[Report 1956] / Medical Officer of Health, County of Zetland (Shetland Islands).

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COUNTY OF ZEELAND

ANNUAL REPORT

of the

MEDICAL OFFICER OF HEALTH

1956

Public Health Office,

Brentham Place,

LERWICK, August, 1957.

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 1956.

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 1956. Figures for the years 1954 and 1955 are given for comparison. The figures given are corrected for transfers.

	Zetland			Scotland
	1954	1955	1956	
Population (estimated)	18,715	18,656	18,582	
Crude death rate per 1,000 population	14.9	15.0	16.5	12.0
Death rate adjusted for age and sex distribution	9.7	9.8	10.8	
Live births (including illegitimate)	273	294	257	
Birth rate (per 1,000 population)	14.6	15.8	13.8	18.5
Illegitimate birth rate (per 100 births)	5.1	3.1	2.7	4.3
Infant mortality rate	44	14	39	29
Deaths from tuberculosis (all forms)	3	5	1	
Death rate from tuberculosis (all forms)	0.16	0.27	0.05	0.16
Deaths from pulmonary tuberculosis	2	3	-	
Death rate from pulmonary tuberculosis	0.11	0.16	-	0.14
Deaths from principal epidemic diseases	3	6	2	
Death rate (per 1,000 population) from principal epidemic diseases	0.16	0.32	0.11	0.06

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 1956 shows a decrease of 74 on the estimated figure for the previous year, and a decrease of 770 in the five years that have elapsed since the census of 1951.

Since 1948 the number of deaths each year have exceeded the number of births. In 1956 there were 306 deaths and 257 births. This is the second lowest number of births that has ever been recorded for the county and the birth rate is the lowest recorded since 1939. These figures make sad reading.

There were 37 fewer births than in 1955. The average birth rate for the period 1951-55 was 15.3 and it is to be hoped that the sudden drop to 13.8 will prove to be an exceptional figure.

The drop in population is not only being caused by emigration from the county, 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 have figures for the numbers of persons on the various practitioners' lists, and the changes that occur in these figures give a picture of the changing structure of the population. In last year's report a table was included showing the numbers on country doctors' lists in 1951 and 1955 and showing how much the population had decreased in seven different country areas. The figures below show how certain changes have occurred in the total numbers on "doctors lists" in the county during the period April, 1956 to April, 1957:-

Additions to and Withdrawals from Doctors Lists

Additions to doctors lists from	Scotland	- 167
" "	England	- 73
" "	Ireland	- nil
" "	Wales	- nil
Withdrawals from doctors lists to	Scotland	- 209
" "	England	- 94
" "	Ireland	- 1
" "	Wales	- 5
Names added to lists of persons from overseas		- 11
Names withdrawn of persons who have emigrated overseas		- 38
Members of H.M. Forces added to lists		- 49
" " withdrawn from lists		- 42

It would seem that in the last year we are 'down' on the exchanges to the extent of about 63 persons who have left the county to live in England or Scotland and about 27 who have gone overseas.

Infant mortality rates and the figures for tuberculosis are discussed later in this report.

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	89	29.08
Vascular lesions affecting central nervous system	59	19.28
Malignant neoplasms	46	15.0
Senility	11	3.59
Other violence	11	3.59

All the causes of death accounting for more than 3 per cent of the total deaths are conditions associated with old age, except for "other violence" (by which the Registrar General means deaths from accidents or violence other than road and transport accidents). Public health authorities now-a-days recognise that accidents are quite as important a factor in causing disability and death as is disease.

Accident prevention is discussed on page 11 of this report.

Malignant neoplasms (cancer) have been the cause of about 45 deaths each year in recent years, and this cause of death usually occupies second or third place on the table with from 12 to 19 per cent of the total deaths.

Cancer of the lung has shown an increase in incidence throughout the country to an extent which has occurred with no other form of cancer. The figures for recent years, when compared with the figures for the years just before the war, show that there has been a seven-fold increase in the number of deaths in men from this cause. In Shetland our population is too small to give useful figures for comparison. However, there were 20 deaths from cancer of the lung or bronchus in the five years 1952-56, and four deaths from this cause in the five years 1935-39.

The Medical Research Council have recently published a statement on tobacco smoking and cancer of the lung. There is strong evidence that heavy and prolonged smoking of tobacco, particularly in the form of cigarettes, is associated with an increased risk of lung cancer. The results of nineteen inquiries (in Britain, U.S.A., Finland, Germany, Holland, Norway and Switzerland) agree in showing a steadily rising mortality as the amount of smoking increases.

The pattern of incidence of the disease shows that factors such as occupational hazards and atmospheric pollution can only be a very minor cause of the increase in incidence of lung cancer.

Surely it is our duty to try and persuade the young not to start the habit of cigarette smoking. Quite apart from the question of cancer anyone who has worked in a chest clinic knows the amount of lesser damage and ill health that is caused by the excessive inhaling of cigarette smoke.

Efforts to persuade the young to remain non-smokers are unlikely to be successful unless we are prepared to show moderation in our own smoking habits. Could not a start be made locally by the public agreeing to give up smoking in buses, cinemas, restaurants, and food shops?

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

1956/

1956

Number of Deaths

	Males.	Females.	Total.
All ages	143	163	306
- 1	6	4	10
1 - 4	-	1	1
5 - 9	-	-	-
10 - 14	-	1	1
15 - 24	1	-	1
25 - 34	5	-	5
35 - 44	3	3	6
45 - 54	13	9	22
55 - 64	15	20	35
65 - 74	35	31	66
75 - 84	52	63	115
85 and over	13	31	44

The table shows one death of a pre-school age child. In the last five years there has been a total of five deaths of pre-school children (1 year to 5 years of age). This is the age at which children are liable to be killed in accidents. Two of the five deaths were due to accidents.

CARE OF MOTHERS AND YOUNG CHILDREN

The Child Welfare Clinic at Hillhead was attended by 280 different infants who made a total of 1,275 attendances. District nurses made 4,215 child welfare visits in country districts and visited 909 infants and pre-school children.

The table below shows the figures in recent years for stillbirths, neo-natal deaths and total deaths of infants under one year of age.

By "neo-natal" deaths we mean deaths of infants during the first month after birth. Most infant deaths occur within the first few days after birth and are caused by atelectasis, birth injuries, malformations, or immaturity. It can be seen from the table that 1956 was not a good year for our records. (In a usual year stillbirths and neo-natal deaths added together total about eleven).

