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Current Topics in

HOME SAFETY

As presented in the
Home Safety Sessions of the
1948 National Safety Congress

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Transactions
1948 National Safety Congress



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What's New...

In safety, as in all other human activities, the question is repeatedly asked, "What's new?"

Many answers to that question are given every year by those who participate in the various sessions of the National Safety Congress. Many new methods, devices, and ideas which later became generally accepted first were presented at a Congress session.

Because of this fact, safety directors throughout the nation have always found the Transactions of the Congress a valuable tool in their accident prevention programs. Publication of the Transactions in small volumes—one for each Section or Division—permits wide distribution of pertinent portions of the Congress material to management and supervisory personnel at small cost.

The 34 volumes of the 1948 Congress Transactions are listed on the last page. Distribution of these volumes to key personnel is suggested as a valuable aid in the safety program.

In preparing these Transactions the proceedings of the Congress have been condensed and edited for reference purposes. Complete original manuscripts, with any charts or illustrations which were used, are available in National Safety Council files. Views expressed at the Congress or in this record are those of the Congress participants, and not necessarily those of the National Safety Council.

THE HOME SAFETY CONFERENCE

This volume is a record of the sessions held at the 1948 National Safety Congress by the Home Safety Conference. The conduct of these Congress sessions each year is only one of the many cooperative activities which the Conference carries on for the benefit of accident prevention work in the home. The activities of the Conference are under the direction of the officers of the Conference listed on page 23 of this volume.

Patterns in Home Accidents

By DR. JOHN E. GORDON

Professor of Preventive Medicine and Epidemiology, Harvard University,
School of Public Health

The responsibilities of physicians in the problems presented by health and disease have been stated in simple fashion as the obligation first to prevent disease; if that is not possible, to effect a cure; and if that proves impossible, to alleviate suffering.

Doctors of medicine as a profession approach the problem of prevention in two ways. The first is through that intimate and universal relation which exists between the individual practitioner and a single patient. The advice he gives and the measures he takes are preventive medicine. The contribution that results is a major part of what doctors give to the prevention of disease, first because of the numbers of doctors and of people concerned, and secondly because the action is directed toward a determined need, a known cause, and to a specific circumstance.

But the health problems of man are not the simple summation of the ills of the individuals who make up a given population or community. The misfortunes of one act on the well being of others. There are causes of disease and injury which are beyond the control of the individual, to be eliminated only by group action. There are sick communities as well as sick individuals, and it is the community that the public health physician has as his patient. This, then, is the second way in which the physician approaches prevention, as a problem of populations rather than individuals, and the medium is known as public health.

While the primary objective of public health is to prevent disease of the community, circumstances commonly require the same compromise as in clinical medicine, the need to be satisfied with something less than the perfect result of prevention, to control or limit disease that cannot be prevented and to decrease the costs in terms of community health when neither is successful. All three are a positive contribution to prevention although in progressively lesser degree.

A successful and intelligent practice of medicine as it relates to the individual pa-

tient depends first on a clear recognition of the character and extent of a disease process, upon diagnosis, and secondly upon a treatment designed for that particular circumstance and that particular person. The same principles hold when the community is the patient.

The counterpart of the discipline of clinical diagnosis is that of epidemiology, with the obligation to evaluate the ills of a community. It is that of which I wish to speak. I have purposely refrained from using that term in the title of this paper, and I shall in the discussion to follow. After all, epidemiology consists of no more than defining the patterns of disease, but that is most important because it determines to a great degree the reasonableness and the success of measures that are applied to remedy a situation.

I would make one more point before turning to the special question of home accidents. When the problem is that of the cure or alleviation of disease in the individual, that is a function wholly of the physician through his special skills and the knowledge derived from his profession. Prevention is something else. The principle is firmly established that the control of community health is a community obligation, a team effort requiring a variety of skills, that of the engineer, the public administrator, experts in sciences allied to medicine, the social service worker, the sanitarian, the safety officer, and of course the physician.

The doctor has his contribution to make because his business is health. But depending on the nature of a community problem, his part may be dominant, as it is in the health of the new born and of infants, or secondary, as I feel it is in accidents, taking the problem as a whole. But he does have some obligation in every community problem that leads to death, defect, or disability. I venture that one of the reasons that physicians have failed to interest themselves as they should in the prevention of accidents is a failure to dissect the problem. Many fields in accident prevention are clearly the

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primary responsibility of others, the safety engineer in industry, the police and other law enforcement authority in motor accidents, these and many others in the diverse accidents that occur in public places. Nevertheless, the physician has a recognized duty in all these fields, as a technical expert and as a public health officer.

The accidents that occur in homes are something apart. This important group accounts for more deaths and far more disabling injuries than any other of the four great categories into which accidents are divided. I believe that the home is the particular province of public health and preventive medicine, and I see no other promise of successful approach except through these agencies.

If home accidents be a primary problem of community medicine then it seems reasonable to apply to its solution the techniques upon which all community health practice is based, whether the question is of the communicable diseases or cancer, diabetes, nutrition or other. In essence, this includes first an epidemiologic analysis of the broad problem and then a focal attack where the condition is determinably most pronounced, through specific educational techniques and the demonstration of preventive measures by public health nurses or other health visitors in the homes of people. The definition of patterns is the first requisite. In presenting this method of medicine as an approach to accidents that occur in homes, the suggestion is left that these techniques may be applied to advantage in other fields of accident prevention not so clearly within the responsibility of the doctor.

Objectives

The reasons for an interest in the patterns of home accidents are simple—to find out when and where these events take place; how they occur, which is to say the mechanism involved; and finally to learn who gets hurt. These matters are vitally practical. Remedial measures are costly. They are time consuming and interest flags if return is not evident. If universally applied, and blanket-wise, they lead to diffuseness of effort and minimal accomplishment.

When the death rates from tuberculosis in Detroit were judged some years ago to be beyond reasonable limits, the attack on the disease was not through a city wide

campaign, but through search for those factions of the population contributing in inordinate degree to the total tuberculosis of the city. They were found in the population of three wards, predominantly negro, where intensive control measures produced a significant improvement in the rates for the city as a whole.

The reason then for an interest in the patterns of home accidents or any other community health problem is to direct available preventive measures intelligently and specifically. The demonstration and interpretation of these patterns lead straight to the question of cause, and that is more than the simple tangible object so commonly interpreted as the sole responsible factor in disease or injury, a germ in infectious disease or the loose board in a home accident. Rather it is a combination of forces of origin from at least three sources, neither one nor the other regularly exerting the principal effect. Because this suggests that similar disease phenomena may arise from dissimilar causes, it is necessary to speak briefly of the biologic origin of disease and injury.

An Ecologic Interpretation of Mass Diseases

The direct causes of disease or injury are many, ranging from microscopic living things to chemical agents such as lead, physical agents of heat, cold, electricity, dusts, fire and a host of others. Disease may also result from the lack of an essential element, such as vitamins. Collectively these are the agents of disease.

A suitable host is essential to the production of disease, and our interest here is in man as the host. The essential consideration is in that qualifying word "suitable." Some ages and some races are individually susceptible to a disease or an injury, and there are variations from condition to condition. There are important differences in organic and psychologic makeup that relate to resistance or to the likelihood of disease. These and many others are the host factors in disease.

