Round Table Discussion

CHILDHOOD ACCIDENTS AND THEIR PREVENTION

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Chairman Dietrich: We wish to direct attention to the much neglected problem of accidents in children. It is a unique one. The ultimate solution rests on child-parent relationship, and we as pediatricians are responsible for guiding that relationship. So far, the medical profession's attack on the problem has been piecemeal, perfunctory and without potency. For this round table discussion, our plan is as follows: Dr. George Wheatley of the Metropolitan Life Insurance Company will present the size and shape of the accident problem, Dr. Glidden Brooks will indicate the hospital's role in the problem of accidents and outline the research needs in this field, I will briefly outline what I think is a practical theory of accident prevention, and Dr. Wheatley will sketch some areas of thought on community organization for accident prevention.

Dr. Wheatley: Pediatricians are well aware of the child accident problem. But they are apt to look at it almost exclusively from the point of view of the day-to-day treatment of pediatric emergencies. Unquestionably proper management of accidents is important but it overlooks the basic approach in solving the problem. This major concern with accident-treatment contrasts with the modern pediatrician's orientation toward disease prevention.

What are the facts? The highest accident fatality rate is found in the preschool age group from 1 to 4 years, the period during which most of the children spend more of their time in the home environment under closer supervision than any other period in their lives. The remarkable conquest of the common childhood diseases has sharpened our focus on the child accident picture. In preschool age children the drop in mortality rate for all diseases combined for the period of 1930-1947 has been almost 70%. Over the same period and in the same age group, the accident death rate declined only 23%. The accidents which occur more frequently in the 1 to 4 year age group are fatalities caused by motor vehicles, closely followed by those resulting from burns and conflagrations. These causes combined account for more than 60% of all fatal accidents in this age group.

About one fourth of all fatal accidental poisonings are in children of preschool age. Most of these are concentrated in ages of 1 and 2 years. This is, as we know, a particularly inquisitive period. In most cases, the fact that such young children were able to get at known poisons indicates some adult's carelessness, not only in handling the poisons, but also in supervising the child. Many other cases indicate that parents simply do not realize the number of substances in an ordinary home which can poison a small child if he manages to get hold of them. Some of these fatalities would probably have been avoided by more careful supervision. A knowledge of first aid might have saved others. For similar reasons, fatalities due to choking are by no means rare. As with accidental poisoning, the age when these deaths occur is significant. About 9 out of every 10 deaths due to ingestion of poisons or choking on a foreign body are in children aged 1 and 2 years.

Chairman Dietrich: I think it is worth emphasizing that while the death rate in children from all causes has dropped over 90% in the past 50 years, the rate from accidental death has been too nearly constant. At the present time, and for all age groups after 1 year, accidents are the most common cause of death. Over 12,000 children are "accidentally" killed in the United States each year.

Dr. Brooks: The topic assigned for me to discuss is "The Importance of the Problem from the Standpoint of Hospitals and Communities—Research Needs."

As in any research activity, the basic and primary need is, of course, as accurate and complete a measurement of the problem as is possible. Such a measurement then makes possible the intelligent


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delineation of areas both for further study or for direct action. Dr. Wheatley has just presented data of the type to which I have reference and has spoken of the need for more statistics, especially from the standpoint of morbidity. I believe that it is necessary for each community to develop a system of collection of data so that it may study its individual problem of accident prevention more effectively. Assuming that one is developing a system for collection of statistics having to do with childhood accidents in a community, some of the data one would obviously want are the number of accidents, the seriousness of the type of accident, its location, the age of the child involved, and something about his general social and economic background.

Other factors which might appear in our data have to do with the economic situation. We must have the answers to: How many children are hospitalized as the result of accidents? How long do they remain in the hospital? Who pays the hospital bill? How much time from work is lost by an income-producing parent?

Since most significant accidents to children come to the direct attention of the community hospital, this might be a logical place to centralize collection of such data. The hospital, after all, is the place where the doctor, the parent, the child, the police force and other groups in the community dealing with the problem of accidents meet most often.

A second general category of research for which there is need is the study of the individual child. It is in this area that we, as pediatricians, have a special obligation. For example, here is a little boy, 10 years old, named Stanley, who came to the Children's Hospital of Pittsburgh in August of this year. In the previous years he had been seen for 10 different accidental injuries. There are many such children and each requires careful, individual study before a label such as "accident-prone" can be applied. It is obvious that this boy is adventurous, but is he accident-prone, or just unlucky?

The third general area in which research is needed lies in the development of preventive measures. If we have accumulated and analyzed data about the mass of children, so far as accidents are concerned, and have arrived at a few generalizations as the result of the study of a number of individual children, we are then in a position to develop a whole series of preventive measures or programs whose emphasis and limitations are based on this data. We must, however, not be content with simply establishing a program based upon sound data but we must constantly evaluate and re-define these programs.

The fourth and final general area for research lies in the field of continued development of therapeutic measurements. These measures are designed to minimize the effect of those accidents which, in spite of our best efforts, we fail to prevent.