	1950	1951	1952	1953	1954	1955	1956
Births (corrected for transfers)	308	305	281	300	273	294	257
Total deaths under 1 year	11	6	7	1	12	4	10
Neo-natal deaths	10	4	6	1	11	4	8
Infant mortality rate	36	20	25	3	44	14	39
Stillbirths	3	8	8	9	11	4	10

As we are dealing with a small number of total births our infant mortality rate can show big variations from year to year. If, however, one takes a five year view of the situation one can see that in the period 1952 - 1956 there have been 1,405 births and 43 deaths of infants, which would give a rate of 30.6 which is not much of an improvement on the rate of/

of 32 for the previous five years 1947 - 1951.

39 of the 43 infant deaths in the last five years were neo-natal deaths; once an infant mortality rate gets towards 30 it becomes increasingly difficult to lower the rate further.
The infant mortality rate for Scotland in 1956 was 29.

There were 10 stillbirths in 1956. The stillbirth rate for the past five years is 29 which is higher than the 1956 rate for Scotland (23.8).

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 the 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 make it difficult to give an adequate service, but once again there has been an increase in the numbers treated. The table below gives figures for work among such patients done by the School Dental Officer:-

	No. inspected.	No. requiring treatment.	No. accepting treatment.	No. actually treated.
Expectant Mothers	9	9	9	9
Nursing Mothers	5	5	5	5
Pre-school children	119	103	100	100

It is interesting to see that in her report on the dental services in the Scandinavian countries our School Dentist states that in Norway the work of the school dentist does not include any service for pre-school children as the extent of their other work allows no time for this. In Copenhagen four dental officers work in a special clinic for pre-school and junior school children (ages 3 - 7 years). (See Appendix to this report, page 3).

MIDWIFERY

There were 202 confinements in hospital during the year. There were 60 domiciliary confinements in all of which the local authority's district nurse-midwives were in attendance. The proportion of hospital confinements (77 per cent) is almost the same as in the past two years.

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

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

HEALTH VISITING AND HOME NURSING/

HEALTH VISITING AND HOME NURSING

Our public health nursing staff consists of the Nursing Superintendent and 21 nurses. One of the Nurses works as a whole time trained health visitor, the remainder are district nurse-midwives who act as health visitors, as is the case in most areas of the Highlands and Islands.

In the last two annual reports I described the public health duties of our nursing staff, to show how dependent we are on the nursing staff if we are to carry out our functions as a health authority.

More than half the nurses have been with us for several years and we like to look upon them as permanent staff. The remainder of the staff is mainly made up of young women who give us a year or two of useful service and then, quite understandably, go south to continue their nursing career in some other county.

During the past year we have managed to keep the county staffed with nurses though, as explained in last year's report, this is not easy, especially when vacancies occur in the more remote and depopulated areas.

It is difficult to obtain temporary relief nurses for holiday periods and until staff is more easily recruited we cannot send selected nurses south for instruction in various subjects of public health importance. There are certain advantages in the combination of the dual duties of district nurse and health visitor, although there is a danger that the time consuming work of nursing old persons may reduce the time available to a nurse for health education and public health work.

*The Working Party appointed by the Department of Health to report on Health Visiting obviously do not like the multi-purpose "health visitor-midwife-district nurse" though they have accepted the fact that such staff have to be used in rural areas. However, they state that where combined work is the established practice all such workers should be qualified health visitors. They are no doubt correct, and we would be glad if our trained nurse-midwives were trained health visitors as well; or as an alternative we would no doubt be happy to employ trained health visitors to work with our nurses. However, this recommendation shows an unrealistic view of the recruiting difficulties which are likely to face small rural counties for many years. We are fortunate that nearly all our trained nurses are trained midwives and also trained in district nursing; under the present difficulties it would be useless to demand further qualifications in addition. It seems unlikely that highly qualified nurses with their health visitor qualification will be available in numbers for staffing rural areas in the Highlands and Islands. In the meantime we must keep the nursing posts filled and hope that more nurses will in the future be available for the public health nursing services.

The Public Health Committee have always recognised the importance of comfortable houses and good working conditions for the nursing staff. During the year nurses' houses were being built at Brae and at Unst. These will bring the total of new nurses' houses to seven since the County Council assumed responsibility for the nursing service in 1948.

During 1956 three new cars were purchased for the nursing service making a total of 25 new cars purchased since 1948.

CARE OF THE AGED. DOMESTIC HELP SCHEME./

* An Inquiry on Health Visiting. H.M. Stationery Office. 1956.

CARE OF THE AGED. DOMESTIC HELP SCHEME

In reporting on the care of the aged I am forced to repeat some of the information recently given in a report to the Welfare Committee of the County Council.

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 the country areas of the county one person in every five is of pensionable age. There are approximately 1,500 persons over seventy years of age in the country areas and a further 500 in Lerwick. 226 old people over seventy in the country places are living alone.

The following table has been prepared from the returns of District Welfare Officers:-

Area.	Population over 70 years of age	Percentage of Total Population	Number of Old Persons Living Alone.
Northmavine	145	13.8	14
Whalsay	135	13.7	9
Delting	108	12.5	18
Dunrossness	293	11.9	29
Bressay	37	11.2	9
Nesting	62	11.0	23
Sandsting	124	10.1	15
Unst	111	10.0	15
Tingwall	152	9.8	23
Lerwick Landward	104	9.6	13
Fetlar	14	8.7	2
Yell	109	7.4	25
Walls & Sandness	54	6.5	31

The column of percentages given in the above table are calculated from the total population of each area in the census year 1951. As in all areas there has been some reduction in the population since then he percentages in the table are rather lower than the true figure.

It must be remembered that the table refers only to persons over 70 years of age. The usual age groups considered in most reports on the aged are those of "pensionable age" - (60 for women, 65 for men).

If we were considering persons of pensionable age in each area the percentages would be much higher - Northmavine 22 per cent, Bressay 22 per cent, Nesting 20 per cent.

It can be seen that there is no great difference in the proportion of old people in the different areas. Walls and Sandness may have a smaller proportion of persons over seventy but they make up for this by having far the largest proportion of old persons living alone. The problem of the care of old people is not much easier in any one district than in any other.

At any one time there are about forty old persons in hospital beds in the county and another 40 in hostels or in beds in hospital but as "local authority" cases.

According to the standards given in a report published by the Scottish Health Services Council* we would seem to have up to the required number of hospital beds for elderly cases, but we are below the "immediate target" of hostel beds considered necessary.

When Leog House is in use we will have 1.5 hostel beds per 100 old people./

*The Ageing Population. Report by Standing Medical Advisory Committee. (H.M. Stationery Office). Para. 21 and 27.

people. (2.5 hostel beds per 100 old persons is given as the 'target.') In this respect many other counties are probably no better off than us.

Hospital beds have to be reserved for those old persons who require nursing and medical care beyond the scope of what can be made available in a private home.

Hospitals should not be used to accommodate old people merely because one cannot think of any other solution to the problem of caring for them. If hospital accommodation was misused in this way the community would soon find itself with a large proportion of its hospital beds "blocked" by long-stay cases. The hospitals would then be unable to perform their proper function.

