What We Do Not Know about Accidents*

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Accidental deaths will be considered in this paper, disregarding non-fatal injuries, about which our ignorance is even greater than about fatalities. I shall discuss three things that we do not know about accidental deaths: first, how many there are; second, where they occur; and third, their circumstances.

How Many Accidents

It is quite true that at present we do not know how many people are killed by accident in the United States each year. There are two reasons for this: first, incomplete reporting within the U. S. Registration Area, and second, lack of reports from outside this area. The first is less important than the second, and the second is receiving more and more attention. One evidence of this attention is the slogan printed in red on the stationery of the U. S. Bureau of the Census: "Every State in the Registration Area Before 1930." I feel sure that the conditions which have prevented the remaining few states from entering the registration area will be eliminated within the next two years so that this goal can be reached. When it is reached and we can include 100 per cent of the population of the United States in the registration area, then we shall know more accurately than we do today the number of deaths from accidents, as well as other causes, in the entire United States.

Where Accidents Occur

Neither do we know where accidents occur. Two methods of classifying accidental deaths suggest themselves: first, a classification, by type, such as falls, burns, machine accidents, etc.; the other a classification by the place of accident occurrence. In general, the International List of Causes of Death follows the first method. With one or two exceptions the International List numbers from 175 to 196 and from 201 to 203 separate different types of accidental injury. An exception to this method is classification 186 A, traumatism in mines;

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another is 186 B, traumatism in quarries. In these two instances the second method of classification has been followed, namely, a classification by the place of accident occurrence. In other words, an accident in a mine may be a burn, a fall, a machine accident, or other kind. All of these, however, would be classified in 186 A—mine accidents.

This classification by type of injury is quite essential. It supplies information of great practical importance. Its sufficiency as a method, however, must be considered in the light of the fact that statistics covering accidental deaths are not collected for the purpose of discovering what occurred in the past, but for determining what should be done in the future. The most important task of the accident preventionist is the education of individuals that they may act safely.

There are several spheres of activity into which the life of the ordinary individual divides itself. These are, briefly, home, industrial, and public. There is undeniably a certain similarity among the various things done by an individual in any one of these spheres of activity, guided to a considerable extent by daily habits.

Paralleling this division of activity it is also true that accidents occur where men live, where they work, and in public places. Accident prevention should accordingly be undertaken with this in mind. Two accidents of the same type may be subject to entirely different preventive methods because one of them occurs in a public place while the other occurs in a home. Similarly, two accidents essentially different in type may become similar from the prevention standpoint because they both occur in a home under domestic conditions.

There is a fourth classification of accidents that is frequently made; namely, the separation of motor vehicle public accidents from those public accidents not involving a motor vehicle.

At the present time, information about accidental deaths, classified as suggested here, is not available. To be specific, some 17,000 persons died in the United States in 1927 as a result of falls. Some of these were falls of construction laborers from buildings, others were of men in factories, still others were of persons on floors and rugs in homes. We do not know the number in each of these groups; and this despite the fact that a reasonably exact distribution of all such accidents into the classes mentioned would be of the greatest value in prevention work.

Not knowing how many persons are killed each year in industries, in homes, and in public places, all we can do at present is to estimate them on the basis of meager information. And if more than one agency attempts to make such an estimate there is liable to be a wide divergence of results. Let me repeat that this information is vitally
important. It would make possible, excluding automobile accidents, a separation of each accident classification in the *International List of Causes of Death* into the three groups of public, home, and industrial accidents.

It would of course be insufficient to have such a separation only for the country as a whole. The differences from one part of the country to another are great and significant. Perhaps the outstanding one is the difference between rural and urban sections. We should want, therefore, a complete separation of the rural and the urban experience, covering type of accident as well as place of accident. At the present time we know much less about rural accidents than about urban accidents, because difficulty has been experienced in the past in obtaining detailed accident information except in cities. It is quite certain, however, that this grouping of accidents by place of occurrence would be quite different in country from in city.

We also need to obtain detailed information covering the age and sex of accident victims in each of these three classifications. These things would be of immense value to the safety worker because accident prevention efforts, to be successful, must be directed at specific hazards in specific locations. By the grouping of accidents in the way suggested, the prevention efforts can be correlated with the natural phases of human activity, with much better results than are otherwise possible.

