

1957

CURRENT SAFETY TOPICS

Volume

13

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Transactions of the
45th National Safety Congress.
(October 21-25, 1957, Chicago, Ill.)

NATIONAL SAFETY COUNCIL

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LEARNING TO LIVE . . .

Learning to live—safely—was the drawing card which brought more than 13,000 men and women from the United States and 27 other countries to Chicago for the 45th National Safety Congress. These people gathered to exchange the latest ideas in safe attitudes, safe methods and safe equipment. Through speeches, panel discussions and symposiums, they acquired new ideas for helping others—and themselves—to live, work, and play safely.

This was the reason the National Safety Council was organized less than half a century ago, a time when man's thoughts barely kept pace with the industrial revolution. Since then, man has introduced an atomic age which is bringing the continents closer and has made the earth a smaller world. And now man anticipates inter-space travel!

Through science and technology, man is progressing to increasing speeds in travel and production, and increasing dangers—new dangers never before encountered. These, in addition to the everyday hazards of life, occupied the thoughts of the safety people at the Congress.

To encourage more widespread knowledge of the various fields of safety, the National Safety Council publishes the Current Safety Topics—30 volumes of condensations of Congress speeches and exchanges of ideas. Each volume is a handy reference to different phases of accident prevention. The complete set of volumes are listed on the back page of each volume.

Since the proceedings have been edited and condensed for reference purposes, the complete original manuscripts with any charts or illustrations used, are available in the National Safety Council files. Views expressed at the Congress or in any volume of Current Safety Topics 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 1957 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 in behalf of its members, and for the benefit of accident prevention work in the home. The Conference gives guidance in the preparation of a great variety of technical and educational material useful in the day-to-day safety programs of the home.

The activities of the Conference are under the direction of its executive committee, the members of which are listed at the close of this volume.

HOW TO INTEREST PEOPLE IN WHAT THEY DON'T WANT TO KNOW

REMARKS OF FAIRFAX M. CONE

chairman, Executive committee, Foote, Cone & Belding, Chicago

I know almost nothing about the organization of your work for safety. I can only talk to you a little but out of a fairly long experience in selling, and most of this through advertising.

But it just may be that advertising, properly planned—with the right appeals, and done according to certain standards, can be important in reaching certain objectives.

The thing here, as everywhere, of course, is how advertising is used. For advertising without a plan is no better in most cases than no advertising at all. I am not at all sure that advertising of the means and the rewards of safety—in any of its areas of interest, can ever be wholly planned.

There may simply be too many well-meaning people and dedicated organizations at work in the field—each going his own way or its own way, to make possible the unified planning that makes good advertising effective.

On the other hand, advertising may be helpful. For advertising is one of our most powerful means of communication. And it is our only controllable one. It is the only one where you or I can say what we want to say, when and where we want to say it—without change and without interference. The great problem is to make advertising, in cases like this one, a part of a plan. When you can, few means are more productive.

PLAN ADVERTISING

Over a long period of years, ever since I was a little boy, the press and the periodical press, and later the radio—and, still later, television, and pastors and priests and rabbis, all worked at the problem of voting. And all that happened was: the percentage of eligible voters who went to the polls declined—steadily and drastically.

The best selfish reasons that could be presented were of no avail. The trouble was that there actually were too many arguments. No one could hear any of them, or

see any of them, because of the din of the sounds and the confusion of all of them.

There was nothing wrong with those arguments; in fact, they were very good ones. But no one stood out. There was no voice of authority; no single command. And I think this is a little bit like our current campaigning, for instance, for traffic safety.

It needs not more money to be spent or more people to be interested in it; but only more planning.

This is what happened to getting out the vote.

One simple idea—"See you at the polls," became the slogan and the selling idea for everyone who was interested: radio, television, press and pulpit, and millions of school children working on their mothers and fathers—did it.

CAMPAIGN GOT VOTERS

A single campaign turned the tide; voting increased everywhere in the country in 1952. A repeat of that campaign, that single theme, further increased the vote in 1956.

Now, I certainly cannot tell you what the theme of an advertising campaign for traffic safety should be; or how much or what kind of an organization would be required to successfully back it up. But I can tell you that various efforts under a variety of auspices at varying levels of intensity are not the best way to sell anything.

