

When considering factors which might be expected to influence decay it will be realized that the teeth of the oldest group have had a chequered existence since eruption. The effects of these factors have been so balanced that the caries figures are now the same as in 1939. Teeth in the youngest group, with slightly better structure, show slightly less decay than in that year. But the striking change is that the A.C.F. of children aged 6-9 is only just over half its 1939 counterpart in spite of the teeth having a worse structure. In broad terms, therefore, the post-eruptive influences since 1945 must have been less damaging than in the previous years. This can be explained either by an increased tooth resistance due to a higher post-eruptive dietary calcium intake or by a decrease in the factors favouring decay. However, if the calcifying power of the diet during this time is reflected in the tooth structure of the children under 5, the dietary calcium since 1945 has been substantially the same as before the war. Therefore it seems that the teeth of the 6-9-year-olds are less carious, not because they are more resistant, but because there are fewer external influences favouring decay. Although more meat and fish was eaten during those years the one factor in the diet which is known to have decreased is sugar. A tentative conclusion on this evidence must be that a low-sugar diet decreases the chance of caries.

With regard to the caries figures of the Enontekio and Inari Lapps it is significant that in 1945 the former moved over to Sweden, where they fed well by European standards (with plenty of sugar and vitamin-fortified margarine), while in their homes after their return they were able to trade with smugglers travelling between Norway, Finland, and Sweden who largely carry spirits, sugar, and margarine. So in addition to their vitamins A and D intake (contributed mainly by the margarine and fresh fish) being as high as, or possibly higher than, that of the Inari Lapps, their sugar consumption also was much higher. Now since the state of their teeth is so much worse than that of the Inari Lapps, they must have been subjected to factors favouring decay to a much greater extent than the Inari Lapps' teeth. In this case a high-sugar diet might be incriminated.

### Summary and Conclusion

The changes found in both Fell and settled Lapps fall in line with other wartime studies and the conclusion of Toverud (1951) that "the knowledge gained through the greatest dietary experiment forced upon us strengthens the value of more natural foods and less of easily fermentable carbohydrates in the prophylaxis against dental caries."

The teeth of 92 settled and 11 nomadic Lapp children were inspected for caries and surface hypoplasia.

The state of the teeth is compared with that existing in 1939.

An attempt is made to correlate the changes found in the teeth with the alterations in diet during the intervening period.

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## CHILDREN'S NURSING UNIT

BY

JOS. A. GILLET, M.B., Ch.B., D.P.H.

Medical Officer of Health, County Borough of Rotherham

Following on a high infant death rate in Rotherham during the winter of 1948 and early 1949, considered to be largely due to cross-infection in hospital, the health committee in March, 1949, approved a scheme for the establishment of a children's nursing unit as part of the home nursing service. It was to be at the disposal of the family doctor as a first line of defence so that a child could be nursed at home in its own environment, except when conditions were such as to make this impossible, or when special treatment necessitated removal to hospital. It was also appreciated that the value of the education of the mother in practical preventive methods and treatment during illness, with the necessary equipment, even in what might appear at first sight to be hopeless domestic conditions, would ultimately be of benefit to the community and that such action would help to reduce the pressure on hospital accommodation.

### Preparations for the Scheme

Authority was given to obtain special nursing equipment, including infants' clothing, treasure cots, the necessary gowns, masks, storage cupboard, and nursing bags. Some of this equipment was given to the service, the treasure cots being presented by the Rotherham District Nursing Benevolent Association; and the children's nightgowns, coats, vests, etc., were either knitted locally or received in gift parcels from New Zealand, the remainder being purchased.

One of the Queen's Nursing Sisters on the home nursing staff undertook a postgraduate course covering children's diseases, and she was made responsible (under the direction of the home nursing superintendent) for this special service. Later on in the year, a second nurse received similar training. During 1952 both nurses undertook further hospital duty as refresher courses.