Finally, having developed data and programs in individual communities, some thought must be given to making such data more than locally useful. Therefore, it might be advisable to constitute some form of state or nation-wide cooperation so that a uniform system of recording, classification and interpretation of data can be developed. One might visualize, for example, a joint committee representing those national organizations which impinge upon this general field of accident prevention to children. All these activities which we have just discussed depend for their consummation upon an awakened interest in one of the most serious problems in child health today; a problem which is not only medical in its scope but requires the participation of many persons in many fields of endeavor.

Chairman Dietrich: I have been emboldened to suggest that it is possible to formulate a practical theory of accident prevention. The multiplicity of variables in childhood has apparently discouraged such an attempt, but if one deals with the means of prevention rather than the individual situations, such a formulation does not seem impossible. The two factors needed for the prevention of accidents at any age are protection and education. During the first year of life, when the child is not skillful at dodging, he must be given exactly 100% protection against burning, drowning, poisoning, crushing and mangling. At 5 years of age, both school and play remove the child from the protective devices established by the parents, and principle reliance must be placed on what the child has learned. Obviously, the years from 1 to 5, must be occupied by increasing educational experience and decreasing protection. While the parents maintain protection against the lethal and crippling hazards, they must be imaginatively and progressively teaching the youngsters the ordinary hazards of living. If we plotted the roles of protection and education in a horizontal rectangular frame representing the first 5 years of life, a reciprocal relationship between protection and education would emerge. This is the theory of accident prevention in children. Its practical application in the home requires forethought (stimulated by pediatric counsel), time (borrowed from the time we allow parents to
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Dr. Joseph S. Wall, Washington, D.C.: I was asked to speak on a television program during this meeting and prepared something on the hazards in modern child life. We had a program depicting accidents by automobile and by poison, and in answer to Dr. Wheatley’s question, we had about 260 poison cases at the Children’s Hospital in Washington in a 4 year period, 2 of which were fatal. I believe that we can do a great deal in the way of education of the child, his parents and his physicians. Physicians are the ones who come in contact with the results of accidents; they ought to know something about accidents. They ought to know what produces accidents, through research, and then put in practice what we have learned. Once a year we put on an accident conference during our Sunday morning conferences in the hospital. I see no reason why the pediatric group in any county medical society couldn’t put on something with all the membership in relation to this point. Then I think we could reach others through the lay organizations that were mentioned here, and then through television, such as we had this morning.

We must impress the public but we must not make it too boring. Here is a pair of pants that look as if they have leopard spots, because they were on a child when he drank clorox. Now I think if we could show the mothers some of these things it would make an impression on them and teach them something. I do think that we want research. The organization conducting research in our town is the Red Cross and if we could determine through research what are the environmental factors causing accidents and what is the trigger mechanism that sets them off we might be well repaid.

Dr. Herman Marks, Providence, R.I.: I agree essentially with everything that has been said except I wish, Dr. Dietrich, you hadn’t been in such a hurry to use the eraser on “mental health” because I think there is a very definite relationship between childhood accidents and what we may loosely designate as “mental health.”

We have been shown a graph to illustrate the relative importance of protection and education in the prevention of accidents at various age levels. I submit that the degree of protection and education against accidental hazards that parents give to children and the extent of protection and education children accept from parents are determined by the nature of the parent-child relationship. All accidents are not really “accidents” as studies of accident-prone adults and children will show.

Dr. Wheatley: First, there should be a sponsoring agency. It could be a committee of the local medical society or it might be a health department with a health officer who understands the problem and has a plan to reduce the child accidents. Some communities have safety councils which have so far been partially interested in industrial safety problems and sometimes this interest reaches the schools, but they have had no access to the age group where we see a large part of this problem. They might conceivably be the sponsoring agency but they do need the help of the other agencies in the community. The sponsoring agency should call a meeting of other interested organizations. At a meeting, the sponsoring agency should outline the possible activities that the community groups might carry out. Representatives from the health department, parent teacher association, tuberculosis association, etc., would be expected to tell what they could do to help. One important result of such a meeting would be to form a child safety committee to carry on the activities outlined at a meeting. For example, what could a medical society do? Suppose you are representing your medical society. One of the unique contributions of the physician is through his hospital. What kind of accident facts can be obtained through the hospital? How should the records be kept? Has your hospital considered accident prevention as an ideal medium public relations project?

Another way to bring accident prevention program to the fore in the hospital is through conferences to discuss accident cases. These meetings would be comparable to the pathologic conferences or history meetings. Not only the treatment, but the preventive, economic and social aspects of the cases should be discussed.

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even ascertain with certainty, how many mothers were motivated to leave their homes by patriotism, for financial gain, for change of scenery, or for unconscious rejection of their children.

We may lay down rules to minimize accidental hazards and to reduce their incidence and this is all to the good and commendable. But it is well to remember that we are just beginning to learn about the children who, without being aware of it, seek injury to gratify certain complex instinctual needs and parents who in equally neurotic ways somehow can neither afford their children nor wish to give them the education to prevent sometimes frequent and sometimes tragic accidents. As pediatricians, we are in a particularly strategic position to observe and sometimes modify some of these unhealthy parent-child relationships that may contribute to "accidents" in childhood.

