rooms may be concerned with matters of health. The use of bulletin boards is of particular advantage where women are employed. The supply of material for this purpose is almost limitless. It can include every subject from the care of the hair and the nails to the latest research on cancer. Excellent articles appear almost daily in our current magazines, nursing literature, and newspapers. Very often they are lengthy and written in terms difficult for the average shop worker to interpret, but they can be excerpted or rewritten in a simple form.

Many organizations throughout the country distribute without cost pamphlets and bulletins on health. Pamphlets that are too lengthy to be placed on the bulletin board may be kept in the first-aid room to be distributed to interested individuals. A list of this reading material may be kept posted on the bulletin board. To create interest in health information the employees may be encouraged to bring in articles they have found interesting. If these have news value, they can be placed on the board for others to read.

In larger cities there are health centres and clinics of various types to provide diagnosis and treatment. In Chicago we are particularly fortunate in having a large number of them. Care and advice are given without charge in some, while in others fees are regulated on a sliding scale. In most instances ill employees are urged to see their family physician, but occasionally it is advisable to send them directly to a clinic for an examination. The nurse in industry should know the location of health centres and clinics and at what hours and days specific services are available. Employees often request the name of a physician or surgeon special-ising in some particular field, and it is well for the nurse to have a list of specialists in various fields. In smaller communities where few or no health services are available the nurse can often arrange with the physicians of the community to treat ill employees or their families on a deferred payment plan, arranged with the co-operation of the company for which the patient works. Many employees neglect their health because of the inability to make prompt payments for medical services.

The problem of good health for industrial workers is one that vitally affects the welfare of the worker, his output in the plant, and his functioning as a citizen in the community. The nurse in industry increasingly realises that her function is not merely the care of the employee injured in the plant but should include promotion of the health and safety of all the workers in the plant and their families.—From *Public Health Nursing*.

## TRANSFUSION VOLUNTEERS.

It was stated at the annual dinner of the Voluntary Blood Donors' Association that calls on blood donors in London this year totalled 4,800—100 more than for the whole of last year. Mr. P. L. Oliver, Secretary of the London Service of the Association, said the increase was being experienced all over the country, but, fortunately, there was no diminution in the number of volunteers. Those attending the dinner included domestic servants, naval officers, tramcar conductors, omnibus drivers, clerks, M.P.s, and road workers. The Duke of York (now King George VI), patron of the Association, sent a message expressing his delight at the splendid results achieved by the members, whose self-sacrifice was worthy of every praise.

## HOW CAN DENTAL CARIES BE PREVENTED? By professor carl schiötz.

## Professor of Hygiene at the University of Oslo, Norway.

The most important problem in hygiene at the present time is caries of the teeth. And our diet is at the root of this problem. It cannot be considered as solved until we see dental caries definitely on the wane.

The position with regard to school children in Oslo in this respect at the present time is as follows: Among 25,000 examined, it has been possible to find only between 160 and 170 with perfect teeth. In other words, 99½ per cent. of Oslo's school children suffer more or less from disease of the teeth. This is surely a deplorable state of affairs.

With regard to the suggestion that the infectious diseases are the most important or central factor in dental caries, it may be noted that while this disease is on the increase, the infectious diseases have become much less frequent in childhood. No doubt they play a certain part; but it must not be exaggerated.

In our search for the factors responsible for healthy teeth, we have secured the attendance at the University Hygiene Institute of 159 of the children found to have perfectly healthy teeth. We have weighed, measured, and photographed them; we have also investigated their dietaries, from the time their mothers were pregnant till these children began to go to school. One result of this study has been the discovery that the health of the teeth of school children coming from well-to-do homes is more than five times better than that of all the children taken as a whole. Poverty, in other words, is somehow or other a factor in the genesis of dental caries.

Rapid growth predisposes to dental caries, and it is particularly liable to occur during pregnancy, childhood and puberty. Recent investigations in Sweden have shown that women are more liable to dental caries than men. There are three reasons for this. One of them is pregnancy under faulty conditions of diet, the contents of which are qualitatively inadequate. Another reason is the comparatively rapid growth of girls in relation to boys. The third reason is that the housewife is apt to deny herself food which goes to her husband and children.

In a public home for children in Oslo, a recent dental survey of 23 children over the age of three years showed that as many as 20 of them possessed perfect teeth. One of the three remaining children showed only one small fissure in a tooth. The other two children had only recently been admitted to this home. What was its secret ? Its dietary consisted of milk, wholemeal bread, fruit, etc., every day. Some 20 to 35 grams of sugar were allowed every day on the porridge and with other food. From time to time sweets were also provided.

time to time sweets were also provided. The immunity to dental caries enjoyed by these and other children, may be traced to (1) a daily supply of foodstuffs containing plenty of vitamins and minerals, (2) little or no sugar in the food, or (3) a combination of these two factors. It is temptingly easy to remain satisfied with the comprehensiveness of the third explanation; but this is not a scientific attitude to adopt. We have investigated closely the conditions under which the children living in five public homes in Oslo have succeeded in avoiding dental caries much more frequently than the children living at home.

Some of these conditions proved to be common to all five homes, while other conditions existed in some homes but not in others. The conditions common to all five homes were (1) many hours spent every day in the open, some 5 to 6 hours being spent daily out of doors; (2) plenty of sleep assured by strict enforcement of early hours for going to bed; and (3) the supply every day (except in one