There are right ways and there are wrong ways and, in between there are indifferent ways. What is worst of all are the misguided ways; and these, more often than not are the uneducated ways; the amateur ways.

The men and women of the National Safety Council are professionals. I think they can do no better as a starter than to try to rule out the amateurs.

Sticking to traffic, as an example, I would hope that you could regulate signs and no-

tices, and establish professional standards. Here are two examples of what I mean.

Anyone who has driven on Chicago's Outer Drive has seen what is surely one of the most oversigned roadways in the world. Almost every lamp post carries some kind of message. Highway numbers are easily confused with speed limit signs. And almost every overpass is decorated with highly embellished warnings to drive carefully.

So highly embellished are these, with so many different messages, in so many kinds and sizes of type, that to read them surely must create a traffic hazard in itself.

SIGNS CAN BE HAZARDS

Every time I see one of these I am reminded of another traffic safety sign that I saw on a narrow, twisting road in Sonoma county, California, between Petaluma and Rio Nido, on the Russian River. This was on the back of a billboard structure that faced north.

Coming from the south I saw a line of white letters on the dark back of the structure, letters about five inches high, and when I got right even with them, peering across the road, I was just able to read—in the face of oncoming traffic:

"Drive safely, the life you save may be your own!"

I have no doubt of the good intentions of the man who painted those words on the back of that billboard structure. But I also have no doubt that the result could be awful.

Incidentally, on that same drive, crossing the Golden Gate Bridge from San Francisco to Marin County, I saw what I believe is an example of very good signing. There are exactly three signs on that span; three each way, that is.

- One large one posts the speed limit.
- One medium-size one marks the county line.
- One other large one says: stay alert.

And there isn't any picture to distract you from the words.

Let me say again that I don't know whether any standardization is possible, either in the design of highway signs or in their wording.

But if there could be generally (much as there is beginning to be on the toll roads) the results would be startling. They could

have some of the effect there that consistent advertising has for products and services whose worth is nothing compared to human lives.

I believe the same kind of planning of factory and plant signs—and perhaps even home safety instructions, backing up your best educational efforts would be no less effective.

STANDARDIZE ADS

The thing is to standardize—on professional standards.

I can give you no better example of what this may mean than the campaigning against forest fires since 1941. My own company happens to have made the very first outdoor posters with Smokey Bear. We also made the school posters, the radio warnings and the television films.

And we've made them to a single standard, for a single integrated plan, mapped out with the forest service of the U. S. Department of the Interior.

Last month I heard Richard E. McArdle, chief of the U. S. Forest Service, tell the story of results. Up to 1942 the number of forest fires was increasing rapidly. Then there was a sharp decrease. During the war years there were many fewer people in the forests. However, at the end of the war there began a greatly stepped-up activity—more visitors, more timber-cutting, more land-clearing and road-building; and the number of fires increased sharply.

SMOKEY CUT FIRES

Now the Forest Fire Prevention campaign took hold. Approximately 350,000 fires a year were expected at the time and there were less than half of that number. In 1942 fires blackened 30 million acres of forest land. By 1956 this figure was down to six million.

During the 15-year period of this campaign, McArdle said there was a total of 600,000 fires expected that did not start. There were 260 million acres of forest land that did not burn according to schedule; and there was 10 billion dollars of forecast damage that did not occur.

The timber and water and wild life saved and soil preserved passes any possible dollar estimate. This was the savings through the kind of planned warnings and planned national campaign that I hope may some day be yours.▲

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REMARKS OF PIERRE MARTINEAU

manager, Research & Presentation Division, Chicago Tribune, Chicago

One of the most battered clichés in the world of the social sciences is "the individual as a whole." Educators talk of "teaching the *whole* child"; psychologists mention the "personality as a *whole*"; and sociologists stress "the relationship of groups to the *whole* person."

In talking about the individual as a *whole*, however, the exigencies of language force us to talk of sections of the personality—we speak of "knowledge," "information," "interests," "needs," "predispositions," "beliefs" and "attitudes." As men have sought to understand personality and the reasons why other men behave the way that they do, there has been a compartmentalization due to these words—an isolation of "factors of the mind."