Only a small proportion of our 2,070 persons over seventy years of age will spend their last few years or months in institutions of any kind. Our efforts must be directed to enable as many old persons as possible to live at home in reasonable comfort and eventually to die in peace in their own homes.

About 220 aged people die each year in the county. Table 12 of the Census report shows that for many years to come these 220 people will be replaced each year by more than this number of old persons stepping up into the older age groups.

In country districts the form of help most regularly required is assistance in bringing in fuel and water and help with washing clothes.

The willing help given by neighbours and relatives is the means through which most old people are enabled to stay in their own homes. District nurses spend more time on nursing aged people than on any other part of their work.

Despite the large number of old people, we find that in any one area at any one time there are usually only two or three old people who are real problems to their neighbours and others. Looked at this way the task seems less unmanageable. The problem is an increasing one. However, our services will not break down so long as the general public continue to help and do not decide that the matter is solely the duty of some public body. Despite difficulties we have managed in the past. Our object should be to see how we can improve the standard of care given to the elderly over the next few years.

The outstanding event in 1956 was the opening of Viewforth Home in May. The county's first hostel for old persons has rapidly collected a considerable waiting list. The age average of the occupants is probably higher than that found in similar homes in the south.

During the year work proceeded in the conversion of Leog House into a second hostel for the aged.

Domestic Help Scheme.

The Council's modified form of a home help service has enabled us to look after some aged invalids and has helped to spare institutional beds for other cases. Conditions in most areas of the county are such that we cannot have a permanent staff of domestic helpers as most local authorities have in the south. The cases needing help are so scattered that we usually have to employ someone living in the neighbourhood to help one particular case. The scheme is reserved for cases where no other solution can be found, and at the end of the year one whole time domestic help and four part-time helpers were employed by the County Council. During the year the domestic help scheme assisted 15 cases. Seven of these were new cases during the year.

VACCINATION and IMMUNISATION/

VACCINATION and IMMUNISATION

Vaccination against Smallpox

It is a pity that mothers do not realise that vaccination during infancy is advisable. It makes all subsequent re-vaccination against smallpox safer and easier. It is unlikely now-a-days that anyone will escape vaccination in adult life, and adolescence is not as safe nor as suitable an age for primary vaccination.

In 1955 efforts were made to explain to mothers the advantages of primary vaccination in infancy and there has been some improvement in the numbers of infants vaccinated in 1956 - 46 infants were vaccinated under the County Council's scheme, instead of less than a dozen which has been the yearly figure for the past few years. A certain number of infants are vaccinated privately without the Public Health Office having a record of the fact, but it seems that only about one child in every five or six in this county is vaccinated in infancy.

Diphtheria Immunisation

There has not been a case of diphtheria in the county for eleven years. The figures for diphtheria immunisations are satisfactory though some parents prefer to delay consent for immunisation until the child is at school. It is wiser to protect the child at an earlier age.

Practitioners have held immunising sessions at country schools and the Medical Officer of Health holds immunising sessions at the Welfare Clinic in Lerwick and at the Lerwick schools. The numbers of primary immunising injections done in 1956 were greater than in any previous year. The numbers immunised are shown in the table below:-

	Primary Immunisation.	Re-inforcing Doses
By practitioners	233	140
By Medical Officer of Health	137	178
	370	318

Poliomyelitis Vaccine

Limited quantities of poliomyelitis vaccine were issued to the Health Department in the course of the year. In accordance with the arrangements made by the Department a register was made of children born in the years 1947 to 1954 whose parents wished them to be protected. The limited supplies of vaccine were then used to protect those children on the register born in certain months of certain years selected by the Medical Research Council. Each child received two injections with an interval of three or four weeks between injections.

This arrangement was not easy to work in a county such as Shetland. Children born in the selected months were scattered in small numbers over several islands. However, the helpful co-operation of practitioners throughout the county enabled us to work the scheme. By the end of the year a more easily workable arrangement was in force, and since then larger amounts of vaccine have become available.

By the end of the year 61 children had received two injections and 4 had received one injection of poliomyelitis vaccine.

(Protection against Tuberculosis by B.C.G. Vaccine is discussed on page 10).

PREVENTION OF ILLNESS, CARE AND AFTER CARE

Tuberculosis.

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

When dealing with small numbers of cases figures for a five year period give a truer picture than comparisons made between any one year and another. The table below shows the average number of notifications and deaths each year during five year periods for the last twenty five years.

	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.
1952	14	8	22	-	6	6
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

The reduction in the number of new cases notified is encouraging, but there must be no slackening of our efforts to reduce the incidence still further.

The Medical Officer of Health acts as Tuberculosis Physician for the county. The chest clinic at the Sanatorium was attended during the year by 322 different patients. (This clinic is, however, attended by many persons with chest troubles apart from tuberculosis cases and their contacts).

District Nurses during 1956 made a total of 457 visits to 143 persons on the tuberculosis register.

During 1956 235 school children, 13 or 14 years old, were tuberculin skin tested and 219 negative reactors were given B.C.G. vaccine to protect them against tuberculosis. This method of increasing a senior school child's resistance to the disease is particularly useful in this county as so many of our young people travel south to work or study in cities soon after leaving school.

The parents of more than 80 per cent of school leavers in the past three years have consented to their children receiving B.C.G. vaccine, and their co-operation has been most satisfactory.

Chiropody/

Chiropody

The County Branch of the British Red Cross Society started a Chiropody Scheme for old age pensioners in Lerwick at the beginning of 1956.

Clinic sessions were held in the Brevik Hospital and were appreciated by patients in the hospital and others from Viewforth Home. In addition thirty old age pensioners living in their own homes were treated. The work was limited owing to the fact that the Chiropodist was only available for work in the evenings, and because it has not been possible to extend the scheme to patients in the country.

The district nursing staff and the hospital staffs have helped the scheme to make a start.

HEALTH EDUCATION

District nurses have taken the opportunity to give lectures and talks on matters of health to women's societies and other organisations 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 in the course of child welfare work.

It is necessary to be careful in one's selection of pamphlets as it is not difficult to confuse or to frighten certain parents if this method of teaching is overdone. Informal conversation by a nurse or by the patient's practitioner is found to be far more effective than any other methods of health instruction.

Accident prevention pamphlets are issued to nurses and in two districts nurses have lectured on this subject to audiences of parents.

The County Sanitary Inspector attended a course of instruction on methods of health education during the year.

There is scope for increase in our work in this direction.

INFECTIOUS DISEASES

The table below shows the number of cases of notifiable infectious diseases (excluding tuberculosis) in the county during 1956.

