

# Dr. O'Meara Reports on Halton Dental Project

By B. J. O'Meara, DDS, DDPH

Over a period of years, more and more local school boards in the county have assumed the cost of dental treatment for the children in the primary schools. Now practically all rural school children have this service. This program has been made possible by the provincial Department of Health, making available funds for this purpose. The Department pays 30 per cent of the cost of treatment. Locally, agreements have been made between the local school boards and the practicing dentists whereby the dentists do this work at a moderate hourly rate.

With free dental treatment available, one would think that Halton County School children would be dentally perfect. However, this has not been true. By far the most common defect found in school children has been dental decay. It became obvious that children were going to the dentist only when something drastic occurred, such as an aching tooth, a dental abscess, a huge cavity or when urged by the school nurse or physician. The treatment program had become solely a reparative rather than a preventive service.

Under the new federal health grants made available in 1948, funds were allocated for strengthening existing health services, initiating new services, and studying public health problems. It was obvious that Halton county offered a unique field for the study of dental public health problems. The Provincial Department of Health made available ample funds from federal health grants to allow us to attack this major problem. This grant was to be used for several purposes: (1) to assess the magnitude of the problem by careful dental examination of school children; (2) to promote better health habits by an intensive program of education; (3) to evaluate the results of the treatment program; (4) by correlation of the educational and treatment service, to attempt to improve the dental health of our children. It was not to be used for payment for treatment.

It is emphasized that the entire funds for this work are derived from federal health grants and are not a charge on the local taxpayer. The federal authorities will be amply repaid if reliable information can be obtained from this and other surveys. It is a long range project and results may not be apparent for some years. The new dental program made possible by the federal grant began on October 1st, 1949. Between that time and the end of June, 1950, all the primary schools in the county were visited and all the students, except those absent at the time of the visit, were examined. In this way a total of 5,063 children were seen. It was intended to examine the secondary school students too, but there was insufficient time. It should be possible to include these next year. Also, it is hoped later to see as many of the pre-school children as possible. This is of the greatest importance.

An unusual feature exists in Halton County in that two-fifths of the primary school population can obtain dental treatment from private practitioners at no direct cost to themselves. The accounts are paid by the respective school boards, 70 per cent from local taxation and 30 per cent from a Provincial Department of Health grant. The parents of the remaining three-fifths of the school children pay the cost of dental treatment themselves. There is a situation present, therefore, which affords the opportunity of a study of the value of a free dental treatment plan. In this report, for the sake of brevity those whose treatment has been paid for by the school board have been classified as "Aided" while those who pay for their own treatment have been called "Unaided."

The aided scheme has been in use in nearly all the schools of the four townships of the county for varying periods of time. The five towns of the county have not made use of it until January, 1950 when one, Georgetown, introduced it. As the children of that town were examined before that date, this would not affect the comparison. Of the four townships, Nelson has used the plan since 1943. However, the average per capita cost of treatment for the first five years, until 1947, was less than \$1.00 for each school child. In 1948, it was nearly \$4.00 per head.

Trafalgar Township began the plan in 1946 but the cost for the first two years was again less than \$1.00 per head. In 1948 it was over \$2.00 and in 1949 \$7.00 per head.

Essex Township introduced the plan in 1948 but little use was made of it until 1949 when the cost was \$6.42 per head.

Nassagaweya Township, much the smallest of the four, brought in the scheme in 1944, and here alone, the school children seem to have availed themselves of the opportunity from the start. The annual cost per child was \$2.25 per

head. It might be added that the dental health of these children is generally better than elsewhere, although there is no dentist in the township.

It is noteworthy that, although a public health dental officer was not appointed until late in 1949, there was a very marked increase in the amount of treatment carried out in 1948 and 1949. It could not be just a coincidence that the Halton County Health Unit came into existence in September, 1947 and an adequate staff of public health nurses regularly visited the school. It is surely an excellent example of what public health education can do, and of how useless any such treatment plan is unless it is related to an educational program. In attempting to evaluate the benefits of this aid plan it is necessary to consider any other factors which may influence the results. The more important of these are:

(a) Economic Status: Although this would not affect the aided population, it would affect the remainder. The aided schools are mainly rural or semi-urban while the others are all urban. However, the towns in the county are generally prosperous and the economic level fairly high. The number of children unable to obtain treatment for financial reasons would likely be small.

(b) Availability of Dental Treatment: Because the unaided schools are generally in the towns, these children have a much greater advantage. In rural areas the difficulty of obtaining transportation to the towns for treatment is undoubtedly an important factor. As in other parts of the province the number of dentists is inadequate to cope with the work. However, Halton County is probably better served than many other districts. There are 16 dentists in the County, at least 2 in every town, besides those in the near vicinity. All the dentists in the county are giving treatment to children, some to a greater degree than others.

(c) Nutrition: The economic status of the population would also have some bearing on nutrition. However, there is a danger of over-emphasis in this respect. Generally speaking, one would expect the children in rural areas to have a better diet than those in the towns. Milk, vegetables and fruit are more readily available. In spite of this, the teeth of 5 and 6 year old children were found to be ra-

ther worse in rural than in urban areas.

(d) Environment: From a dental viewpoint the main importance of this is the availability of the candy store. Research into the cause of dental caries in later years has demonstrated a very close relationship between concentrated sugars such as are found in candies and soft drinks and tooth decay. Children in the towns have far greater access to these than those in the country.

The effect of all these factors and others on the findings is very difficult to estimate. The problems of nutrition and of excessive sugar consumption are of course inter-related and the solution is nutritional education. The need for this can not be too greatly stressed.