TERMS ARE THEORETICAL

To be sure, writers always add a preface or foreword that states something about the dynamic interaction of various factors, but when the chips are down, the conversation usually turns to a description of how a particular "belief" or attitude, by itself, influences what somebody or some group does.

Just as there is no such thing as an ego, so too is there no such thing as a need. All our terms are only theoretical guesses about what exists within the churning mass of a man's brain. We shuffle explanations and regroup hunches; we alter relationships and construct systems of behavior that we think does a better job of explanation.

But we always have to remember that there is no surety that we are correct. The responsible social scientist is always sensitive that it is a dull knife with which he is cutting the pie of personality and the explanation of behavior.

The great contribution of Freud to the social sciences was that he sharpened the knife, and by so doing, changed the distribution of slices. But many of Freud's followers have been overly rigid in their view of behavior—just as the more "scientific" camp has been overly rigid in so precisely looking at factors that they have forgotten where the factors came from.

CONSIDER THOUGHTS, BEHAVIOR

I suggest that we take the largest possible overview of behavior. Men's thoughts and their behavior—and change in their thoughts and behavior—have two major influences on them. The first of these is what the individual man wants to do. At the simplest level, when he gets hungry, he wants to eat—no nonsense about it. But every time a man is hungry, he doesn't eat. And when he doesn't eat, it is because of the way that he sees the world around him.

A man having a job interview doesn't pull a candy bar from his pocket in the middle of the interview—even though his stomach may be growling away; it isn't the thing to do at this time or in this place. The world outside the individual brings pressures to bear on him—pressures that modify what he can do, the ways he can do it, and when he can do it.

If we want to change behavior—that is, to influence people to do something they are not doing, and to tell them things their ears are closed to—we should try to understand how the two considerations of individual wants and group pressures relate to each other.

INTERPRETING COMMUNICATION

Take a common piece of behavior and communication—a friendly face to face conversation. Going into the conversation, each member already has ideas about the other—his habits of speech, his status position and power, an evaluation of him as a man.

When A says to B "nice job you did," B immediately interprets the message. Is he really giving out congratulations, is he being patronizing, or is he saying "It's about time you did something good"? The past experience of the two men will give the listener the cues to interpret the message.

A's meaning may be greatly distorted, but it is the interpreted meaning that B will act on—not the intended meaning. With the interpreted meaning now serving as the "motivator to action"—the listener will come up with a reply. He might say to himself "of course," or "Thank goodness" but this will not be his reply. Just as the message

was altered in meaning, so too will the reply be altered.

If A was president of the firm, the answer might be "thank you, oh sir." If A is a mailboy, the reply might be an impatient nod. The output will be modified and distorted just as the input was. The *effect* of behaving the way that you *want* to behave to the answer will be weighed, and your reply will depend at least on these two levels of interpretation.

This is a theoretical example of a situation in the smallest possible group. Let's look now at an experiment which shows the same skeleton form of behavior in a larger group and with a message that had little appeal to the audience.

GROUP BEHAVIOR

During World War II, there was a strong movement urging housewives to serve cheaper cuts of meat. For the most part, the early parts of this campaign were a flop; housewives did not want to, and did not serve kidneys and beef hearts—these foods did not fit into their image of the good housewife. In order to convince housewives—to tell them something they didn't want to know or do, a social psychologist experimented with two different approaches to selling the idea of serving sweetbreads, kidneys and beefhearts.

With one group, he had an authority—a sweet, motherly home economist—lecture a group of housewives about all the advantages of these foods. The economy, the nutrition, savory methods of preparation, and the contribution to the defense effort were all mentioned. This home economist talked, and the housewives listened. The end result was that 4 per cent of the housewives served the foods that they were informed about in a convivial lecture.

DISCUSSION GROUP EFFECTIVE

Another group, very similar to the first, had the same information presented to them—price, economy and so on. But the technique was to give them a short talk first and then a discussion period about how husbands would react to the foods, cooking odors, and any other questions that the housewives felt were important.

This group—the discussion group—had *eight times* as many housewives go out and

serve the food to their families as the group that was just told about all the benefits of sweetbreads.