Finally there is the environment in which agent and host find themselves. First is the physical environment which includes climate, weather, and similar influences. Secondly, the biologic environment, the whole of the other living things with which man associates, and finally the socio-economic environ-

ment, those things of the surrounding world which arise from man's association with his fellow man such as crowding, economic status, housing, clothing and many others.

An established and satisfactory equilibrium or adjustment between man and his environment leads to the situation called health. A significant disturbance of this equilibrium results in disease or injury. The disturbance may follow through the principal action of the agent or of the host or of the environment, more commonly through their combination.

But what is the practical relationship of all this to the causation of disease or injury? How is it concerned with our particular problem of accidents? May I return to my previous example of the loose board that caused a home accident through a fall. A loose board exists. The likelihood of tripping and falling is exaggerated by its position in the *environment*, whether that be attic, cellar or front steps, by the influence of weather, of season and of daylight or darkness. The *host* may determine the whole event. A careful individual may avoid the most evident danger over long periods, while a minimal provocation suffices for the opposite sort of person. And of the *agent* itself? Big boards may cause little accidents and little boards, big ones. The cause is the summation of these three forces, and what is so frequently looked upon as cause is actually mechanism. These principles are believed to apply equally to disease and injury of the individual and to mass disease of communities.

Many facts are known about accidents in the home. Their interpretation and the relation one has to another are presumably improved by looking at them in these terms of agent, host, and environment. These are the fundamental factors in producing accidents. The mechanism of how they act together in the eventual production of an accident is an equally practical consideration—through burns, falls, crowding and what not—but not the essential question. Basically, what caused the fall?

Environment—The primary classification of accidents by the National Safety Council is on the basis of environment, four great categories to include the accidents that occur in homes, in relation to motor vehicles, in public places and where men work. Judged by the deaths that occur, home ac-

cidents are the principal factor in the health losses from accidents since they represent about 35 per cent of the total reported for the United States in 1947. The proportion varies in different parts of the country and from one time to another. The experience of Tennessee shows home accidents to be somewhat less important than those due to motor vehicles, while the data for New York State during the years 1942 to 1946 show almost one half of accidental deaths to have occurred in the home.

Geographic Distribution—Not only is the relative proportion of home accidents to all others a variable feature of geographic regions, but the actual frequency as judged by the number of such events among each 100,000 people differs from state to state. The differences in respect to all accidental deaths are well known and have been recorded over a number of years.

The less comprehensive information about home accidents shows great differences from one part of the country to another. Rates vary from 34.5 in Missouri to those of Utah with 16.8 per 100,000 population. The gross differentiation by states scarcely permits the individual community logically to judge its problem of home accidents. Much depends on the concentration and character of the population as becomes evident when the frequency of home accidents is considered in relation to place of residence, as urban, farm and rural non-farm, for home accidents are clearly a greater problem of urban communities than rural non-farm areas. The reasons are not well defined but the differences are sufficiently great to suggest material variations from community to community. This has been recognized to the extent that some few cities have determined the frequency of home accidents by political subdivision such as wards or census tracts, and states like Tennessee and Kansas have effected divisions by counties. The results emphasize the need for individualized information if communities are to apply proper stress to control measures.

Largely because of the interests of a few investigators, much is known of the inner structure of the home as an environmental factor in home accidents. The data are familiar to most and appreciation is general of the extent to which direct educational measures have followed the demonstration of the hazard pertaining to various features of home life.

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Seasonal—Accidents as a health problem are a steadily recurring phenomenon corresponding to what is termed endemic behavior in terms of disease occurrence. Little variation occurs from month to month, as illustrated by the experience of Wisconsin for 1946. Specific kinds of accidents are recognized as common to certain seasons, suffocation of infants and falls at all ages predominating in winter. Generally, the information is none too extensive and the knowledge of home accidents would profit by methods used in the study of motor vehicle accidents to determine such time factors as the influence of weekends, of holidays, of periods of bad weather, and of daylight hours as contrasted to those of darkness.

Biologic Environment—The biologic factor of environment has minor significance in home accidents compared with the dominant part in such mass diseases as malaria and rabies. That the principle holds and that environment is rationally interpreted in terms of physical, biologic and socio-economic components, is demonstrated by the home accidents associated with pets, with poisonings through action of snakes and insects, and other events related to the animate things that live with man.

Socio-economic Environment—Whatever the kind or nature of mass disease or injury, whether it be infectious, metabolic or traumatic, the part exerted by the socio-economic environment is probably the most neglected and underdeveloped of any epidemiologic influence, with accidents no different from any other. Only scattered information can be put together, that arising from the National Health Survey of 1935 being the most instructive. The quality of housing as judged by the amount of income or rental paid has been repeatedly demonstrated to have an influence on the frequency of both communicable and non-communicable diseases. It is not surprising that the same causative influence can be shown in the frequency of accidents. Indeed, many of the physical factors of environment already presented and those of the host to follow will be seen as scarcely independent in their action, but representative of a solid admixture with this component of socio-economic environment.

Host—Because the object that directly gives rise to an accident—the faulty pave-

ment, the scalding hot water, the unguarded poison—is so evident, the tendency to think only of that factor in a causative relation is completely human. An enveloping darkness or rainy wet weather, or a crowded tortuous thoroughfare are also readily viewed as contributing to the causation of accidents. But the people who get hurt—they are only the poor victims of circumstance. And yet, when we examine the question, probably more causes of accidents lie within what we choose to call "host factors"—within people themselves—than in any other of the three parts of the triad which explain the causes of disease and injury.

Age is an important determining factor. Considering deaths, the very old are most affected, with the loss of life far less during the active periods of life when conceivably the opportunity for accidents is far greater and the risks much enhanced.

The contrasting liability of the two sexes to accidents is best demonstrated by examining deaths from accidents of specific types. Those associated with falls serve to good purpose. The factor of age is well indicated, with more deaths among those of advanced years than in younger age groups. Equally striking differences are related to sex, in that younger males are far more frequently involved than females of the same age. At advanced ages females outnumber males in deaths from falls by a wide margin. Deaths from cutting and piercing instruments fail to show these differences according to age. The sex differentiation is just as definite. At younger ages males surpass females, but with advancing age the susceptibility becomes more nearly even and from persons past 75 years the differences are non-essential.

The relation of race and likelihood of death from accidents is best illustrated by the particular condition of accidental death from suffocation. Again the age differences are well marked, in that the rates for infants under one year of age are completely out of proportion to those of children aged 1-4 years, but the data are chosen to illustrate another point and that is the discrepancy in respect to race. For this unusual cause of accidental death more than twice the numbers of children succumb among colored than white.

These differences in liability to accidents among the gross divisions of the population

are striking. Each may be subdivided by all manner of other factors which make up the whole of the constitution of the host. Accident proneness is a host factor related to social attitudes and psychologic differences, a subject to be developed in detail by the speaker next to follow. The increased liability to accidents in the wake of fatigue and other physical and mental stresses, the effect of alcohol, all manner of physical defects of which those of the eye and the ear are especially significant, are further examples of host factors too little developed in relation to home accidents, despite the emphasis they have had in industrial and motor accidents.

Agent—The information about the precise agents involved in home accidents is none too satisfying because of the common confusion with mechanism by which the accident results. The mechanism is not the cause of the accident. It is the means by which it is brought about, while the causative factors have been seen to reside not only in the agent but in the host and in the environment as well.

A log lying in a park gives rise to a fall which ends in a broken arm. The log is the agent, the fall is the mechanism which characterizes the type of accident. The cause may well be a combination of first the agent as a fundamental essential, of a host with faulty vision, and a rainy day. The broken arm is the accident, the result arising from duly defined cause.