Disease	At All ages	-1	1-	5-	15-	25-	45-	Received hospital treatment.
Lerwick Burgh								
Cerebro-spinal Fever	1	-	1	-	-	-	-	1
Food Poisoning	1	-	1	-	-	-	-	-
Total	2	-	2	-	-	-	-	1
County								
Acute Poliomyelitis	3	-	-	2	-	-	1	3
Pneumonia, Acute Primary	1	-	-	-	-	1	-	-
Scarlet Fever	72	-	4	20	14	12	22	-
Total	76	-	4	22	14	13	23	3

The three cases of poliomyelitis came from three widely separated parts of the county. One adult case proved fatal; the two remaining cases were children, and one of the two cases developed paralysis.

Some scarlet fever cases occurred in the county in autumn and most of the inhabitants of Skerries caught the infection.

MENTAL HEALTH SERVICES

There are 21 certified mental defectives in the county. Most of these cases are cared for by relatives. They are visited by practitioners and by welfare officers.

Twice in the course of 1956 the welfare authorities were faced with the difficulty of having to find a home for a middle aged mentally defective person when the death occurred of the aged parent who had looked after the defective for years. Efforts at boarding out the case were unsuccessful and in both cases the middle aged defectives had to be admitted to the Brevik Hospital. Their continued presence in this hospital would reduce by two the beds available for aged and chronic cases for possibly about twenty years. The need for more accommodation for mental defectives in the North Eastern Hospital Region is well known.

A consultant in mental diseases from Kingseat Hospital, Aberdeenshire, visits the county six times a year, and holds a clinic in Lerwick for a few days on each visit.

There were 5 certified patients sent to mental hospitals in the south during the year. It is not known how many cases were in addition admitted 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 488 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, 1956

STAFF

School Medical Officer (part-time)

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

School Dental Officers:-

Miss Joyce G. Campbell, L.D.S.
Miss Sweelian Sio, 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 - 18,656 (at start of school year)

Number of Schools:-

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

Number of children on register	-	2,953
Number of children in average attendance	-	2,733
Percentage attendance for year	-	93.6

REPORT ON SCHOOL MEDICAL INSPECTION

During the school year ending July, 1956, all schools were visited for medical inspection of the pupils except for the schools at Trondra, Fetlar and Papa Stour.

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

(1) All entrants and pupils not previously given routine school medical inspection.
(11) Pupils born in 1948 (examined for visual acuity and hearing only).
(111) Pupils born in 1946.
(1V) Pupils born in 1942.
(V) Pupils born in 1939.

Table 1 of this report shows that 1,086 children were given systematic examination. This is 35 less than in the previous year. 151 children not in the age groups for examination were re-examined on account of some defect noted or suspected at a previous examination.

54 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 344 of the children receiving routine inspection. Parents attended with 67 per cent of all children examined in the entrants group.

THE FINDINGS OF MEDICAL INSPECTION

Table 11 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.

Defective vision is the commonest defect. 80 children were recommended for refraction compared with 66 in the previous year. Most children have their vision tested for the first time in the second age group - when they are about six and a half or seven years old. 18 out of 214 children at this age were recommended for refraction. (8.4 per cent compared with 9 per cent in the previous year).

A suggestion has been made that five year old entrants should have the benefit of a screening test for defective vision. There are difficulties in this idea, and it can be seen from our figures that the numbers likely to be 'caught' a year earlier for treatment would be few. However, the question is under consideration at present.

Table 111 classifies the children into groups in accordance with the severity of defects discovered. The table is similar to the equivalent tables in the reports for the last few years. It shows a slight increase in the numbers of children in Groups 11(a) and 11(b) (minor defects of vision, and mouth and teeth requiring treatment).

The table of average weights and heights is very similar to last year's table.

Table 1V gives particulars about handicapped children. There were at the end of the school year eight 'educable' mentally handicapped children at ordinary schools. Though not at special schools these children/

children are receiving a form of special education.

In this county the problem of educating handicapped children cannot easily be solved by sending such children to special schools in the south. Parents are naturally very protective towards a handicapped child and prefer to retain the child in the home.

Distances would usually make it impossible to collect such children to some special class in any one school in the county.

The possibility of extending the work done locally for handicapped children is under discussion at present.

For children who have a serious degree of deafness or of defective vision it is essential to arrange for special school education in the south.

TABLE 1/

TABLE 1.

Total number of children examined at:-

(A)		Systematic Examinations:-	Other systematic Examinations:-
Ordinary Schools	Entrants	256	-
	Second Age Group	214	-
	Third Age Group	275	-
	Fourth Age Group	236	-
Secondary Schools	Fourth Age Group	75	-
	Fifth Age Group	30	-
		1086	-

(B)	Other examinations:-	Special cases	81
		Re-inspections by Medical Officer	70
			151

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

Entrants	-	8
Second Age Group	-	18
Third Age Group	-	47
Fourth Age Group	-	35
Fifth Age Group	-	3
Other systematic examinations	-	-
		111

Of 151 children given a re-inspection or special examination 40 were notified to parents as requiring treatment and 24 were noted for re-inspection again during the school year 1956-57.

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:		139	117	151	124	136	175	13	17	439	433
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:											
Impetigo	-	-	-	-	-	-	-	-	-	-	-
Other	1	-	-	-	-	1	-	-	-	1	-
Diseases	0.1	-	-	-	-	0.7	-	-	-	0.2	-
(b) Body: Ringworm	-	-	-	-	-	-	-	-	-	-	-
Impetigo	-	-	-	-	-	-	-	-	-	-	-
Scabies	-	-	-	-	-	-	-	-	-	-	-
Other	3	1	1	-	-	1	-	-	-	2	1
diseases	0.3	0.7	0.9	-	-	0.7	-	-	-	0.5	0.2
5. Nutritional State-	1	1	-	-	-	-	-	-	-	1	-
Slightly defective	0.1	0.7	-	-	-	-	-	-	-	0.2	-
Bad	-	-	-	-	-	-	-	-	-	-	-
6. Mouth and teeth	16	5	2	3	2	-	4	-	-	8	8
unhealthy	1.8	3.6	1.7	2.0	1.6	-	2.3	-	-	1.8	1.8
7. Naso-pharynx-											
(a) Nose:											
(i) Obstruction req.	5	2	1	-	-	1	1	-	-	3	2
observation	0.6	1.4	0.9	-	-	0.7	0.6	-	-	0.7	0.5
(ii) Requiring	2	1	-	-	-	-	1	-	-	1	1
operation	0.2	0.7	-	-	-	-	0.6	-	-	0.2	0.2
(iii) Other conditions	-	-	-	-	-	-	-	-	-	-	-
(b) Throat:											
(i) Tonsils req.	16	4	7	1	1	1	2	-	-	6	10
observation	1.8	2.9	6.0	0.7	0.8	0.7	1.1	-	-	1.4	2.3
(ii) Requiring operation	-	-	-	-	-	-	-	-	-	-	-
(c) Glands req.	4	3	1	-	-	-	-	-	-	3	1
observation	0.5	2.2	0.9	-	-	-	-	-	-	0.7	0.2
(iii) Requiring operation	-	-	-	-	-	-	-	-	-	-	-
8. Eyes-											
(a) External diseases:											
Blepharitis	13	1	1	2	5	2	2	-	-	5	8
	1.5	0.7	0.9	1.3	4.0	1.5	1.1	-	-	1.1	1.8