The information communicated was the same in both cases—the knowledge that the women had was the same—but this startling difference came about. The explanation that has been given centers about the interpretation that the housewife gave to the *results* of serving the food. No matter how "right" she felt serving brains, or how "good" it would be for her family, the basic consideration was the acceptance of the food by the family.

In the group discussion situation, the sharing of the problem with other housewives showed up the individual housewife's concern—and the group gave her the confidence that she would not look worse in her family's eyes for serving the food; at least, she would be no worse off than other women in her same position.

The same man, Kurt Lewin, showed that the same results could be obtained with as important an area as a mother's wish to take good care of her child. The value of serving orange juice to infants was presented in the same two methods and the same findings occurred. Those who just *heard* about how good orange juice was for babies felt little about it; those who discussed serving orange juice actually did do something—they were positively influenced to serve orange juice to their children.

FEAR MOTIVATES SAFETY

These are both examples of how relating the knowledge to a group situation activated the knowledge—made it a stimulus to behavior instead of idle thought. Information alone never sells a thing—information must have with it a catalyst that will produce action, which, directly or indirectly, is the goal of most communication.

Safety is centered around fear; we don't take safety measures because there is some inherent value in being safe; we are safe because we are afraid of being hurt or hurting others.

Advertising and promotion in prior safety campaigns have played on the fear element and "you can't afford not to be" has been an outstanding example of this.

Fear is a necessary part in the selling of safety ideas, but to be effective, the proper

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amount of fear has to be injected into the communication process. If there is too much fear, the listener will be repelled by the whole business. If there is negligible fear, he won't be disturbed enough to do something about the threat that you present to him.

To be most effective, the appeal must first arouse anxiety and then present a believable solution to the problem.

One of the major advantages of using fear is that it is an emotional rather than an intellectual or rational approach, and is thereby more powerful in stirring up feelings.

EMOTIONAL APPEAL BEST

Lewin's studies, and the experience of many advertisers, shows that information alone is not enough. The cancer threat in cigarettes has not harmed long term sales; in politics a study has shown that an emotional appeal produced a 15 per cent greater vote for a party than an identical appeal which was rationally based. Information is necessary, but it can never be relied on to carry singly the burden of influencing others.

A famous study in dental hygiene shows how the strong emotional approach of fear and various intensities of fear influence the receivers of a message.

The same dental health information was presented to three different groups. The first group was given a strong fear approach—the showing of gory pictures, dire threats and the like. The second group was given a more moderate dose of the same treatment. The third group was presented with material in a low fear setting. The result? The low fear group showed a 36 per cent improvement toward better hygiene, the moderate fear group a 22 per cent improvement, and the appeal in a powerful fear setting produced an 8 per cent improvement. Four times as much success with the low fear approach as the high fear approach.

But this was not all. The three groups were followed up and all were exposed to information that belied everything they had been told about dental hygiene. Despite this contrary evidence, the low fear group still believed what they had been told first. But, the moderate and high fear groups switched their allegiances to the last message.

Thus, in terms of both long and short term results from the message, the low fear setting was far superior to the other two treatments. Powerful tool that it is, fear cannot be used indiscriminately.

COMBINE GROUP, FEAR FACTORS

Both the group and fear can be effectively united in a campaign to further safety. We know that fear is powerful if used properly, and we know from observation how important others are to an individual's ideas about safety.

Consider a man driving. It is quite likely that if his wife and children are with him, he will be more careful—and not just because of the wife's nagging. He may be devil-may-care and ignore the skull and crossbones signs, when he is alone, but the presence of his family forces him into a responsible role.

To some degree, all of us have a sense of "personal invulnerability." But the sense that nothing is going to happen to me—the sense that makes for carelessness and accidents—can be short-circuited by arousing the important image of the family.

Now, this won't be easy. The home particularly is a haven from the struggles of the world—a safe place to retire to at the end of the day. If too strong a campaign were used, the campaign ideas run headon into this idea of the comfortable retreat.

EXPLAIN JOB, HAZARDS

Better to state positively to the man his job—that of providing a safe place to live for his family. Shore up his confidence in this. Then inject a little fear by pointing out the common accidents in the home and on the road.

After he is slightly concerned, offer solutions that will eliminate the concern. The safest (psychologically) of all places—the home—can be made even more safe.