An accident may be described as due to cutting or piercing, to collision or to crushing, and yet the agent in all three instances may be a glass panelled door. Conversely, a fall may be due to such dissimilar agents as a faulty ladder, a playful pup or a misplaced handbag.

The Epidemiologic Approach to Accidents

The sort of analysis that has been described is believed fundamental to an understanding of the origin of accidents. It involves first a recognition of the agent involved; second the mechanism by which that agent comes into play; thirdly a determination of cause in terms of agent as the direct inciting cause, the qualities of the host who is involved in the accident; and finally the influences exerted by environment.

The kinds of agent involved in home ac-

cidents in urban areas are expectedly different from those of rural homes. The several kinds of people vary in their susceptibility to accidents from a single potentially dangerous agent. Either an agent or a host can be particularly unlikely to give rise to an accident under one set of environmental circumstances; under others the agent may be rendered particularly dangerous or the host unusually susceptible to injury by accident.

This is not a complicated, but a rational approach to a better understanding of accidents. It is a scheme followed by several state health departments. The National Safety Council has made a special analysis of home accidents according to this pattern. The investigation forms used in Kansas provide a simple means for recording and acquiring these data. The method needs wider application if the problem of the individual community is to be adequately defined, and better definition has the practical end of permitting more intelligent and specific programs of prevention.

The Existing Status of the Home Accident Problem

Much attention has been given in this discussion to the recognition and evaluation of the various kinds of home accidents. This is the sort of intellectual exercise that doctors call diagnosis. I have likewise made it evident that the reason we are interested in diagnosis is because it so largely determines the efficiency of treatment.

But there is always one other feature of a medical problem with which physicians are concerned, and that is the future outlook, will the patient get well and how long will it take, a question of equal significance in the mass diseases of populations and specifically that of home accidents. I wish to make three points:

The 1947 record for accidental deaths in the United States, of all kinds and from all causes, was appreciably improved over other years, but largely related to a better record for accidents of industry, of motor vehicles or those which occur in public places. The frequency of home accidents goes along year after year with relatively little change. As indicated by the number of deaths that occur, no great progress has been made in home accidents.

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Death is not the only health cost exerted by accidents or for that matter with any mass health problem. A common tendency exists with accidents, and particularly with home accidents, to base judgment entirely on deaths. To an extent this is a forced situation by reason of deaths being carefully recorded while cases are not. Estimates indicate that for every death from a home accident about 150 disabling accidents occur, a ratio greater than for any other class of accidents, the ratio for motor vehicle accidents being 1 to 32.

Death is not necessarily the most important cost exerted by a mass health problem, the common cold being in good ex-

ample. The losses from temporary disability and from permanent defect may be the more serious consideration. Just how important that is in connection with home accidents rests upon insecure information.

The problem of home accidents cannot be approached in its entirety without much better information than now exists. There is neither provision nor opportunity for official reporting of cases as is true of communicable disease. The information so necessary to an evaluation of defect and disability from home accidents would appear to be had most readily through visits to the homes of people in the course of the ordinary activities of recognized health agencies.

The Accident Prone Individual

By FRANZ ALEXANDER, M.D.
Psychoanalysis Institute, Chicago

At this conference it is not necessary to emphasize the tremendous practical importance of accidents in relation to our national economy. It is not surprising that medical men, psychiatrists, psychologists and statisticians have tried for a long time to establish precisely what is the human factor in the causation of accidents. Effective prevention requires such precise knowledge.

The contention of modern psychiatry that most accidents are not accidents at all but are caused largely by the victim's own disposition is but a confirmation of common observation. Strictly speaking, an accident is an occurrence, the cause of which is outside a person's control. A brick falling on a pedestrian's head is a completely accidental event, particularly if the pedestrian is not warned by a sign that such an event is likely to occur at a particular place.

Most industrial and traffic accidents, however, are of a different nature. The sufferer of the accident has some active part in its causation. It is popularly assumed that he was clumsy, tired, absent-minded; otherwise he might have avoided the accident.

Scientific scrutiny, however, has established that most accidents are not favored by such simple human qualities. Many scientific discoveries appear at the first moment

unexpected and improbable. So is the fact that certain people are prone to have more accidents than others, not because they are clumsy or absent-minded, but because of the total structure of their personality. The significant factor is not a particular isolated feature such as slow reaction or lack of intelligence but something much more basic which pertains to the totality of the person as an individual. Let me first mention a few startling facts concerning the human factor in accidents.

More than twenty years ago, Marbe, a German psychologist, established the remarkable fact that the person who had one accident is more than likely to have another one than the person who had never suffered an accident. Statistical studies in large industrial companies have shown that accidents are not evenly distributed among the employees, that a very small percentage of employees has a very high percentage of the accidents.

One might conclude from this that possibly those employees who have more accidents are those whose assignments are most dangerous. That this is not so, however, is demonstrated by the fact that those persons who have the most accidents in one kind of job have also the most accidents in other

kinds of jobs. Moreover, those employees who have the worst accident records in their jobs have also the most frequent accidents at home or on the way to work.

One large company which employs a great number of truck drivers became concerned about the high cost of its automobile accidents and tried to analyze the causes of accidents in order to reduce the frequency. Among other procedures, they examined the accident records of each driver, and finally they transferred those who had the most accidents to other occupations. By this simple device they succeeded in reducing the accident rate to one-fifth of its original level.

The most interesting fact in this study is that the drivers who had a high accident rate retained their accident habit in their new occupation. This shows irrefutably that there exists an accident prone person, and that accident prone individuals are accident prone in any occupation and in their everyday life.

After this highly significant fact had been established, the next problem was to determine those qualities in a person which make him inclined to have accidents.

It was discovered that the total personality structure was to be held responsible for the accident prone individual. Dunbar who, with the modern methods of psychiatry, studied a large number of fracture patients describes the accident prone person as follows: He is decisive or even impulsive; he concentrates upon immediate pleasures and satisfactions. He is apt to act upon the spur of the moment. He likes excitement and adventure, he does not like to plan and prepare for the future.

A large number of persons with accident habit have had a strict upbringing and have derived from this an unusual amount of resentment against persons in authority. Briefly, they are men of action and not of planning, persons who do not interpolate much deliberation and hesitation between impulses and their actual execution. There may be various reasons for this impetuosity, but apparently rebellion against restrictions by authority and all form of external coercion is its most common origin.

Planning and deliberation are potent factors which make one refrain from immediate rash action. The accident prone person

is essentially a rebel. He cannot tolerate even self-discipline. He rebels not only against external authorities but against the rule of his own reason and self-control.

Intensive psychoanalytic study of a few cases has allowed an even deeper insight into the intricacies of the emotional life of the accident prone person. Particularly revealing were studies which scrutinized the emotional state of the person immediately before his accident. Dunbar, Menninger, Ackerman, Rawson and others have shown that in most accidents there is an element of intention, though this intention is by no means conscious.

In other words, most accidents are unconsciously intended. They belong to that category of phenomena which were described by Freud as the errors of everyday life such as misplacing an object, forgetting to mail a letter and carrying it for days in one's pocket, misspelling or mispronouncing a word. Freud showed convincingly that such errors are not accidental in the strict sense of the word but are unconsciously intended. When a president of parliament erroneously declared a meeting closed instead of opening it, he had some good but hidden reason for having the meeting over with before it started. A person who carries a letter in his pocket for days has some definite, although unconscious, reason for not mailing it. Most accidents are similarly caused by unconscious motivations although they usually are of much graver consequence than these more harmless errors of everyday life.