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	4	3	1	-	-	-	-	-	-	3	1
	0.5	2.2	0.9	-	-	-	-	-	-	0.7	0.2
Other diseases	-	-	-	-	-	-	-	-	-	-	-
(b) Visual acuity				See end of Table 11							
9. Ears-											
(a) Diseases:											
Otorrhoea	5	1	-	-	2	-	1	-	1	1	4
	0.6	0.7	-	-	1.6	-	0.6	-	5.9	0.2	0.9
Other diseases	15	2	-	4	3	5	1	-	-	11	4
	1.7	1.4	-	2.6	2.4	3.7	0.6	-	-	2.5	0.9
(b) Defective hearing-											
Grade 1	2	-	1	-	-	-	-	-	1	-	2
	0.2	-	0.9	-	-	-	-	-	5.9	-	0.5
" 11(a)	-	-	-	-	-	-	-	-	-	-	-
" 11(b)	-	-	-	-	-	-	-	-	-	-	-
" 111	-	-	-	-	-	-	-	-	-	-	-
10. Speech-											
Defective articulation	-	-	-	-	-	-	-	-	-	-	-
Stammering	-	-	-	-	-	-	-	-	-	-	-
11. Mental and Nervous Condition-											
(a) Backward (due to irregular attendance, etc.)	-	-	-	-	-	-	-	-	-	-	-
(b) Dull (intrinsically)	2	-	-	-	-	1	1	-	-	1	1
	0.2	-	-	-	-	0.7	0.6	-	-	0.2	0.2
(c) Mentally defective (educable)	1	-	-	1	-	-	-	-	-	1	-
	0.1	-	-	0.7	-	-	-	-	-	0.2	-
(d) Mentally defective (ineducable)	-	-	-	-	-	-	-	-	-	-	-
(e) Highly nervous or unstable	-	-	-	-	-	-	-	-	-	-	-
(f) Difficult in behaviour	1	-	-	1	-	-	-	-	-	1	-
	0.1	-	-	0.7	-	-	-	-	-	0.2	-
12. Circulatory system-											
(a) Organic heart disease:											
(1) Congenital	1	-	-	1	-	-	-	-	-	1	-
	0.1	-	-	0.7	-	-	-	-	-	0.2	-
(11) Acquired	4	-	1	-	2	1	-	-	-	3	1
	0.5	-	0.9	-	1.6	0.7	-	-	-	0.7	0.2
(b) Functional conditions	2	-	-	2	-	-	-	-	-	2	-
	0.2	-	-	1.3	-	-	-	-	-	0.5	-
13. Lungs-											
Chronic bronchitis	3	-	1	-	-	-	2	-	-	-	3
	0.3	-	0.9	-	-	-	1.1	-	-	-	0.7
Suspected tuberculosis	-	-	-	-	-	-	-	-	-	-	-
Other diseases	3	1	1	1	-	-	-	-	-	2	1
	0.3	0.7	0.9	0.7	-	-	-	-	-	0.5	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
4. Deformities-													
(a) Congenital	3	1	-	2	-	-	-	-	-	3	-		
	0.3	0.7	-	1.3	-	-	-	-	-	0.7	-		
(b) Acquired (Infantile Paralysis)	-	-	-	-	-	-	-	-	-	-	-		
(c) Acquired (probable rickets)	6	1	2	-	-	2	1	-	-	3	3		
	0.7	0.7	1.7	-	-	1.5	0.6	-	-	0.7	0.7		
(d) Acquired (Other causes)	-	-	-	-	-	-	-	-	-	-	-		
5. Infectious diseases	-	-	-	-	-	-	-	-	-	-	-		
6. Other diseases or defects	4	-	-	2	1	-	1	-	-	2	2		
	0.5	-	-	1.3	0.8	-	0.6	-	-	0.5	0.5		

. (b) Visual acuity:

ature of efect.	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
otal number subjected o routine vision esting:		3	2	122	90	146	122	135	174	12	16	418	404
isual acuity:													
air	93	-	-	11	15	13	15	14	21	2	2	40	53
	11.3	-	-	9.0	16.7	8.9	12.3	10.4	12.1	16.7	12.5	9.6	13.1
ad	49	-	1	4	4	8	10	10	12	-	-	22	27
	6.0	-	50.0	3.3	4.4	5.5	8.2	7.4	6.9	-	-	5.3	6.7
umber re- ommended for efraction	78	-	1	5	13	16	17	14	9	2	1	37	41
	9.5	-	50.0	4.1	14.4	11.0	13.9	10.4	5.2	16.7	6.3	8.9	10.1

Table of Average Age, Weight and Height of Children examined at Systematic School Medical Inspection During the Year Ended 31st July, 1956.

Group	Average Age Years	Months	Average Weight in lbs	Average Height in inches
Entrants:-				
Males	5	7.4	47.9	44.8
Females	5	8.0	46.0	44.4
Third Age Group:-				
Males	9	5.9	70.5	53.5
Females	9	6.1	69.2	52.8
Fourth Age Group:-				
Males	13	7.4	104.5	61.0
Females	13	7.4	109.2	61.3
Fifth Age Group:-				
Males	16	8.9	141.1	68.5
Females	16	9.5	125.8	63.8

Visits to School Children in their homes by School Nurses

In an area where District Nurses act as school nurses it is not easy to answer the Department of Health's request to give the number of visits made to school children by the nurses in their capacity as "school nurses."

Our records, however, can show that at least 101 children were visited by District Nurses in their capacity as school nurses, and in connection with the school medical inspection work.

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	228	89.06	224	81.45	273	87.78	26	86.67	751	86.12
" 11(a)	1	0.39	18	6.54	14	4.50	3	10.00	36	4.12
" 11(b)	7	2.73	2	0.73	-	-	-	-	9	1.03
" 11(c)	-	-	1	0.36	-	-	-	-	1	0.11
Total	8	3.13	21	7.64	14	4.50	3	10.00	46	5.28
" 111	11	4.29	21	7.64	17	5.47	-	-	49	5.62
" 1V(a)	9	3.52	9	3.27	7	2.25	-	-	25	2.86
" 1V(b)	-	-	-	-	-	-	1	3.33	1	0.11
Total	9	3.52	9	3.27	7	2.25	1	3.33	26	2.98
Total No. of children examined	256	100.00	275	100.00	311	100.00	30	100.00	872	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	-	-	-	-
" 11(a)	-	-	-	-
" 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	8	-	-	8
(b) Ineducable	3	-	11	*14(+3)
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	-	-	-	-

* Three additional mentally defective children of school age are in institutions for mental defectives in the south.