The feeling of safety can be sold at the same time that responsibility can be sold. The individual is reached on two levels—his own personal, and individual state of well being and his job to the group, his family.

It is more difficult to communicate via one of the mass media than it is on a face to face basis. But practical considerations force us to think in terms of the mass media.

SELECT RIGHT MEDIA

Use media that have high prestige. It has been found that a message gains a great deal from the "ruboff" or association with the media in which it appears. To increase believability and impact in your message, a solid and serious television show would be better than situation comedy; the major newspaper in a city would probably be good, as would be association with a high status commentator—say Edward R. Murrow.

There is a greater risk in television than in other media of arousing too great a fear. Go soft on the more blatant results of carelessness; imply them, but don't show a distorted man hanging from a car.

The running media of radio and television can offer a good deal in sequential development of the "fear then resolution" idea. The print media (magazines and newspapers) can give more weight to your message by nature of the public's perception of them. The broadcast media are primarily light; the print media are primarily heavy.

Basic to every man is his allegiance to himself and to his group (be it family or friends or community). The most successful communications will be those that play on both allegiances; communications that offer to the man as individual greater happiness and to the man as group member a more adequate filling of his responsibility.▲

REMARKS OF VICTOR M. RATNER

vice-president, Benton & Bowles, New York city

Let's start with some specific questions, for example: "Is it possible to interest people in what they don't want to know?" Or:

"In order of importance, which of the following have the greatest positive reaction, from the standpoint of safety precautions: pictures, the written word, the spoken word or personal experience?"

And just one more, of the many questions received: "Are mass media effective in influencing a change in people's habits, to the same degree as in the purchase of something which gives immediate satisfaction?"

"Is it possible to interest people in something they don't want to know?" The answer is "Yes"—in almost every case.

"What creates the greatest positive reaction . . .?" I would place "personal experience" and "face-to-face" communication so far ahead of the "written word" and "pictures" as to put them into separate categories.

Furthermore, I would suggest that—in such a complex area as safety precautions—you cannot begin to move people very much or very far with the "written word" and "pictures" alone, unless these are somehow used *together* with "personal experience" and "face-to-face" speech.

As for our third question: "Are mass media as effective in changing people's hab-

its, as they seem to be in getting people to buy specific merchandise . . .", my answer, here, would be a large and flat "No."

EVERYONE WANTS TO KNOW

These may guide us toward answering almost any question. Let's look, then, at the first question again: "Can we really interest people in anything they don't want to know?"

If we stopped at that, the answer, of course, would be that we cannot. But this needn't be discouraging. For Aristotle pointed out, a long time ago, that "*all men have the desire to know*"—and this is true, even if it be only a desire to know who is going to win next Saturday's football game.

Certainly, every normal human being is interested in many things. Certainly, he is interested in himself and in his family. And just as certainly, the real question you face is, "How can I best relate what *I* want to say to something he is already interested in?"

If you can, you can reach him, and you can teach him. But you must realize that this is a two-step process. You must first take the trouble to interest your man. And then, you do your teaching.

Putting this another way—one of the axioms of effective communication says that: "You must start with where your audience

is, not with where you are." And surely, anyone you are trying to reach has some interest, some need, some desire, to which you can relate yourself and your message; something in which he is interested, rather than something in which you are interested.

RELATE TO NEEDS

You must find this need or desire, and use it to anchor an emotional or intellectual "bridge" between you and your audience. You then send your message to them over this "bridge." If you don't, it's as though you are shouting from bank to bank across a wide river. This is fundamental to all teaching and all selling, whether you're selling a man a new house, a new car, a new hat . . . or a new idea.

The basic act of selling is to try to relate something to someone else's need or desire. You must make him feel that this something will serve one of his needs or desires—or why should he buy what you have to sell, whether it be "better schools" for his community, or a brand of beer, or even the Brooklyn Bridge?

You see, I am not discussing the morality of selling but the act of selling. Until you have figured out what need or desire you can serve in someone else—and until you state it convincing to him—you cannot begin to sell a person, or even interest him, in anything.