Psychoanalytic investigations have revealed the nature of the unconscious motives which induce people to act in a way which invites accidents. The most common motive is a sense of guilt which the victim tries to expiate by self-imposed suffering, by self-imposed punishment. The unconsciously induced accident serves this purpose. Since this may sound improbable to you, I shall try to illustrate it with a few brief examples. Ackerman quotes the following case:

"A youth was driving his mother on a shopping tour. He begged her for the use of the car for a fishing party the following day. She refused, whereupon he fidgeted angrily, 'accidentally' stepped on the accelerator and sent the car into a ditch, injuring both himself and his mother."

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According to Rawson, 60 per cent of fractures studied psychiatrically confessed guilt and resentment in their relationship to some person in connection with the accident. He illustrated this by such revealing examples as the following:

"A 16-year-old Puerto Rican said: 'It was really my fault because Mother said supper was ready, and I was not to go out. I went out anyway, got into a wrestling match and got my arm broken. Anyway, I guess Mother's sorry she's so strict with me.'

"A 27-year-old woman was hurt sliding down a banister. She had always worked off annoyances with her parents and later with her husband by such tricks. 'Perhaps I ought to know better, but I wouldn't have been like that if they had had more sense, and had treated me more like a person instead of being so strict.'

"A secretary fell and fractured her hip. 'I asked my friends why I must be punished so. I can't remember ever having done anything wrong, but I must have done something terrible.'

The basis of this strange combination of emotions is a deeply ingrained attitude prevalent in our present civilization, that suffering expiates guilt. If the child commits something wrong, he is punished. Through the suffering caused by the punishment he makes up for his guilt and thus deserves and regains the love of his parents. The same emotional attitude is at the basis of our criminal procedure. The offender serves his punishment, after which he can return to the community as a free person who has expiated his wrongdoing. The human conscience applies this same principle within the personality. The conscience acts as an internalized judge whom we carry in ourselves, and who demands suffering for our wrongdoings. Suffering relieves the pangs of a guilty conscience and restores the inner peace.

The most common causes of guilt feelings in children are hostile, rebellious impulses against the parents. The accident prone person retains his childhood rebellion against persons in authority even in his later life. He also retains the guilt reactions originally

felt towards his parents. The combination of these two, resentment and guilt, is the most common factor in accidents. Those people who have a great deal of this self-punitive urge constitute the majority of the accident prone individuals. The guilt feelings are convincingly revealed in the frequent question of the sufferer right after his accident; "Why did it happen to me? What did I do to deserve it?" These questions show that the guilt feeling, although not quite conscious, is vaguely sensed by the patient.

It was 20 years ago that I first became convinced of the unconsciously intended nature of certain accidents. I was consulted by a very intelligent man in middle life suffering from a severe depression which developed out of an unsuccessful struggle for existence. He came from a well-to-do socially eminent family but had married into a different social stratum. After this alliance his father and family refused to have anything more to do with him. His unsuccessful struggle for existence through many years terminated (on account of neurotically determined inhibitions) in a total psychic collapse.

I advised him to begin an analysis with a colleague, because I had personal relations with him and his family and was well acquainted with his previous history. He found decision difficult. One evening when the final decision about the analysis was to have been made, he asked to visit me in order to talk over the pros and cons once more. But he did not arrive; he had been run over by an auto in the neighborhood of my home. He was taken to a hospital suffering from many severe injuries.

It was only the following day that I heard of the accident. When I discovered him in the third-class division of the hospital, he was bandaged up like a mummy. He could not move and all one could see of his face were his eyes, shining with a euphoric light. He was in good spirits, free from the oppressive melancholy of recent days. The contrast between his physical condition and his mental state was striking. The first words with which he greeted me were, "Now I have paid for everything, now I will at last tell my father what I think of him." He wanted to dictate a determined letter to his father immediately, demanding his share of his mother's estate. He was full

of plans and was thinking of starting a new life.

What is most impressive in this story is the emotional relief which this patient gleaned from his injury. It freed him from the pressure of his guilty conscience which was stirred up by his extremely hostile feelings against his family who refused to recognize his marriage. After the injury he was ready to express freely all his resentment and tell his father what he thought of him.

Occasionally there are other unconscious motives at work in the causation of accidents such as the wish to avoid responsibility, the wish to be taken care of, even the desire for monetary compensation, but time does not allow me to go into further detail concerning these secondary motivations. There is also some evidence of a correlation between accident proneness and certain isolated faculties such as side vision which cannot be discussed here. Another interesting correlation is between accident proneness and low blood pressure. Since blood pressure is correlated with certain personality constellations, the significance of this finding will have to be elucidated by future studies.

In summary, the accident prone individual is an impetuous person who converts immediately into action his momentary impulses without deliberation and planning. He harbors a deeply ingrained rebellion against the early excessive regulations of his upbringing—a deep resentment against persons in authority. At the same time he has a strict conscience which makes him feel guilty for his rebellion. In the unconsciously provoked accident he expresses his resentment and revenge, at the same time atoning for his rebellion by his injury.

What can we learn from all this for the

momentous practical problem we are interested in at this conference: the prevention of accidents.

Since the major factors in accidents are not external, such as defective machinery or unfavorable conditions like weather, darkness, etc. but lie in the person who has the accident, the primary measures must be directed towards the person. There are only two effective ways to approach this human factor: one is to change the individual and the other, to take the accident prone person away from those occupations where the danger is great. Both measures require reliable methods by which the accident prone individual can be spotted. Because the psychological factors which predispose an individual to accidents are not simple isolated qualities, they cannot be detected by the usual methods of psychological testing. The psychiatric interview, conducted by an expert, which reveals the whole previous life history of a person is the most, if not the only reliable method.

The accident habit develops early in life and manifests itself in the youngster, in a noticeable inclination to contract physical injuries even if only minor. Also, the combination of excessive resentment and guilt manifests itself in early childhood in various ways familiar to the trained psychiatrist.

To alter such an ingrained emotional pattern as is characteristic for the accident prone individual by psychotherapy is a major therapeutic task. It requires prolonged treatment and is, therefore, in the present state of psychiatric facilities, of no practical significance. The recognition of the accident prone person and his removal from occupations which are dangerous for him and for the public is at the present moment the only effective measure.

Accident Prevention—A State Health Department's Responsibility

By F. C. BEELMAN, M.D.
Executive Officer, Kansas State Board of Health

There was a time when hazards to life were so great that the annual toll from accidents passed unnoticed. The ravages of uncontrollable disease brought fear and de-

spair—not only to individuals and families but to large cities. Just a lifetime ago recurrent epidemics decimated the younger population groups in entire communities.

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The compound microscope, with its oil immersion lens and the new world of bacteria, advanced medicine from its dark ages into a new era of scientific truths. Since the 1890's, in almost every state there have been constantly increasing efforts to avert preventable diseases and deaths. Public health and preventive medicine, the application of new medical skills, immunizing agents, and drugs, have changed the leading causes of death. In no group is this change more striking today than in the younger population. The first reliable mortality statistics for Kansas were tabulated in 1916, and by comparing causes of death in 1916 with those for 1947, a graphic story emerges concerning health progress in only 31 years. In 1916 there were 1,548 deaths from acute communicable diseases. In 1947 there were only 290 such deaths. For children of school age the mortality decrease is even more remarkable. In 1916—318 children between the ages of 5 to 19 died from acute communicable disease, as compared with only 20 in the year 1947.