The doctors practising in the town were informed of the facilities available and the unit began to function in June, 1949. Cases are notified direct to the superintendent, usually by telephone by the general practitioners, and the special home nurse visits the home to assess whether the case is suitable and what equipment is needed. The equipment is kept in the nurses' home and special containers are packed and sterilized ready for use in infectious cases.

During the winter months cases are so numerous that the two special nurses are unable to deal with them all, and each home nurse attends the overflow cases on her district, giving a specially detailed report on all cases after each visit. Additional assistance is also given to the unit by the Queen's candidates as part of their training. The frequency of visiting depends on the child's condition; often it is necessary to pay three or four visits daily. The home nurse is in frequent consultation with the general practitioner, who is informed immediately if the child does not appear to be responding to treatment. The parents are encouraged to contact the nurses' home if they are unduly worried about their child's condition, and a nurse (usually the superintendent) pays a visit immediately. Night calls have been very few, and it is felt that the assurance of a visit from the nurse at any time removes a good deal of the parents' anxiety.

### Equipment

Details of the equipment now used by the unit are as follows: 4 treasure cots; 1 dozen sheets; 2 pillows; 3 enamel pails; 6 wash basins; 6 enamel trays, 6 by 4 in.

(15 by 10 cm.); 6 "stay bright" measures, 1 pint; 6 receivers and 6 gallipots; thermometers; rubber gloves; masks; gowns; nightgowns and vests, 1 dozen of each (to be loaned out); 1 dozen towels (to be loaned out); nightgowns and vests to be given away (these are gifts from the Women's Voluntary Organizations in Australia and New Zealand). All new garments are made specially for us.

The special tins for use in infectious cases, such as measles, scarlet fever, ophthalmia neonatorum, and pemphigus, contain all the necessary equipment for nursing the child, so that the nurse's bag need not be taken into the sick-room. The tins contain: gown, mask, gloves, envelopes, message papers and chart, syringe and needles, thermometer and lotion, boric crystals, surgical spirit, powder, "dettol," undine, and pipette. Relatives usually send to the nurses' home for the cot (which folds up and is easily carried), sheets, and pail. In infectious cases the special tin is either taken by the nurse or called for by a relative of the patient.

When the child is convalescent the nurse ceases to attend and all the articles on loan are returned to the nurses' home, with the exception of clothing for small infants, which the parents are allowed to keep, much of it having been received as gifts from New Zealand and from interested local people. All returned articles and equipment which have been into the child's home, whether used or not, are soaked in 5% solution of dettol for 24 hours and then removed and boiled. The cot canvas, sheets, and towels, after being hung outside to dry, are sent to the laundry in the usual way.

**Details of Work Done**

This children's nursing unit, which has now been in operation for over three and a half years, has proved to be very popular with the general practitioners in the area, and is widely used by them. Table I gives details of the patients

TABLE I

	1949	1950	1951	1952
Cases nursed .. .. .	455	621	508	713
Visits paid .. .. .	4,151	5,870	4,150	5,837

under the age of 15 years who have been treated, and of visits paid by this unit from its beginning in 1949 up to December 31, 1952.

Details of the work of the children's unit during 1952, when 713 cases were nursed, are given in Table II.

TABLE II

	Under 1 year	1-5 years	6-15 years	Total
Brought forward at Jan. 1, 1952 .. .. .	1	8	1	10
New cases, 1952 .. .. .	225	284	194	703
<b>Total .. .. .</b>	<b>226</b>	<b>292</b>	<b>195</b>	<b>713</b>
Result of treatment:				
Convalescent .. .. .	192	276	184	652
Removed to hospital .. .. .	19	4	6	29
Died .. .. .	—	—	—	—
Removed or transferred .. .. .	1	5	3	9
Remaining on books Dec. 31, 1951 .. .. .	14	7	2	23
<b>Total .. .. .</b>	<b>226</b>	<b>292</b>	<b>195</b>	<b>713</b>
Visits paid .. .. .	2,038	2,268	1,531	5,837

Table III gives details of the "infectious" cases nursed during 1952 and their disposal.