This reminds me of something I once said while discussing a curious prejudice about the power of advertising. Oddly enough, it is a prejudice in favor of advertising, in the minds of its friends, and simultaneously, a prejudice against advertising, in the minds of its critics. It is the often-repeated claim that "*advertising creates desires.*" Or, stated negatively, "*advertising makes people buy things they don't want.*"

ADS DON'T CREATE

I think both the friends and critics of advertising are repeating a myth which has no substantiating data behind it. They have only hunches and opinions about it.

Advertising, I am convinced, cannot create a desire. It can only capitalize on an existing one. Thus, advertising which sold orange juice to mothers, derived its inherent power out of the desires mothers have to feed their children well. That desire was

there, long before advertising or orange juice.

Such advertising told mothers about a new and healthier way to feed their children—a useful educational function, but not the creation of desire.

Does anyone think advertising "creates the desire" in women to look more beautiful or to wear new clothes?

This is something which started, I believe, in the Garden of Eden. And I refuse to think of the serpent there, as the first advertising man!

It's much the same with automobiles and washing machines, and even beer. People have basic desires for such things. That's the only reason advertising can help to sell them.

Similarly, you must effectively relate the important story you have to tell to some *basic desire* of people—in their terms, not your terms—and then you can hope to move them.

But let's try to get even more fundamental than this, in analyzing just what it is your communications must try to do. Where do you start, when you're planning any type of communication? If you want it to be effective, you must begin (either consciously or unconsciously) with a full realization of the fact that all communication has something very like the structure of a sentence.

ELEMENTS OF COMMUNICATION

A sentence, as you know, always has a subject, a verb, and an object.

And the meaning of each of these influences and modifies the meaning of the others; and of the sentence as a whole. Therefore, even a slight change in any one of these can make quite a drastic change in the meaning of the sentence.

Consider, for example, a sentence as simple as "John loves Mary." You could probably write a whole novel about changing just one word here: "John loves Sally." You see, Mary is John's wife. And Sally is her sister! Or change it to: "Jim loves Mary."

The confusion is compounded. Jim is Sally's husband! You see how intimate the relation between the subject and object can be? What does this suggest about "communication"? Well, like every sentence,

every communication has three elements—each of which determines the meaning and values of the other two.

There is a subject—which is the “content” of your communication, what it is you want to say.

There is the “form” in which you say it—how you express and transmit the “content,” which includes both the medium and the words you use.

And then there is your “audience”—the object of your communication.

RELATE THE ELEMENTS

Obviously, until all three of these—“content,” “form” and “audience”—are carefully and successfully related to each other, your communication is not likely to have the result you want it to have.

What you have to say must be properly and precisely related to your “audience.”

How you say it must be properly and precisely related to both your “content” and your “audience.”

When these three are not effectively related the communications fall tragically short of communicating. It is here, I think, that we find the fundamental differences between an amateur communicator and a good professional communicator.

The amateur is generally in love with his message. He tells it in his own way, in media of his personal preference. He is known as “message-oriented.” He feels that what he has to say is so fascinating and important that everyone will drop everything to listen to it and absorb it. Your children are such amateur communicators.

The professional communicator, on the other hand, tends to be as much “audience-oriented” as “message-oriented.” He is always conscious of whom he is trying to reach, of how that person thinks and feels, and he directs his efforts, shapes his message and his media as best he can to fit his audience.

To do this, he must start with his audience in mind. That, I think, is where all persuasive communication must start. You, too, can start with rather precise definitions of just whom you can realistically expect to reach. This is never the “many” people you would like to reach. It should be, rather, the “few” people you can really hope to reach.

AIM FOR SMALL AUDIENCE

I would earnestly suggest that, in your communication efforts, you aim for a small success rather than for a glorious failure. The small success will be hard enough to come by!

To do this, you should start with defining some small audience on whom you can hope to make a significant impact. The smaller the better! For, then, you can more specifically define your audience and its interests. You can learn, or guess, what is particular to these people—and you can then relate your message to their particular feelings, rather than your own.

This brings us to the question of the best media for reaching them—and here you run into all sorts of myths and fantasies about our modern communication media.

What I am about to say, now, may sound unorthodox to some of you. And it may sound paradoxical, coming from the vice-president of a large New York advertising agency, who also spent 14 years working for a major network.