There is one leading preventable cause of death and disability which has not kept pace with its mates of half a century ago—accidents. The estimated acute communicable disease rate, as mentioned for Kansas in 1916 for ages 5 to 19 was 61 per 100,000 population, as compared with the rate of 4 for the year 1947—a decrease of 93 per cent. The accidental death rate for the same years and the same ages was 40 for 1916, and 35 for 1947—a decrease of only 12 per cent.

Unfortunately, there are only meager statistics available indicating the status of accidents as a factor in non-fatal, temporary disability or crippling.

Death statistics, however, are complete and indicate clearly the current risk from accidental death as compared with all other causes. For Kansas, in 1947, accidents were the fourth leading cause of death for the total population, but for all ages, up to 35, they were the leading cause of death. Further analysis shows that for ages 5 to 19, accidents represent almost one-half of the total deaths. Specifically, 172 children in Kansas between the ages of 5 to 19 years were accidentally killed in 1947.

Favorable mortality trends for the first eight months of 1948 in Kansas were highlighted by the exceptionally low death rate

from acute communicable diseases and the exceedingly high death rate from accidents. In eight months of this year, Kansas is near a record breaking accidental death rate. Both motor vehicle and other accidents are reaching nearly an all-time high for the State. If this trend is true for other states, 1948 may see a national record breaking year in the number of lives lost through accidents.

Accidents are, perhaps, the most preventable of all the misfortunes of mankind. People cannot be immunized against them. They must know how to avoid them. From the past available records it seems that some small progress may have been made in accident prevention. Yet, at the present rate, it will be many decades before accidents have undergone a decline comparable to the experience in the control of communicable diseases. Are state health departments, which, in the past, have initiated and put into operation programs that have contributed so much to the saving of lives through communicable disease control, fiddling like Nero while the accident death rate mounts—or, fully aware of the devastating scope of the accident problem? Are they convinced that nothing actually can be done about it?

To answer this question fairly, and without prejudice, a questionnaire was prepared and mailed to every state health officer. An excellent response was obtained. Forty-one—or 85½ per cent—completed and returned the questionnaire. Three state health officers replied that, in their departments, nothing was done toward accident prevention. All the others carried on accident prevention activities to some degree. The questions and information secured follow:

The first question asked was—"In what place do accidental deaths rank as a cause of death in your state?" In two states—Nevada and Idaho—they are the second cause of death; in nine states—Texas, Utah, Louisiana, Montana, New Mexico, California, Arizona, North Dakota, and Florida—they were the third cause of death; in nineteen states—the fourth cause of death; and in seven states—the fifth cause of death. One state each reported accidents as the sixth, seventh, and eighth cause of death. In 31 out of 41 states, 75 per cent, accidents ranked fourth, or better, as a cause of death.

The second question was—"To what extent should state health departments engage in accident prevention activities?" Ten state health officers replied that it should be a major activity; 27 stated it should be a minor activity; three did not commit themselves, and one stated it should not be a function of state health departments. Recognition of the responsibility of the state health department in the field of accident prevention is clearly indicated by the 25 per cent which felt it should be a major function, and the 66 per cent which indicated it should be a minor activity.

The next question, entirely in the realm of speculation, was—"In your opinion, what would a major accident prevention program in the state health department, operating on a divisional basis (comparable with tuberculosis control) accomplish in decreasing the accidental death rate for your state?"

5 state health officers replied that it could be reduced 25 per cent

12 state health officers replied that it could be reduced 15 per cent

9 state health officers replied that it could be reduced 10 per cent

6 state health officers replied that it could be reduced 5 per cent

9 state health officers gave no opinion. Even the reduction of 10 per cent, or more, which 64 per cent of health officers believe could be accomplished, would result in a greater saving of lives than in many other areas of intensive activity.

The fourth question—"What is the extent of your state health department's organizational responsibility for accident prevention?" None of the states, at the present time, have a major division with full-time personnel engaged entirely in accident prevention activities. New York is the only state with a minor bureau with full-time personnel. Many of the states are carrying on some accident prevention work as a part of the activities of various state health department divisions.

Health Education Services	31 states
Maternal and Child Health.....	13 states
Industrial Hygiene.....	29 states
Vital Statistics.....	24 states
Division of Sanitation.....	15 states
No activities.....	2 states

The fifth question was—"What type of accident prevention activities are carried on in your state health department?"

26 states carry on special statistical studies on accidents

6 states promote organization of local Safety Councils

4 states coordinate state-wide accident prevention activities

16 states furnish consultation services to other state departments on accident prevention

1 state health department lends personnel to other state departments

19 participate in State Safety Council activities

11 prepare and publish special reports on accidents

5 prepare and publish pamphlets

7 prepare and publish posters

Under Safety Inspection Services

18 states carry on safety inspection services in industry

11 states inspect public buildings for safety measures

7 states inspect mines for safety practices.

Under Health Education Services

27 states prepare and release newspaper articles

15 prepare radio releases

21 talks are given by personnel

27 distribute pamphlets on accident prevention

16 distribute posters

24 distribute films on safety.

It is evident that health department activities now concern themselves largely with the study and educational aspects of accident prevention. A few are entering on more specific control programs such as promotion, assisting in forming local safety councils, co-ordination and inspections. Sixty-six per cent of those replying are developing programs.

The sixth question concerned itself with personnel, and it is an important question—"Indicate the number of health department personnel engaged in accident prevention activities." Answers to this question were disappointing as the totals indicated relatively few persons are actually engaged in accident prevention programs in state health departments.

1 state—full-time employment.....	2
1 state—full-time employment.....	1
1 state—half-time employment.....	2
1 state—half-time employment.....	1
30 states—small amount of time.....	170

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The seventh question gave some indication as to the amount of money that was being spent for accident prevention programs—"What is the estimated amount of funds expended on accident prevention by your state health department?"

- 15 states indicated they were spending approximately \$1,000 or less
- 4 states indicated they were spending approximately \$2,000
- 1 state indicated it was spending approximately \$3,000
- 2 states indicated they were spending approximately \$5,000
- 1 state indicated it was spending approximately \$8,000
- 2 states indicated they were spending approximately \$10,000
- 12 states did not make a statement.

Answers to the sixth and seventh questions indicate that state health departments have not, as yet, seriously undertaken the task of accident prevention. Any state-wide program, to be effective, must have full-time trained personnel, with an adequate budget. In the control of tuberculosis, which kills approximately 60 per cent of the number lost through accidents, state health departments are spending over \$10,000,000 and have a small army of trained personnel of, at least, 10,000. It would be decidedly interesting to see what might be accomplished if forces of that magnitude were available and functioning in the field of accident prevention.

In the eighth question an attempt was made to secure information from the health officers relative to organization and departments outside the health department that were active in the field of accident prevention.

- 24 states listed a State Safety Council
- 6 states had a Safety Commission
- 5 states had a Safety Committee
- 3 states had an Industrial Safety Commission
- 7 states had a Public Safety Department.

In 31 states the highway department carried on safety programs, and in 16 states the department of labor; 21 states mentioned the department of education; eight states listed the department of agriculture, and 17 states listed the office of the state fire marshal. Other state departments mentioned were: state police, commerce department,

insurance department, and workman's compensation commission. In most states, one or more organizations were active in the field of accident prevention.

