COMMUNITY ASPECTS OF TRAUMA IN CHILDHOOD*

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I want to present this issue as forcefully as possible by saying that accidental injury is now the most important public health problem of the childhood and adolescent years. For example, accidental deaths from the age of 5 onwards into early middle life now account for about 20% to 40% of all deaths at these ages.

violence are actually increasing at these ages. They are in fact declining. But other causes of death to the young have been so sharply reduced that accidents emerge starkly as our number one problem today. The great epidemic of accidents is made up of a series of lesser epidemics. These wax and wane as a cause of death. An obvious example of

a cause which has been on the increase is accidents on the road. On the other hand, deaths from burns and scalds have been very considerably reduced over a period of time. But undoubtedly a great part of this reduction has been due to better treatment. How far there has been a reduction in burning accidents we just do not know. Presumably there must have been some reduction since the fall in mortality began before modern advances in treatment.

Within the age of youth the amount of risk and the kind of risk changes. Mortality is at its highest in the young child, although reported deaths from violence in infancy include many from suffocation which are only doubtfully to be attributed to mechanical causes.

In a survey dealing with the incidence of accidents in the young child, it was found that the risk of injury is small before the child can sit up, but increases when he sits, and reaches a peak when he can walk and is unsteady on his feet (Rowntree, 1950).

As the child becomes mobile while still uninformed of danger, new hazards beset it in and around the home, which is its world at this stage. These are not only the dangers of fire and water; already at an early age the road begins to take its toll. For

FIGURE.—Fatal accident rates per million and proportion per cent. of all caused, by sex and age in England and Wales in 1950.

This situation is true for all of the so-called advanced countries today. A recent World Health Organization publication on accidents in childhood shows that anything from 25% to 37% of all deaths at ages 1-19 are due to violence (World Health Organization, 1957). It is not that deaths from

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example, a study has been made of accidents which occur when a stationary vehicle moves off. In a recent two-year period 160 deaths of this kind occurred in children under 9, 126 of them to children under 4. These grim accidents were mostly concerned with local delivery vehicles at or near the home of the victim (Garwood, 1956).

There has been a substantial reduction in accidental death rates among very young children because of the reduced mortality from drowning and from burns and scalds, whereas with school children and adolescents road accidents have effectively counterbalanced reductions elsewhere. With advancing school age the child ventures farther from home and the bicycle comes into prominence as a fatal instrument. The trend continues into adolescence and mortality rates increase as compared with school age. Other instruments of destruction, such as the motor cycle, appear on the scene, and adventure and sport take their toll (Glanville, 1954).

So far I have been considering the effects of accidents mainly in terms of mortality. But for every death there is some unknown but considerable number of accidents leading to pain, loss of time at school and work, and sometimes to permanent disability.

Valuable evidence has come from a study made by Lee (1955) of the records of boys coming up before National Service Boards. From these records he calculated the proportion who had had accidents in their lives of varying degrees of severity. He also estimated from the Registrar-General's mortality rates for accidents how many boys were, so to speak, missing from the group because of earlier death due to violence. He estimated that among this group of 18-year-old boys seven per 1,000 were missing through death, 10 per 1,000 were excluded as unfit for National Service because of disability left behind by past accidents, 16 per 1,000 were enlisted but put into low medical categories due to disabilities of the same kind, and 89 per 1,000 showed a record of an accident at least of the severity of a fracture without any residual disability. (This last figure is certainly an under-estimation.) This is a record of pretty considerable damage. Accidents were found to be much the commonest cause of orthopaedic disability leading to rejection for National Service. An estimate was made of the comparative damage done by accidents and poliomyelitis to a hypothetical group of 5,000 male babies by the time the eighteenth anniversary of birth is reached. Of these 5,000, one would have died of poliomyelitis as against 33 deaths due to accidents, and 12 would have been so disabled by

polio as to be unfit for National Service as compared with 42 from accidents. Incidentally, there seemed, from the National Service Board records, to be evidence that some of the young men disabled by accidents had been inadequately rehabilitated after them and unwisely placed so far as their jobs were concerned.

More than other conditions accidental injuries leave behind the feeling that they should not happen. Yet because human behaviour is so difficult to change and control, effective preventive policies are difficult to develop.

Prevention may be thought of at three levels: (1) Impersonal environmental control: at this level improved neighbourhood planning and road design could do a great deal to keep children off the road. Yet as a nation we seem as impotent to make the major environmental changes necessary as we appeared to be a hundred years ago in the field of sanitary control. Better standards of housing and house design can diminish risks within the home, and Scotland with its unenviable record of overcrowding is still virtually a barbaric country in this respect.

(2) Control of the personal environment, by which phrase I mean the equipment we use in everyday life, and here improvement could be achieved quickly if we really want it. The twin destroyers of girls, the open fire and the inflammable dress, could be brought under control within a year or two if we were determined. Our record in this respect is much worse than other European countries which heat their houses in a more sensible fashion (World Health Organization, 1957). In fact child death and mutilation by fire is an old British custom no less cruel than the Hindu tradition of suttee. However, it looks as though our shameful complacency is shaken at last. The 1952 Heating Appliances (Fireguards) Act, and now the proposal to designate and mark safe fabrics, are steps in the right direction. But resistance to change remains deeprooted, as Wallace (personal communication) has found in his efforts to interest manufacturers in safer designs for teapots and other household utensils responsible for scalding. There is a really encouraging movement towards greater safety in car design. The voluntary movement to encourage bicycle riding efficiency tests for children is doing useful work too; but should such tests not now be compulsory?

(3) Control of personal behaviour: this remains much the most important and yet difficult field for preventive work. I am sure that the child health and education services have already achieved a good deal in teaching children and those who look after

them to be more safety minded. But there is still a tremendous need for well-planned, well-sustained, continuous, patient work. Perhaps as a profession we should take the lead in sponsoring a campaign to infiltrate television and radio subtly, so that continually through the ordinary programmes the public are educated in simple known measures of accident prevention. We know enough to do much already, but there are many things about which we need to know more. We need to know more about how to arouse and maintain interest in this subject. We need to know more about the families and children who are particularly susceptible to accidents; who are the accident-prone children and parents. Douglas and Blomfield found that children experiencing more than one accident in his child health survey (1950) seemed to be larger and probably more active than the rest; they were either more intelligent or more stupid than average. It has been suggested that children involved as pedestrians in road accidents come more often than would be expected by chance from careless and neglectful families. We need more information about the children at greatest risk of accidental injury so that we can direct special efforts to educate them and their guardians.

We need to know more about the incidence of accidents in our own areas, to see the epidemic patterns of accidents, so that we can relate policies to the local situation. We need to know more

about what happens to the injured after the accident has happened in terms of first aid, duration of hospital treatment, amount of time lost from school and work, rehabilitation and the amount of residual disability.

Dr. Seiler, the Medical Officer of Health for Edinburgh, has done pioneer work in Edinburgh in studying home accidents (Seiler, 1956, 1957; Seiler and Ramsay, 1954). And recently, motivated by Mr. A. B. Wallace and supported by Sir James Learmonth and Professor John Bruce, the surgeons of Edinburgh have set in motion a survey of all accidental injuries treated as in-patients in Edinburgh and a sample of those coming to out-patient departments. This survey began on April 1, 1957, and it is to last for one year. From this we hope that a picture will emerge which will be helpful in planning arrangements for prevention and medical care.

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