TABLE V

DENTAL INSPECTION AND TREATMENT

Number of children who were:-

(1) Inspected by the dental officer:-

Age.	(a) Systematic examinations.	(b) Special and emergency cases.	Total.
5	128		
6	134		
7	113		
8	100		
9	102		
10	77		
11	52		
12	56		
13	47		
14	42		
15	7		
	858	-	858

		Systematic Examinations.
(2)	Found to require treatment	586
(3)	Actually treated by the school dental officer	320
(4)	Number of attendances made by children for treatment	2,617
(5)	Fillings (a) Permanent teeth	1,347
	(b) Temporary teeth	198
(6)	Extractions -	
	(a) Permanent teeth	591
	(b) Temporary teeth	939
(7)	Number of administrations of a general anaesthetic for extractions	341
(8)	Other operations -	
	(a) Permanent teeth	312
	(b) Temporary teeth	56
(9)	Half-days devoted to inspection	29
	Half-days devoted to treatment	517
(10)	Orthodontic cases	29
(11)	Denture cases	24
(12)	X-rays	70.

Table V/

Table V shows details of the work done by the School Dental Officer. During the first half of the school year we were fortunate in having the services of Miss Sio as Assistant School Dental Officer; for the rest of the year Miss Joyce Campbell was single handed.

Apart from individual instruction at the chairside, one week in September was devoted to dental health propoganda work. Four films were shown in six schools.

The school dental service is a preventive service. Early detection and treatment of caries and other dental troubles is an important part of the work of the service. The only way in which a fair share of the Dental Officer's time can be given to this work in each area is to allow him to work uninterruptedly through his programme. The School Dental Officer cannot, therefore be expected to be available to travel at any time to any area where a child happens to be suffering from toothache.

The orthodontic specialist from Aberdeen visited Lerwick on three occasions during the school year. On each visit an average of 14 patients were seen and 6 appliances provided.

The Annual Report of the Department of Health (1956) tells us that the incidence of carious teeth is increasing and that "the situation has substantially deteriorated since the end of the war.....While early detection and treatment of caries is a valuable contribution to preventive dentistry, it would be better to prevent its occurrence altogether. There is weighty evidence that one of the main factors in this deterioration of children's teeth is the indiscriminate consumption of sweetmeats between meals and at all times of the day."

Miss Campbell's account of her visit to the Scandinavian countries shows that this trouble is not confined to our shores, and that in Norway and Sweden they are trying to reduce the incidence by persuading parents to correct faulty eating habits. In addition they are spending large sums on providing elaborate treatment clinics. Miss Campbell's report on her visit has been included at the end of the appendix of this report for the benefit of those interested in this important subject.

APPENDIX

MATERNITY AND CHILD WELFARE

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

Number of Expectant Mothers visited	- 140
Total visits made	- 744
Number of Children under 1 year of age visited	- 214
Total visits made	- 2,546
Number of Children between age of 1 - 5 years visited	- 1,118
Total visits made	- 3,063
No. of Tuberculosis Cases visited	- 114
Total visits made	- 457
No. of other cases visited	- 91
Total visits made	- 149

Attendances at Lerwick Child Welfare Centre.

Number of Expectant Mothers attending	- 8
Total attendances	- 16
Number of Children under 1 year attending	- 142
Total attendances	- 833
Number of Children 1 - 5 years attending	- 138
Total attendances	- 442

Births During 1956

(1)	Total number of live births during year (before correction for mother's residence)	- 251
	Total number of Stillbirths	- 11
(11)	Total number of births in (1) occurring in institutions	- 202
(111)	Total number of births occurring at home:-	
	Doctor present	- 50
	Doctor not present	- 10

TUBERCULOSIS

Number of Cases Diagnosed as suffering from Tuberculosis

	Males	Females	Total
Respiratory	2	3	5
Non-Respiratory	1	-	1
	3	3	6

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	10	4
Children	1	-
Admitted during the year:		
Adults	2	8
Children	-	-
Discharged during the year:		
Adults	12	8
Children	1	-
Died in Institutions:		
Adults	-	-
Children	-	-
In Institutions on December 31st:		
Adults	-	4
Children	-	-

Number of Persons resident in the Area at 31st December, 1956 who were known to be suffering from Tuberculosis

Respiratory:	Males	- 53
	Females	- 50
Non-Respiratory:	Males	- 20
	Females	- 20

B.C.G. VACCINATION

	Tuberculin Tested.		Negative Re-actors.		Vaccinated during 1956	
	Males.	Females.	Males.	Females.	Males.	Females.
Contacts	8	6	7	5	2	3
School Leavers	103	132	99	120	99	120

REPORT BY MISS JOYCE G. CAMPBELL, L.D.S.,

ON A

WORLD HEALTH ORGANISATION TOUR OF SCANDINAVIA, 1957

Through the courtesy of the World Health Organisation and the Education Committee of the Zetland County Council I was given the opportunity during May and June of this year to study the organisation and routine work of the school dental services in Scandinavia.

In Norway, 18 clinics, the Oslo Dental School and a dental manufacturing depot were visited. I make mention of the visit to the dental depot as it plans and equips clinics in remote areas - designs first class portable equipment and equips surgeries on a number of Norwegian ships.

The Norwegian visit was divided into three parts. The dental clinics and institutions visited in

(a) Oslo,
(b) Drammen,
(c) North Norway including Trondheim and Bórvik and Kolvereid on the Vikna islands.

The Public Dental Service in Norway is known as the Folktannpleie and the school dental service as established from 1910-1950 was the natural starting point.

In Norway 70 per cent of the population live in rural districts and 30 per cent in cities. The dispersion of dentists is just the opposite - 70 per cent living in cities and 30 per cent in rural districts. Something had to be done to provide dental care for the population in the rural and remote areas. So in July, 1950, the Public Dental Service Act was passed with the following aims.

1. Dispersing the dentists throughout the county according to the distribution of the population.
2. Saving the first permanent molar.
3. Retaining the teeth of children under control to the age of 18 at least.
4. Securing dental care for the remainder of the population at fixed charges.

Norway is divided into 15 districts and the patients are divided into two groups - non-paying and paying The group 7 - 14 years with the exception of specialised treatment, e.g. orthodontic work, is non-paying. The remainder of the population is paying patients.

This scheme was first put into effect in Finmark county on July 1st, 1950.

That is briefly the development of the Public Dental Service in Norway - future development depending on the economy of the country and the availability of dentists.