Twenty-five states had regular appropriations for safety to a state agency; 11 had no state appropriations, and six gave no answer. Twenty-eight states had full-time personnel, which totaled approximately 212 persons; nine did not have full-time personnel, and four gave no answer. One question was asked as to the limit of accident prevention activities by these various state agencies:

- 13 carried on programs to control all accidents
- 25 carried on only highway and traffic accident prevention programs
- 15 engaged in home accident prevention
- 15 included farm accident prevention
- 15 industrial accidents
- 14 school accident prevention
- 15 included fire prevention safety programs.

This brief review of information, secured within the last few weeks from forty-one state health officers, presents a fair picture of the accident prevention problem and the progress which is being made toward the development of effective accident control programs within state health departments. A number of conclusions can be drawn.

State health officers are aware of the seriousness of the accident problem and the majority feel that it is a responsibility of the official health agency. They further believe that control measures can reduce the death rate. In fact, 26, or 60 per cent of the questionnaires returned, indicate that accident prevention on a divisional basis comparable to tuberculosis control would reduce the accidental death rate 10 per cent or more. Yet, only 10 of these 26 health officers thought that accident prevention should be a major activity of the state health organization. The majority of state health departments, at the present time, are carrying on studies and limited educational programs in accident prevention. A number of states have expanded programs to include promotion and co-ordination of activities.

If the responses of the health executives of the United States are accepted only in part, it is clear that health departments are allocating grossly inadequate funds for accident prevention activities. Funds and per-

sonnel should be provided in sufficient quantities to construct active safety programs and to coordinate safety activities within the states.

State-wide accident prevention programs are still in the experimental and planning stage, as evidenced by various divisions within the state health department carrying on separate activities.

Many state departments are interested and active in accident prevention. Probably the most active, operating in a greater percentage of states, are programs of highway agencies aimed at motor vehicle and traffic accidents. Occupational accidents are possibly second in their coverage by state labor departments. Home and public accidents (other than motor vehicle) receive the least attention from state agencies and might logically be the entering field for state health departments.

There is, apparently, no uniform well-organized agency, either official or voluntary, with full-time personnel and funds actively covering the broad field of accident prevention. Many states have funds appropriated for various phases of accident prevention. No specific federal funds, or national voluntary agency funds, appear to be available to states for demonstrations, program planning, or the training of personnel in the field of accident prevention.

These conclusions might be compared to the conclusions drawn by the Sub-committee on Accident Prevention of the American Public Health Association and published in

the March, 1945 JOURNAL of the American Public Health Association. The article entitled, "Accident Prevention—An Essential Public Health Service" resulted from a study in which some three hundred state, county and local health departments were asked to outline their past and current accident prevention activities. Conclusions reached were as follows:

- "1. Health departments on the whole are now doing very little as regards actual or contemplated studies in the home accident field.
- "2. Some casual educational work is being undertaken, generally in cooperation with other agencies and frequently through nursing staffs.
- "3. There is considerable awareness of the importance of the field and the logic of health department participation in it. There is also evidence of a desire for suggestions and information which health departments can utilize in connection with integrating safety with health educational activities."

It is evident that progress is slowly being made by state health departments in assuming responsibilities in the accident prevention field. The increasing seriousness of the problem warrants greater effort on the part of all interested state and national organizations. Only through organized and coordinated activities embracing the concerted action of official and nonofficial organizations can we hope to curb this needless loss of life.

"Built-in" Safety in the Home

By TYLER S. ROGERS

Owens-Corning Fiberglas Corp., Toledo, Ohio

When someone falls on a steep stairway at home, part of the blame for the accident should rest on the man who designed the stairway.

When someone falls on an ice-covered doorway or terrace, part of the blame should rest on the man who failed to provide an overhead shelter that would keep out the ice.

When Fibber McGee gets banged on the

head by the contents of an over-stuffed closet, part of the blame—but only a small part—should rest on the designer or builder who didn't provide enough storage space in the McGee home.

The accident prevention phase of home safety is partly a matter of original design. It is this part of the safety problem with which I shall deal.

If we take the records of home accidents

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and sort out those which are due to improper design from those which are due to human factors of carelessness, ignorance, foolhardiness and the like, we find a relatively small list of causes. But this list is important, for it is a contributory cause of thousands of injuries. And it is important because it contains elements that should not be perpetuated by repeated use in the million new homes the building industry is erecting each year!

Here are the major items on the list:

1. *Interior stairways*: too steep, badly proportioned steps, curving winders, lack of handrails, lack of head room, inadequate lighting, slippery or uneven treads. It would be nice if everyone could live in one-story houses without basements or attics; that would eliminate stairways altogether, but then we would not know how to handle ourselves when we had to visit some school or office building that did have stairs.

2. *Outside walks and steps*: subject to the same troubles as indoor stairs plus the hazards of ice and snow and rain. Terraces and entrance porches are included here.

3. *Unsafe floors*: uneven, slippery, or sloping floors, high thresholds or changes of level due to changes of surfacing. We cannot blame loose scatter rugs on designers, nor the degree of slipperiness due to polishing, even though they are major hazards.

4. *Cupboard and cabinet doors* that swing out where they can be bumped into by the busy housewife. Included here are improperly designed doors on refrigerators, ranges, clothes- and dish-washers, laundering devices, etc.

5. *Closets and their fittings*: inadequate in size, containing shelves above safe reach, with projecting fittings that cause bumps in the dark. To be sure, most people abuse the closets they have; the art of disposing of useless junk is not well developed.

6. *Doors that swing the wrong way*. They are often blamed for black eyes they didn't cause; but on the other hand, the skeptics are often wrong.

7. *Poor traffic arrangements*: the enforced use of living rooms, dining rooms and kitchens as traffic ways. Hallways are very desirable for traffic, but other rooms have furniture that causes accidents in the dark, or clashes between running children and busy adults.

8. *Inadequate lighting*: not only in halls and passageways, but on stairs, in closets and in rooms that must be used for traffic. The ability to pass through the house, turning lights on ahead and off as you leave is a minimum safeguard when rooms serve as necessary passages.

9. *Safety from fire*, involving not only proper design and construction and the use of low-hazard materials, but provision for rapid and safe exit from any part of the house if fire should start.

10. *Safety in the use of electricity, gas, oil and coal fuels* and proper protection of boilers, water tanks, refrigerators and similar domestic appliances.

These last two, you will note, are the only items on the list that are well covered by universally recognized building codes and ordinances. In ratio to their potential danger, they are probably the cause of the fewest accidents. That is due, I believe, to the fact that everyone recognizes the imminence of high personal danger in these sources of power and in the hazards of fire; hence they respect the codes and support their enforcement.

Stairs and stairways are also within the province of most building codes. Nevertheless, statistical evidence of home accidents points sharply to the question of the adequacy of code provisions or to the degree of their enforcement. I have seen too many houses being built today that have obviously hazardous stairways to believe that the code requirements are adequate, or that the sound codes are being enforced. The pressure of cost is making small houses smaller; the stairs are being squeezed down, inch by inch, to make space for other rooms. We are, I fear, building broken legs and arms, necks and heads, into altogether too many new houses.

What can be done to prevent these "built-in" accidents?

The job is big. There are many people concerned. And a good share of the work rests on us who have an acknowledged interest in home safety.