A comparison of the infant deaths occurring in 1948 with those of 1952 is given in Table IV. When considering these figures it must be pointed out that the establishment of a premature baby unit some two years ago has effected some reduction in the number of deaths from prematurity, but there has also been a most striking reduction in the number

TABLE III

	Cases	Visits	Convalescent	Hospital	Died	Removed	Remaining on Books 13/12/52
Pneumonia .. .. .	67	537	59	3	—	—	5
Bronchitis .. .. .	119	990	109	5	—	1	6
Gastro-enteritis .. .. .	6	62	6	—	—	—	—
Measles .. .. .	23	197	22	—	—	—	1
Measles and pneumonia .. .. .	9	76	9	—	—	—	—
Measles and bronchitis .. .. .	1	1	—	—	—	—	1
Scarlet fever .. .. .	1	1	1	—	—	—	—
Chicken-pox .. .. .	1	7	1	—	—	—	—
Pemphigus .. .. .	3	11	2	—	—	—	1
Ophthalmia neonatorum .. .. .	1	12	1	—	—	—	—
Whooping-cough .. .. .	5	56	5	—	—	—	—
Whooping-cough and pneumonia .. .. .	1	3	—	1	—	—	—
Poliomyelitis .. .. .	1	3	—	1	—	—	—
<b>Totals .. .. .</b>	<b>238</b>	<b>1,956</b>	<b>215</b>	<b>8</b>	<b>—</b>	<b>1</b>	<b>14</b>

TABLE IV

	1948	1952 (provisional)
Total infant deaths .. .. .	114	43
Infant mortality rate .. .. .	70	32
Deaths from prematurity .. .. .	27	12
Deaths from enteritis .. .. .	31	—

of infant deaths since the establishment of the children's nursing unit. It is worthy of note that the overall incidence of enteritis in Rotherham also fell during the same period, possibly due to the nursing of cases at home instead of in hospital.

Apart from figures, the experience gained has shown that it has been well worth while to undertake this special children's work, some of its advantages being: (1) the child remaining at home in familiar surroundings is less liable to fret; (2) the danger of cross-infection is lessened; (3) the mother is encouraged to help in the nursing of the child, and the health teaching to parents and relatives done in these cases is considerable; (4) the call on hospital beds for sick children has been reduced.

Sixty delegates attended the seminar on foot health organized recently by the Central Council for Health Education at St. John House, Collingham Gardens, London. The seminar was for medical officers of health. The first lecture was given by Mr. T. T. Stamm, F.R.C.S., on "Development and Function of the Foot." Mr. Stamm followed this lecture with another the following day on "Foot Examination and Foot Defects." In the afternoons parties of delegates toured two factories to see shoes made by machine mass-production and hand methods. Lectures and demonstrations on foot health education methods and media were given by Dr. W. Emrys Davies. The discussion panel took as its subject "Foot Defects—Where Does the Cause Lie?" Members of the Panel were Dr. E. K. Macdonald, Medical Officer of Health for Leicester; Dr. Doris Craigmile, Assistant Medical Officer of Health, Ealing; Mr. Edward Rayne, Director of H. & M. Rayne, Ltd. (shoe manufacturers); Mr. J. Korn, Principal of the Cordwainers Technical College, London; and Mrs. Alice Buxton, Liaison Officer to the Foot Health Educational Bureau of the Central Council for Health Education. One group queried whether any available footwear was suitably shaped or priced for the growing child, economy and high prices being a recognized cause of shoes being worn too long until they are outgrown. Lieutenant-Colonel J. M. Milne, Adviser in Physical Medicine, R.A.M.C., reported that 80% of the Army intake showing foot defects were handed over to the physical training instructor, and that 60% of defects were postural or connected with the feet. Foot infections, he said, were not a major problem.