**CIRCUMSTANCES OF ACCIDENTS**

The vehicular accident reporting card prepared and issued by the National Safety Council is now widely used. I mention this card because it illustrates the idea of obtaining detailed information on circumstances of accidents. In this case the circumstances relate to motor vehicle accidents only. Answers are required to such questions as: "What was the driver doing at the time of the accident?" and under this question such possibilities are suggested as turning right, turning left, passing standing street car, etc., all designed to throw new light on the circumstances surrounding the accident. Another question is: "What was the pedestrian doing?" Still others ask about the road condition, the light condition, and so on. If the conditions and circumstances revealed in such reports are actually used to educate motor vehicle drivers and pedestrians to avoid taking those actions which result in accidents, then we have taken a step toward the solution of the problem.

Information of this kind is needed regarding all types of accidents. Some of it is now available in connection with industrial accidents. In
a few states some of it may be had relative to motor vehicle accidents. But in both of these cases the information is far from satisfactory as representing nation-wide conditions. For public accidents not involving a motor vehicle, and for home accidents, we have almost no such information.

We need to know not only how many falls occurred in homes, but also how these falls occurred; how many of them were falls on stairs and steps; how many resulted from tripping on rugs; how many from falling off porches and from trees, etc. In the classification of home fires we need to know whether the fire was started by a match, by spontaneous combustion, by poor electrical wiring or by something else. Something can be done toward the prevention of falls by simply pointing out to persons that so many occur in homes; but much more can be done if the circumstances under which those falls occur can be accurately set forth.

The same thing is true of public accidents. We need to know how many accidents occur in falls in public buildings, how many result from flying objects of one kind or another, how many from elevator accidents, etc.

From what sources of information may we expect to obtain these facts? Several possibilities suggest themselves: A state industrial commission may be expected to obtain reports of all accidental deaths falling within the scope of the Workmen's Compensation Law. The usefulness of this information is limited to a considerable extent by lack of uniformity in Workmen's Compensation Laws and lack of uniformity between the various states in statistical procedure.

A state motor vehicle department, with a properly prepared law requiring reports of motor vehicle accidents, may obtain rather complete information on motor vehicle deaths. In some 8 or 10 states this is being done in quite a satisfactory fashion.

The insurance companies are in a position to obtain complete and accurate information on such deaths as occur to their policy holders. The limitation here is the obvious one that not all persons in the country are insured.

A review of these and other sources shows them to be inadequate for our purpose. If a complete record of accidental deaths in any state, community or nation is wanted, we must turn to the officials who receive, by law, reports on all accidental deaths.

To do this job in a complete fashion will require a certain amount of additional procedure on the part of registrars of vital statistics. This is because the death certificate, as at present constituted, will not reveal the information which is outlined as desirable for accident pre-
vention purposes. While this certificate does make possible complete reporting on deaths by disease, the detailed reporting of accidents must be accomplished by some new means.

What has been done in this direction? I shall attempt to tell you very briefly. About one year ago, A. A. Whittemore, M.D., State Health Officer of North Dakota, and an officer of the North Dakota State Safety Council, wrote to me pointing out how meager was the available information on accidents for use by the North Dakota Safety Council in its prevention work in that state. At that time he asked the cooperation of the National Safety Council in proposing some method whereby he, as head of the State Health Department and Registrar of Vital Statistics, could obtain complete and detailed information on at least fatal accidents in his state.

After an exchange of correspondence a proposal for a supplementary accident reporting form was made through my office. Dr. Whittemore, with characteristic energy, printed a quantity of these forms and immediately put them to use in North Dakota, requiring in every case of accidental death a report on this form in addition to the usual death certificate. Shortly after that time, as the news of this pioneering job spread to other states, James E. Bauman, Assistant Director of the Ohio State Health Department, wrote of his interest in doing this same thing for the State of Ohio. The proposed reporting form was brought up to date and was given a trial of several months in that state. Very recently the proposition has also been taken up in the State of Arkansas.

This suggested reporting form is far from perfect. Changes in it will undoubtedly be necessary as a result of experience. It is true, however, that the form is not a radical departure from similar work that is being done. The information requested on motor vehicle accidents, for instance, corresponds exactly with the work being done in the traffic accident field by some 60 cities and 8 or 9 states with compulsory accident reporting laws. The section pertaining to industrial accidents is the same as that recommended by the U. S. Bureau of Labor Statistics. In all other respects the reporting form was designed so that the information obtained would be comparable with any that is being obtained in other ways. A punch card for use in mechanical tabulation has also been developed; and forms are available which facilitate an analysis of the information.

It is my hope that this plan will be tried out by many more states. I am sure that as its use spreads, resulting in much new data, we will see reductions in accidents.