In Oslo there are 100 dentists and a population of 54,000 school-children. I visited and carried out examination in 10 clinics, 6 of which were school dental clinics ranging from the oldest to the most modern and all located on the school premises. It is the practice for the Senior Dental Officer to be consulted during the planning of a new school as to the requirements of the dental premises. Dr. Goli, of Oslo, has planned 100 such clinics and is now planning five years ahead.

Dental/

Dental hygienists are appointed to work in the school dental clinics. Each dental hygienist is assigned certain schools - there being about 2,800 children to each hygienist and the number of children to each dental officer about 700. I was impressed by the work of the dental hygienist as distinct from that of a dental nurse at the chairside. She attends in the classroom in order to give the children tooth brush drill and dental health instruction. In addition she does statistical work.

Personal hygiene is properly considered of very vital importance in the war against dental disease and the Oslo school authorities have made certain rules for school children. "They are to wash, brush and comb themselves and to clean their teeth before going to school" and in the case of breaking this rule the teacher has the right to call it to account and give the home a warning. The bringing of sweets into school premises is strictly forbidden. These rules have been drawn up in full recognition of the influence the teacher and the school have in this matter, and influence the dental personnel cannot have, seeing the children once or twice a year.

The co-operation between the school personnel and the dental clinics is considered very important.

The exemplary practice of good dietary habit in the form of the school "breakfast" was introduced into the schools of Oslo and many other communities in Norway from about 1931. Because of it originating in Oslo it is called the "Oslo Breakfast." I partook of it on one occasion. It consists of unskimmed milk, hard rusk or biscuit, bread, coarse bread, butter or margarine, whey-cheese, apples, carrots or oranges. The contents of albumen, fat, carbohydrates and calcium are apparent from the table. The average caloric value is 717 calories per child per breakfast. It is a highly nutritious meal, contains no property likely to damage the teeth and it compels the children to chew their food.

But in spite of the co-operation of the school authorities, the instruction of the dental hygienist and the incessant prophylactic and restorative work of the school dental officer I found on examination that although the large majority of children in Oslo had not lost any of their permanent teeth they were heavily filled and it was obvious that the incidence of caries was high. During the German occupation the average number of filled surfaces per child went considerably down from 4.08 in 1937-38 to 1.73 in 1944-45. But after the war, however, the number of filled surfaces per child has been steadily increasing - in 1953-54 it was 4.80. Because of this increasing rate the dental officers who had 700 children to look after found it difficult to carry out the systematic treatment of seeing the child once a year. The lowest age group is always treated first.

It was interesting to compare the teeth of the children seen in these school clinics and the children I saw in a special clinic for handicapped children who were living a regular institutional life. 60 per cent of these children were caries free.

The service for pre-school children is not the responsibility of the school dental officer as it is recognised that the extent of the work would be incongruous with the present caries frequency.

The pre-school children are seen in special clinics and treated by full time dental officers. The charge made for a pre-school child is 5/-. The age group 14-18 years is also treated in special clinics and the charge of 10/- per child is made with an additional charge for specialised treatments.

I visited the Oslo emergency dental station where all who need help can get it until midnight including Sundays and holidays.

In Drammen, there are 4,000 school children and eight dentists. Only five permanent teeth were extracted last year for caries. No pre-school children/

children are treated and no child of the 14-18 age group. The Senior Dental Officer is fully employed in organising the school dental scheme and arranging dental health propaganda which she does with excellent results. She speaks not only to collective groups but to each mother individually and each is given a booklet on dental health. I saw her slides which she uses in preference to films for dental health talks. No child is allowed sweets at school or the money to buy them and the local cinema has agreed not to sell sweets to children.

After treatment every child is given a card indicating how many fillings have been done at each visit and I could see that the children took a pride in having few fillings marked down.

Drammen was the one note of optimism during the whole tour as for the past two years the caries rate has dropped. In 1944-45 2.1 filled surfaces were recorded per child and the graph steadily rose to 6.6 surfaces per child in 1953-54 and then in 1954-55 it dropped to 6.1 and 1955-56 to 5.4.

North Norway

Trondheim. Four school dental clinics were visited but again the caries rate was so high that the nine dental officers were not able to control the work. No pre-school or orthodontic work was undertaken.

Kolvereid and Rørvik. Here there were two remote clinics - the standard was as high as the most modern and efficiently run clinics in Oslo. The dental officers in these clinics looked after 600 school children and worked 1,000 hours a year on these children and 800 hours a year on paying patients.

Summary

The dental caries rate was high but there were sufficient dental officers to conserve the teeth I saw no extractions of permanent teeth on school children in the Norwegian school dental clinics. There was more regard paid to dental health propaganda. The equipment amenities and general lay out of the remote clinics in Norway was much higher than the average remote clinic in Britain.

THE PUBLIC DENTAL SERVICE IN SWEDEN

The general administration and management of the Public Dental Service is under the control of the Royal Medical Board which examines and approves the various projects of the County Council regarding the organisation and extension of the Dental Service, nominates Dental Service Supervisors and appoints principals at the central clinics.

The work in connection with the Dental Service at the District Central Clinics is performed by one or more dental surgeons having the rank of District Dental Surgeon. Each District Dental Surgeon has a District Dental Nurse and an assistant nurse. The Senior Nurse has had two years at the school for dental nurses in Stockholm and passed the necessary examinations. In addition salaried Dental Technicians are employed at the central clinics.

A District Central Clinic where only a single dental surgeon operates has the following accommodation:- Operating room, sterilisation room, waiting room, cloakroom, lunch room or rest room, dark room for developing x-ray films, laboratory or technician's room, dressing room and finally one or two store rooms.

The greatest importance is attached to the best use of the area available for the clinic in order to meet the highest requirements for a modern and highly qualified dental service.

In/

In most districts it has proved necessary to establish clinics at sites other than that of the District Central Clinic. Children are treated from three to fifteen years of age and both the sixteen to twenty age group and adults can consult the Government supported Dental Service at a reasonable cost. There is also a priority service for ante-natal and post-natal cases for which mothers receive a special Government grant.

Before leaving for Scandinavia I heard Dr. Bo Krasse of Malmo University lecture at the Dundee Dental School. His lecture was on rampant caries in the school child of Sweden. He deplored the present day eating habits of the people and I found his theory supported by Dr. Dahl, acting chief of the Royal Medical Board who was convinced that the diet today and the pernicious habit of nibbling between meals are the main factors for the high rate of caries. This theory was held without exception by every member of the profession I met in the country. After having heard Dr. Bo Krasse I was prepared for the shock of finding such a very high caries rate in one of the most progressive countries.

Dr. Dahl was about to launch a big propoganda drive and he was hoping to have the co-operation of Norway and Denmark. He believes in the New Zealand system of dental hygienists where girls are trained to undertake certain dental operations under the supervision of a dental surgeon.

My stay in Sweden was divided into two parts.