When one comes to consider the effects of this aid plan as compared with the remainder, it must be borne in mind that it has really only been in operation for from 2 to 2½ years at most.

Apart from Nassagaweya Township, which has only one eighth of the aided school population, the amount of work done before 1948, at less than \$1.00 per head per year, can have been little more than emergency treatment, i.e., extracting of aching teeth. No great differences can therefore be expected.

We have deliberately not included a mass of statistical data, rather, we have attempted to show the broad picture, for those who may have a special interest in the subject, the detailed findings are available. The inclusion of detailed figures of the actual findings of the examination in this report would be too confusing. However, certain findings are significant. The main features are as follows:-

(a) Although in the 6 year age group, those in the aided schools are slightly worse than in the unaided, the standard of all of them is bad. Of 394 children just commencing their school careers, there is an average of 3 untreated cavities and only one filling per child. In addition, for every two children examined, there is 1 tooth already lost or too badly decayed to fill. While such a condition exists it will never be possible to improve materially the dental health of the school population as a whole. Free treatment facilities should be offered to the pre-school child, and parents should be persuaded by every means possible to take their children regularly to the dentist from the age of 3. If the school boards feel this would be too costly, then Grades VII and VIII could be exempted from the scheme. By the time a child who has been receiving dental treatment from an early age, and who has had dental education for several years, has reached Grade VII, there is a great possi-

bility that he will then continue dental treatment at his own expense. This problem is urgent and should receive attention.

(b) By the age of 6, both groups, aided and unaided, are almost identical. In the 7 year group, of 651 examined, there is an average of 3 fillings per child of the aided group. Unfortunately the number of cavities, at about 3.5, remains high in both.

(c) From the age of 8 to the age of 11 the dental condition of all the children appears to improve but this is due to the fact that the remainder of the deciduous teeth are being lost naturally during this period. It is therefore difficult to make a comparison. The permanent teeth however are of course unaffected by this transition period, i.e., they are not lost naturally like the deciduous teeth. There is a slight but steady increase in the number of fillings in the children of unaided schools, and a slightly greater decrease in the number of cavities, as compared with those of the unaided schools. The number of permanent teeth which have been lost or are unsaveable also shows a slight but significant difference.

(d) From the age of 12 onwards, it is only permanent teeth which are being considered. All the deciduous teeth have been lost. The findings continue to show a definitely better dental condition among the children from the aided schools.

(e) Although the findings for the 15 year age group may not be too reliable because of the smaller number (79) examined, it does give indication of the condition of the students on leaving primary school. It was noted that the number of fillings is much the same in both aided and unaided schools. This may be because they are getting more conscious of their appearance and health at this age. In any case

it is certainly an indication that the unaided student is willing to pay for the cost of treatment at this time. In spite of it, these have still twice as many cavities untreated and nearly one more permanent tooth per child already lost or unsaveable.

The findings show without any doubt that the aided scheme is giving benefit and procuring better dental health for the children. With more extensive dental education which is now being carried out, this improvement should be progressive among all the school population. Future annual examinations will show if this is the case. It must be remembered that as more dental treatment is carried out, so will the cost increase. At the present time, even among the aided schools, only 43 per cent of the necessary treatment is being done. In the unaided schools even a smaller proportion of it is carried out. This does not include pre-school children. The school boards must therefore be prepared to incur heavier expenditure to

cope with it. How much heavier it is likely to be difficult to estimate, but there are certain definite limitations. The major one is the quantity of work the dentist can perform. The treatment of the adult population takes up much of their time and they are seeing many more children now than formerly. A saturation point must eventually be reached, and they are probably near to it now.

At the present rate of tooth decay it will never be possible to catch up with the work. It is for this reason that the preventive aspect of dentistry is being stressed so much. It would be far better to reduce the need for dental treatment by education in nutrition, in the need for the reduction of the sugars, and in oral hygiene. A treatment service such as is being offered to the aided schools is excellent but, to have any lasting value, it must be augmented by dental education.

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# Around the Home



**TOM GARD'S NOTE BOOK**

One of the best things about going away for awhile is coming home. Roughing it in the wilds or with fussy relatives sure makes you downright appreciative of your own comfortable furnishings... and you see your dwelling with more discerning eyes. When you live with your things continually they seem to fit like an old shoe and you do not see their shortcomings. As I came up the front walk I decided I just had to get busy and finish up those boxes for the veranda pillars. Artistically planted, they will take away the bareness of the front steps.

**Sit in The Shade**

Is shade at a premium in your yard? One solution to the problem seen on our holidays was a portable canvas shade. Inch water pipe joined by standard fittings had been used and painted dark green. Bright awning material covered the top and was held in place by short tie strings. This particular shade was moved from place to place to avoid wear on the grass and to catch any breeze that was blowing. By covering the sides with the same material the shade could double as a sleeping quarters for the young fry.

**Dual-Purpose Barrel**

Of all the things that puzzle a gardener, possibly more are confused by the statement, "Give liberal applications of liquid manure" than any other. This is not a difficult procedure when handled properly. Bury a water-tight barrel in the ground to the rim. Fit a tight lid near the top from which a hurler bag can be hung. Fill the bag with well-rotted manure (preferably sheep manure) and place it on the hook. Almost fill the barrel with water and allow it to stand for 24 hours before it is used on your plants. Place the barrel directly under the down spout from the eaves or in a secluded corner of the garden if you don't mind carrying the water a little further. Refill the barrel as the liquid is used.

**Coconuts**

Empty coconut shells can be put to many uses. The best one I have seen lately was helping overcome the housing shortage for robins. Placed in the right spot, half a shell makes an ideal base for a robin's nest.

## BOXES OF BEAUTY FOR FERNS OR PLANTS



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