*Dr. Victor C. Vaughn, III, New Haven, Conn.*: May I amplify an idea which is tangential to Dr. Mark's remarks—that is, the type of discipline which we indulge in has to be oriented toward the particular kind of accident prevention in which we are interested. I have in mind the experience in our neighborhood of two 2 year old girls who have a tendency to enter the street. The practice of one of the mothers is to pick up the child and put her right back on the curbstone and give her the rest of the block to play in; whereas the other mother takes her child in the house and doesn't let her come beyond the door. Thus a limit is put on the child's activity which may seem unreasonable in terms of specific safety precautions. I think it would be lots of help to our parents if we tell them how to discipline. You don't necessarily keep the child out of the kitchen because he is likely to burn himself!

*Chairman Dietrich*: Doctor, we could have a real good argument on the latter point if we had time.

*Dr. Donald D. Posson, Rochester, N.Y.*: I don't think you need to be afraid of a community program because of the cost. In Rochester we put on just such a program about a year ago and found enthusiastic response from all the different departments, police, PTA, Red Cross, and everyone up and down the line. We put on a child safety workshop which lasted all day. This was well attended and we felt that we could carry the program right into the home through the PTA, visiting nurses and other groups.

I think that physicians themselves don't do the missionary work that they should do in preventing child accidents. Most of us practicing pediatricians go into the homes in making home calls. There is hardly a family whose home set-up we don't see. Every day I see accident hazards. A bowl of peanuts set on a coffee table where the toddler can get hold of it, unguarded stairways, boiling liquids on the stove, poisonous cleansers and insecticides—all these should be pointed out as potential sources of accidents. We have a unique opportunity as physicians to instruct in safety, and the parents will take it better from us than they will from the PTA group or anyone else. We have had several deaths from oil of wintergreen; a kind neighbor suggested that a woman give her daughter a teaspoonful of oil of wintergreen to stop her colic—she stopped the colic and killed the child.

We have recently had a death in our city from boric acid dusted into the diapers of the child to stop diaper rash; this child absorbed a toxic amount. I think we ought to work toward eliminating boric acid as a household substance because it is much more dangerous than realized.

*Dr. Harriet W. Nielsen, China Lake, Calif.*: I wonder if a list of such poisonous things as boric acid and bromates might be included in one of our journals. It might be a long time before they would appear as case histories and it might be easier to refer to a list in a journal to see if anyone else has had similar experience.

*Dr. Posson*: The University of Rochester Medical School Pharmacology Department is working on a pamphlet of poisons which will list these poisons by their brand names, and will try to have this available for practicing physicians and drugstores in 1951.

*Dr. Robert Warner, Buffalo, N.Y.*: I want to know how we as pediatricians can stand up and be the leaders in this thing when pharmaceutical houses are putting out candy aspirins, and we know that the aspirin bottle is one of the chief causes of poisoning. We of the Academy here accept, support and sponsor these houses who put out the candy aspirin; we give out the candy aspirin. You can't teach a child the difference between one kind of candy and another and it seems to me that is and should be our duty to prevent the manufacturer of these "candy" medications.

*Dr. Donald Court, Newcastle-on-Tyne, England*: Is the hospital alone equal to the task of measuring the total morbidity from accidents in the community?

*Chairman Dietrich*: No, I don't believe it is, particularly in a larger community, but it can be the
nidus from which such studies radiate. In Los Angeles, we started at the Children's Hospital, then
Miss Buckwell of the Public Health Department began studies, and we are now planning surveys of
home accidents in industrial families.

Dr. Court: What part can the law play in accident prevention?

Chairman Dietrich: We need only call attention to the traffic situation to answer that. You can
prevent some accidents by law, but for the most part it takes a great deal more than that. When we
speak of safety in industry or traffic we always refer to the 3 E's—education, engineering and enforc-
ment. You can legislate on certain types of engineering, you can say that there have to be certain
fire protective devices in a building, exits, etc., but you can't keep the tenants in that building from
dropping matches in wastebaskets. Laws can help, I think, but slightly.

Dr. Court: Are accidents of little importance in the first year?

Chairman Dietrich: Statistically they are less important than in the later years because of the pre-
ponderance of neonatal deaths, which heavily weight the figures for the first year.

Dr. Harry Horwitz, Oakland, Calif.: Will you discuss office accidents caused by the detachable
ear piece on the otoscope?

Chairman Dietrich: I am sure Dr. Horwitz has something specific in mind. The only accidents
I have witnessed are the breaking of the detachable ear piece by the children.

Dr. Margaret Limper, Louisville, Ky.: Do you think that the current psychiatric thought that
fear is poisonous to the personality has anything to do with the increasing proneness to accidents?

Chairman Dietrich: I know that I cannot give any opinion on that in a minute or 2 that would
be worth that much of your time.
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