1. Visiting the Eastman Dental Clinic in Stockholm and the oldest clinic in the city, also the school dental clinics and an orthodontic clinic in Gothenburg.

2. Touring the clinics in the county of Jämtland in the North and the county of Bohuslän in the South.

The Eastman Dental Clinic was founded like the London, Brussels, New York and Rochester clinics by Kodak. In Stockholm it is used for the treatment of the pre-school child and difficult and complicated cases referred from school clinics. Dr. Berggren, chief of the Eastman clinic, also believes in the diet theory as the chief contributing factor to the rising incidence of dental caries. He advocates calcium phosphates being added to the school meals and a system of topical fluoride application is carried out once a month by the ten most efficient and reliable dental nurses. The dental officers in the Stockholm school clinics work 1,500 hours in the year. It was a contrast seeing the oldest school clinic in Stockholm where although the equipment was up to date the dental officers all worked together in the one large room.

During the tour of the county of Jämtland I visited six remote clinics most of them in the depths of the forests. Each clinic was modelled on lines of perfection and every facility was offered to the dental staff to encourage a high standard of work. Children were transported from the neighbouring districts to the central clinics and on an average each dental officer had 600 children to look after.

In the county of Bohuslän I visited seven dental clinics - the central one in Uddevalla where the district dental officer acted as consultant dental surgeon for the county and had his own consulting room and operating theatre in the local hospital. Four of the clinics were situated along the coastline and two on islands. The dental caries rate in this part of the country was very much higher than further inland where there was plenty of good farm produce. The county or district dental officer was particularly energetic in dental health propaganda and he quoted the case of his own children and the children of his brother who is a dental surgeon in Gothenburg to prove the theory that the most important factor towards a sound dentition is sound diet. On examining the eight children I was impressed to find each child completely caries free. The children were given to bank each month the equivalent amount of money the average Swedish child/

child spent on sweets.

During my stay at Uddevalla I was privileged to attend the annual general meeting of the Swedish hospital dental officers. It was interesting to hear the theory of sound diet again expressed unanimously and it was agreed that dental caries was now no longer a professional but a social problem.

In Gothenburg I visited three school clinics including the oldest and most modern and I spent two sessions in the orthodontic department where five full-time orthodontists work. Every third week the chief orthodontist visits one of the seventy school dental officers in the city to inspect malocclusions of children. The treatment of less complicated cases is discussed with the dentists but the difficult cases are referred to the clinic. The number of simple orthodontic treatments carried out by the seventy dental officers during 1956 was 458. About 20 per cent of the children between 7 and 15 years of age require orthodontic treatment but to meet that demand ten orthodontists instead of five would be necessary. The caries rate among the Gothenburg school children is high - 3.6 fillings per child were made during 1955. Due to the shortage of dentists 8,000 had not received treatment during 1955-56 and the treatment of deciduous teeth is not provided except for necessary extractions.

Oral Hygiene and Prophylaxis in Gothenburg.

Once a year every school child received a free toothbrush and during the first school year the children are taught by the dental nurses how to clean their teeth. The dental nurses control the oral hygiene. Lectures on the care of teeth are given in the schools and at parents' meetings and children are urged to cut their consumption of sweets. Propaganda for good dental care, for a suitable diet, is carried on by means of posters in the clinics. A certain amount of propaganda material is also distributed free to children and parents. In addition all school dentists try to personally influence their patients in order to promote better dental hygiene, sounder diet and a reduced consumption of sweets.

The fluoridation of drinking water has not yet been carried out in Gothenburg but the senior dental officer is hopeful that in the light of experiments made and experience gathered, especially from U.S.A., that the local authorities will decide in favour of fluoridation of water.

Summary

The caries rate was much higher than in Norway. Correspondingly the carbohydrate consumption was higher and the food, even the bread, was over-sweetened.

The dental clinics, particularly the most remote, were models of perfection indicating the appreciation and understanding the authorities have for the dental officers' work.

The dental health propaganda was being organised on a scale corresponding to the serious situation caused by rampant dental caries.

Topical fluoride application to the teeth was being systematically carried out.

The school dental clinics, unlike those in Norway, were buildings apart from the school premises.

The dental nurses were well educated and most efficient.

DENMARK

The school dental service was started in 1923 but it was 11 years before all the children in all the classes in the municipal schools were under systematic care. All treatment in Denmark has been free of charge, being paid out of municipal funds. The years of occupation and post war years gave rise to many difficulties and there is not yet an organised school dental service throughout the country. Only in Copenhagen and a few of the larger towns is it possible to make a study of the organisation of school clinics. In rural areas the private practitioners undertake to look after the school children. But as the dental surgeon was only receiving a fee for each child regardless of the work involved the dental profession was at the time of visiting the country in conflict with the municipalities.

The time I spent in Denmark was confined to visiting the Copenhagen dental school, 2 large school dental clinics and an orthodontic clinic. I also visited the pre-school dental clinic in Copenhagen and the Roskilde school dental clinic. Apart from these visits I had interesting talks with dental surgeons who had experience of the work in Greenland where the clinics and portable equipment were reported to be of the same high standard as those in the remote areas of Norway and Sweden.

The school dental service in Copenhagen has 43 clinics installed in the schools and 5 large central clinics each covering a district of the old part of the city and attended by the children class by class from the different schools of the district.

Each clinic has one senior dental officer, one orthodontic specialist, 6 - 8 dentists and the requisite number of trained nurses. On the outskirts of Copenhagen there are 37 clinics each having one dental officer and one assistant. These clinics treat only the children in the area in which they are located. There is also a large special clinic to which complicated surgical and orthodontic cases are referred. There are 88 school dental officers in Copenhagen.

There are 4 dental officers in the pre-school clinics and I was much impressed by the attractive lay out of this clinic and the methods used in treating this 3 - 7 age group.

The caries rate of the cases I examined in Copenhagen appeared to be lower than any of the cases seen in Oslo or Stockholm and the enamel and dentine appeared to be much sounder. It was evident that there was not the same indulgence in sweet foods and a higher consumption of farm produce.

In Roskilde where there was no fluorine in the water 78 per cent of the first molars were carious in the first class of the school but in the neighbouring town of Vordinborg where there was fluorine present in the water only 25 per cent of the first molars were carious.

Professor Bjork of the Copenhagen Dental School urged school dental officers to ask the orthodontic specialist to check the possible orthodontic cases systematically and at regular intervals so that malocclusions could be better controlled. Much, he said, could be accomplished by observing and checking without resorting to active and expensive treatment.

Summary

The school dental service was not extended beyond the chief towns.

The incidence of dental caries did not appear to be as high in Copenhagen as the cities and towns visited in Norway and Sweden.

The chief dental officers in Copenhagen and Roskilde organised their own dental health propaganda programmes with effect.