The designer comes first. The term "designer" may mean a professional architect or it may mean any builder or owner who draws the plans from which the house is built. The professional architect is least likely to plan without a conscious thought

for safety. It is part of the training of the experienced architect—although there are altogether too many young practitioners and complacent oldsters who can be swayed from good design by the demands of clients who insist on details that are unsafe in daily use.

It is more important to reach the amateur designer and the builder who plans more with an eye to low cost or high profit than to the living safety of the houses he creates. Only stricter codes, vigorously enforced, can reach these people and force the adoption of safe design practices.

Quite a measure of responsibility attaches to the owner for whom the designer or architect plans the house. Some of them are entranced with the narrow, steep, winding staircases found in many old center-chimney salt-box or Cape Cod houses of colonial days. Others want a winding, gracefully curved staircase reminiscent of the grand manor houses they have seen in the movies—but they don't have the space to make them reasonably safe. Others, imbued with the modern trend, will take freak stairways that resemble ships companionways, modified ladders, slippery ramps or almost anything that is not like an orthodox safe stairway. And these owners are largely responsible for improperly designed closets, cupboards, outside walks, steps and terraces and for poor traffic arrangements.

Builders, millwork companies, manufacturers of prefabricated cabinets, ranges, refrigerators and similar appliances, the producers of some types of floor finishes, all must accept some share of the responsibility for home accidents whenever their products are so designed that they can be hazardous in service. It isn't enough merely to require these products be safe when properly used; we should insist that they be designed so that they cannot become hazardous even when improperly used. That is a tough attitude to take, but I cannot absolve a manufacturer of building items, or a builder who uses them, unless they have taken every possible step to make their products fool-proof, and show clearly how their products should be installed for maximum safety.

But we who profess an interest in home safety also must accept some of the responsibility. Our statistics show us the magnitude of home accidents and fairly well define their causes. We know that a great many accidents are built-in to modern

homes. We know how they can be eliminated. It seems to me we have a job to do that has not yet been done.

When Mr. Fansler wrote me about this talk, he made some very keen observations. "The architect can design and the builder can fabricate a mechanically fool-proof home," he said. "But could the average person afford to pay for it? However, granted a fool-proof environment, there still remains the problem of fool-proofing the people, who live in such an environment—which is, essentially, an educational problem."

To my mind, we have not made adequate progress in this necessary educational process.

First, we should define far more clearly the good design practices that will eliminate the most common built-in hazards. We should give specific dimensions, tolerances, clearances, approved details where necessary. We should set up specific minimum criteria based on currently available accident statistics and modify them later on as further knowledge is gained.

Second, we should publish a "home-safety code" as a pattern for progressive communities that want to write these principles and criteria into their local regulations. And we should make this suggested code available to architects, builders and all other designers through the professional, trade and consumer publications that reach them.

Third, we should encourage the development of local counselling services to home builders and home owners.

Fourth, we should encourage local safety groups to analyze their existing building regulations in the light of our proposed home-safety code, to determine what deviations can be corrected.

Fifth, we should encourage study of the enforcement of existing code provisions to assure better compliance, both in new houses and in all existing residential structures.

And finally, through local displays and exhibits, we should demonstrate to all home owners the most common home hazards and practical means of eliminating them.

To my mind, such a program is our responsibility. We cannot prevent people from doing foolish things that cause accidents. But we can go a long way toward seeing that they do not, through ignorance or indifference, build accidents into their dwellings.

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Safety Is a Family's Business

By MRS. MARTHA LOU GUNDELACH

District Secretary, Southwest District Office, Family Service Bureau,
United Charities of Chicago

How important is safety to you? I mean, how really important? If you were young George whom our agency met two years ago, then you'd know that safety is precious. You see, George is now 14—a very self-conscious adolescent. He's sensitive about his appearance—he feels ugly—he feels people don't like him. George is a lonely youngster and he's carried these attitudes with him as long as he can remember.

George has gone through life this way because his safety was not assured. When he was eight months old he rolled off the bed and fell against the radiator. He received a third degree burn of the right cheek and left hand. The wound healed and left a disfiguring scar on his face. The family did not see the need for the plastic surgery and expensive treatments that were advised to correct this. They hoped the boy would outgrow the scar—instead he has an additional scar—his whole outlook on life has been scarred. The Family Service Bureau is now trying to help George correct his inner scars, but the recognition of the importance of safety could have done a preventive job.

The recognition of the importance of safety is very necessary. The plant foreman at the steel mills felt it keenly as he thought of Mr. Timothy who used to work on the forge. Mr. Timothy had enjoyed this heavy work for years. He had come to the steel mills as a young fellow. He was a handsome, dynamic young man, full of the zest of living and very proud indeed of his physical strength. No job seemed too much for him to perform, and for several years he maintained an excellent work record.

But as the plant foreman now reflected, he knew he would give anything in the world if he had insisted that Mr. Timothy take the precaution of playing safe and getting someone to help him on that last job that he had attempted. That last job was responsible for Mr. Timothy getting a double hernia.

True enough, the company and everyone had tried to make up to Mr. Timothy. He received his compensation and excellent med-

ical care and was offered a job that he could do—that of sweeping floors. Everyone was aware of the seriousness of his physical injury, but no one had considered that every physical injury has its accompanying injury of attitude.

Mr. Timothy, the steel worker—the man envied by his buddies for his physical strength—now a floor sweeper. How did they dare offer him such a job—why he could never face his buddies—it was downright degrading and a constant reminder of the loss of his vitality. His wife was even stronger than he was now. That was a bitter thorn in his side, and it made him very irritable. Mr. Timothy was suffering not only from a physical injury but was also suffering from the loss of his self-esteem. It was in this frame of mind that he wandered into the office of the Family Service Bureau. Mr. Timothy needed some help to make the adjustment with which he was faced, and it was this kind of help that the Family Service Bureau was prepared to give.

We are beginning to see that this job of safety involves many things, and that the broadest of understanding as to causes and results can in many instances eradicate accidents and in many others can re-establish a sense of safety. The Family Service Bureau often becomes acquainted with families as a result of accidents which have disrupted family life and have caused severe suffering.

Chaotic social conditions increase the possibility for accidents. Very often accidents cause dislocations in family living and result in tensions that disrupt the family unit. I think of Mr. Mack, a discharged war veteran, who was faced with the impossibility of finding adequate housing for his wife and baby because of the acute housing shortage. Mr. Mack cherished his family and he wanted a home of his own. The only thing he could find was a garage.

It was just about impossible to heat this garage in zero weather and one bitter cold night while her husband was away working, Mrs. Mack got desperate. She couldn't bear to see her little boy so uncomfortable with

cold. She decided that she might make the coal burn better if she poured kerosene over it, and this she did.

Mrs. Mack's parents had neglected a very important part of her safety education. They had never stressed the danger of pouring kerosene over live coals, and as a result of this she suffered a terrible tragedy. Her clothing became ignited and she suffered such severe burns over her entire body that the doctor said it was a miracle that she lived.

Doctor and hospital bills were tremendous and impossible for Mr. Mack to meet on his earnings as a mechanic. Even after Mrs. Mack left the hospital, she had to have months of convalescent care and the couple were forced to move in with in-laws. Overcrowded living, the responsibility for a convalescent and for the Macks' young baby put a considerable burden on everyone. Moreover, Mrs. Mack's parents held a deep resentment toward their son-in-law, as they blamed him for their daughter's plight. He should have provided better for her.