All I can say is that I am serious; and that I am prepared to debate the validity of my observations until all our citizens really learn how to avoid having accidents at home.

Our mass media—our so-called “major media of communication”—are relatively minor media, when it comes to moving serious ideas into the heads of people.

They have, I believe, only a secondary role to play in helping you with your problems; and it is important that you do not divert too much of your limited resources, chasing after these media. They are not the first or second or even third media you should think of, to reach people, and to teach them serious things for their own good.

PURPOSES OF MEDIA

The basic reason I say this can be summed up very simply. Our mass media are busily at work doing three different things:

They move entertainment.

They move merchandise.

They move ideas.

I place them in that order because this is the order in which we are successful with them.

Our mass media are most effective, today, in distributing entertainment across the

nation; whether in the form of popular programs on the air, or by comic-strips in the newspapers—the most widely-read features of any newspaper.

They are next most effective in moving merchandise into people's heads and homes. And our mass media, in themselves, are least effective in moving serious ideas to the public. The evidence for this is overwhelming.

This should not suggest to you I am criticizing our mass media. I am not. Like everything else, they are designed to do some jobs very much better than others.

We will not try to examine the reasons why I am sure that mass media are intrinsically weak media for moving serious ideas into people's heads, deeply enough to change people's behavior.

PERSONAL CONTACT BETTER

While they have a role to play, in this area, it is a secondary role, not a primary one. And it will be far more useful to you to direct your attention to what really is your primary medium for the work you want to do.

It happens to be the most powerful and most effective communication medium at anyone's disposal. If I were to try to wrap it all up into one phrase, it would be:

Face-to-face communication

All of you live and work in communities. You all live locally. Because you live and work in communities, you can all participate in, create and further "community action" programs of one sort or another.

In these, you can all use "face-to-face communications," with small groups of people, who are gathered together in one room,

where they can see and hear each other talk.

The only hope of moving serious ideas into people's heads effectively, is for us to set aside the seduction of our modern, technologically-advanced, mechanical media—and to refocus our attention on the basic, old-fashioned methods of "face-to-face communication." This is still the only way most people get most of the ideas which move them!

Therefore, my basic recommendation is this:

- If you really want to teach people something, you cannot take "short-cuts" in doing so. The results we get from the "short-cuts" don't seem to warrant the time, effort and expense we put into them.
- If you want to take your efforts seriously, you must figure out ways to communicate with people in small groups, where there is a "live" discussion, among people gathered together in one room.

I know you can only reach a relatively few people this way, compared to the thousands and the millions you think you might reach by television or newspapers or magazines. And I know it is very difficult to develop such programs, and that they have little glamour about them.

It would, indeed, be nice if we could take the "short-cuts" to reaching lots of people, in lots of places, all at the same time. But even if you could get enough time and space in the mass media, beyond your wildest dreams, there is really no good evidence I have ever seen that such "short-cuts" to the people would work for you.▲

THE NEED FOR RESEARCH IN HOME ACCIDENT PREVENTION

REMARKS OF FAY M. HEMPHILL

associate professor, School of Public Health,
University of Michigan, Ann Arbor, Mich.

Many constructions and connotations might be attached to this topic. As long as 28,000 deaths a year in the United States are attributed to accidental circumstances which terminate in home injuries, there is need for research in the prevention of home accidents. Therefore, rather than discuss an obvious topic, I will present the needs which must be filled to have fruitful rewards from research in this domain.

I shall use the word *research* as defined in the dictionary, that is "studious inquiry or examination, critical and exhaustive investigation or experimentation having for its aim the discovery of new facts and their correct interpretation."

MUST DEFINE TERMS

The word *survey* will be used in its dictionary context also, namely "to take a general or comprehensive view of" or "to view in detail." I will use the words *studies* and *investigations* when I wish to refer to surveys and/or research and thus to generalize.

Clearly the mere enumeration of items and/or events does not constitute research; a survey may have objectives but rarely, if ever, does this objective deal with the test of an hypothesis. Experiments traditionally test hypotheses. I point out these concepts to call attention to the necessity for clear and concise terminology in any discussion of the needs for research.