These burdens were just too much, and, as a result, family tensions developed. This tension retarded Mrs. Mack's recovery. The baby was affected by all of the confusion and when Mrs. Mack was able to again be a mother to her own child, she was worried and hurt by his shy responses to her. As you can imagine, Mr. Mack had more than his share of worry and debts. There was no place to live that he could call a home of his own, and, on top of this, he bore the brunt of the resentment of his in-laws because of the disruption in *their* home.

This accident meant an illness of over a year for Mrs. Mack with the family's home life completely disrupted. It is difficult to estimate the damage done to this family group. The Family Service Bureau did help dilute the intensity of the suffering of the Mack family for we were able to help Mr. Mack work out some settlement on his debts. The agency through a trained case worker was able to permit Mr. Mack to give vent to his feelings of frustration and loneliness so that he was able to keep a better hold on himself and not give in completely to his worries. Finally he was able to corral his strength and begin to rebuild his family life and look toward the future.

Accidents cause inevitable physical suffer-

ing and family disruptions. The few examples I have cited could be multiplied many thousands of times. The price of accidents is human suffering.

Accident prevention requires many types of effort. The National Safety Council is doing a job by educating us all in the causes of accidents and what can be done to prevent them. We can all enumerate many reasons for accidents. We know that sometimes it is ignorance of possible dangers—sometimes, carelessness and sometimes, unresolved social conditions such as unsafe housing. Again, the cause of an accident may lie in the fact that a person is absorbed in worry. In addition to these more familiar causes for accidents, I would like to very briefly touch on one cause to which we have given very little attention until recently.

The story of Mr. Gale will make this point more clear. Mr. Gale sought help from the Family Service Bureau on three occasions. Each time the circumstances that brought him in was a need for temporary financial assistance, while he was awaiting compensation for an injury. Each time he had injured himself to the extent that he could not work.

On the first occasion that Mr. Gale came to the Family Service Bureau, he had injured his arm while working on a truck. This accident occurred a couple of months following the birth of his first child, and he was especially worried about his son's welfare.

The second time Mr. Gale came to the Family Service Bureau occurred about three years later. Amazingly enough, the circumstances were almost identical to those under which we first became acquainted with him. His second child had just been born and Mr. Gale was very worried about how his family could manage since he again was awaiting compensation for an injury that had just taken place. He had been employed by the Good Humor Company and his bicycle had run into a hole. He had been thrown and had hurt the arm that had previously been injured.

Three years later Mr. Gale again came to Family Service Bureau for temporary help. This time he had suffered an injury to his shoulder. He had accidentally knocked over some heavy boxes on himself when he was rummaging in his basement for

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stored clothing. This accident occurred at a time when he was faced with additional home responsibilities in that his wife was ill and needed expensive medical care.

As you have probably noticed there are some striking similarities in the circumstances surrounding Mr. Gale's three accidents. Each time he suffers an injury this follows circumstances that have meant additional responsibility for Mr. Gale. His first and second accidents occurred shortly after the birth of his children. The third accident occurred at a time when his wife needed medical care, and the burden for the home was placed on him.

A knowledge of Mr. Gale's life experience gives some clue as to his behavior and explains the coincidence of his accidents and increased responsibilities. You see, Mr. Gale had been left to "grow up like Topsy." From a very early age, just when he most needed some one to depend on and guide him, a little brother was born who became the "apple of his parents' eyes." Mr. Gale was neglected and forlorn.

You can appreciate that a little fellow left in this sort of a spot would have a lot of angry feelings at being so deserted. Also, he'd naturally be guilty about his angry feelings toward his parents. As a little fellow, he did get attention, however, when he hurt himself. He didn't have to take so much responsibility for himself at those times, and he really did suffer when he had an accident and somehow that suffering took care of some of the bad conscience he had when he became angry about not being given attention.

Mr. Gale grew into an adult man ill prepared to meet the demands of an adult world. A piling up of responsibilities stirred up earlier feelings that had never been comfortably worked out. His feelings of frustration, anger and guilt piled up and he was "ripe" for an accident. Having an accident was the one way he had found to give him an out from these feelings. Of course, Mr. Gale was not aware of this explanation for his behavior. It was quite an unconscious pattern and one over which he had no control. He could only gain control over his behavior, if he were helped to understand the causes for his actions.

I'd like to cite one striking example from Dr. Dunbar's book, "Mind and Body," that

re-emphasizes the importance of this aspect of the problem. In Chapter VIII, Dr. Dunbar tells of a large public utility company which operated a fleet of trucks. The company had cause for serious alarm as they noted that the accident rate of their employees was interfering in the profitable operations of their business. They went to great lengths to test their employees, to put in an intensive educational program for safety and to impose severe penalties on employees who had accidents. They shifted truck drivers who had frequent accidents to other jobs. Careful study showed that many men who had been shifted went right on getting themselves injured.

This example illustrates very well the point that the person who has the "accident habit" needs more to correct the situation than a manipulation of his circumstances of safety education. Dr. Dunbar makes this understandable through many individual histories that illustrate the way in which one's emotions can affect the personality that leads to the "accident habit." In such instances the individual needs help with his emotional problems.

The responsibility for safety belongs to each and everyone of us. Individually, we can make important contributions by taking the proper precautions in our own homes. Don't risk putting a box on a chair to stand on when you are in a hurry to hang that shade. If you're tempted to hasten the fire in your stove remember the story of Mrs. Mack. Safety begins at home and that's where our children will begin to get the idea of its importance.

Parents in the home, the policeman on the street, the teacher in the school and the foreman in the plant contribute individually by being sure that safety measures are enforced. If the plant foreman had insisted that Mr. Timothy not take the additional risk on his job, a life-long tragedy would have been averted.

The responsibility for safety belongs to us collectively, and as a community we make important contributions by supporting necessary institutions for our protection and safety. We are glad to support the fire department and the safety division of the police department. In the past year, the citizens of Chicago have crusaded for adequate ambulance service. At the present moment, we are pressing for safer and more adequate

housing so that people like the Macks will not be forced to live in unheated garages.

We, as citizens, support the National Safety Council out of our recognition of the importance of a co-ordinating agency in the community. We realize the worth of the very fine educational program of the National Safety Council.

We as citizens realize the worth and fundamental value of safe and happy living, and we contribute to the promotion and protection of families in many ways. Realizing that safe and happy family living depends on the security of employment; the security of a home to live in; the security of a safe community; we work together toward these goals.

When the security of our environment is threatened in any way the family suffers. It is in this area that the family service agency makes its contribution. Family strains, tensions and disturbed personal relationships become acute if safety in all its meanings is not protected. The Family Service Bureau is making a contribution by being at hand to aid the Georges, the Macks, the Mr. Timothys and the Mr. Gales in re-

establishing their sense of safety and thus strengthening the security of the family. But more than that, the Family Service Bureau is on hand to do a preventive job, to help families ease their tensions and worries before a disaster occurs. Would it not have been more beneficial for Mr. Gale had he been helped to ease his feelings about his responsibilities rather than solving them through developing the "accident habit."

You, who have worked with local safety councils have become very familiar with ways in which you can most effectively work with industry in relation to safety. We would like to ask that you get acquainted in your own communities with another community channel through which you may broaden your program. I am referring to the council of social agencies. Most communities have such a council with which the social agencies affiliate for the purpose of considering community needs and community resources. The council is, therefore, in a position to make use of this broad understanding of the community and to work out a program that will help to strengthen and enforce safety measures.

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