The needs for research in preventing home accidents are not basically different from those for research in any other field. The problems of research in accident prevention are not as complex as those of nuclear physics or in making a vaccine against poliomyelitis. Only a few years ago the suggestion of releasing the energy of the atom was considered an impracticability and only five years ago there was little real hope of producing an effective vaccine against polio.

While both accomplishments have occurred through research efforts, each re-

sulted from compilations of many items, experiments, survey efforts and observations. Within a general frame of reference, the needs for research fall under the following four categories:

1. A framework of terms, definitions, and concepts within which hypotheses and objectives may be developed.
2. A background of observations and experience from which opportunities for research may be fabricated.
3. Persons skilled in techniques and methods of research and motivated to organize and administer these skills.
4. An environment conducive to pursuing research activities, encompassing physical facilities, equipment, and financial support for continuing investigations.

This is only an attempt to suggest the needs which must be met for success in research. These suggestions are neither meant to be exhaustive nor detailed. The details must be spelled out by research persons.

NEED SPECIFIC CONCEPTS

Until quite recently there was no coordinated effort to develop a framework of definitions and specific concepts in accident prevention. However, there were satisfactory definitions and concepts of injury. The Committee on Standard Nomenclature for Home Accident Prevention prepared its first report on definitions and terms which should be helpful.

Definitions and specified concepts are prerequisites to any organized research or survey work, specific hypotheses being essential to experimentation and definitive objectives mandatory in planning surveys. Essentially, basic definitions and statements of underlying concepts must be established before studying a science.

Passing on to the background of observations and experience in accident prevention

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from which research undertakings may be fabricated, one is amazed at the quantities of data on injuries and at the paucity of compilations dealing with accident circumstances and conditions. This is not amazing in view of the lack of definition and specific language applicable to investigations of accidental occurrences.

I do not intend to belittle the enormous amount of background work accumulated, but relatively little benefit will accrue from these to investigators who try to understand events associated with accidental occurrences. Much can be accomplished in such compilations through studies and surveys before those specifically planned steps are taken and can be dignified by the term *research*. There are so few persons skilled in the exacting methodology of research or sufficiently motivated to investigate home accident prevention that all one can do at this time is decry the dilemma. Furthermore, I am not optimistic that this situation will be improved in the near future.

MUST MOTIVATE RESEARCHERS

Professional researchers are not and have not been attracted to accident prevention. I doubt if they will be until the terminology is specific and some gallant, brave surveys have been completed. All the attempts at describing the loss of life, human suffering and destruction of property through accidents has not motivated research in accident prevention.

Researchers are motivated by demonstrating procedures and devices used for measuring, calibrating or evaluating observations or other manifestations, usually in understandable objective units. Professional researchers are not convinced that there is a well defined area of research in home accident prevention or, to go all-out, in any other field of accident prevention. Relatively few research undertakings are found in the field of injury prevention. However, progress along these lines is showing a modest spurt in recent years and there is some reason for cautious optimism in this domain.

CONDUCTIVE ENVIRONMENT

The fourth requirement for research is that of an environment conducive to the researcher. Certainly if there be concurrence with the opinions I have expressed on the previous three phases of research in prevention of home accidents, there is no reason to suppose that there currently exists such a situation. However, when and if such a situation is demanded, an imaginative and dynamic administrative leadership will be needed.

In addition, sufficient and continuing sources of economic support must exist for researchers to settle to their exacting tasks with confidence. Thus they may be assured their struggles will not be unduly drenched in administrative restraints, will be guaranteed opportunity for continuity of effort and equipped with sufficient facilities, equipment and supplies to pursue the steps involved.

These are my own biased opinions of the needs to be met for profitable results from research in home accident prevention, and my evaluation of where we now stand in fulfilling these needs. Let me assure you I consider my experiences on which I base these evaluations quite limited.

Furthermore, even though I may sound pessimistic in evaluating where we now stand, I am quite optimistic that these situations can and are being improved, and that great gains will be made in the future. I believe that gains toward this goal will be made in step-wise progression and that "Heaven is not reached at a single bound . . ." but that "We build a ladder by which we rise from the lowly earth to the vaulted skies."

I have ventured my description of the "lowly earth" on which I now believe we are with respect to research toward accident prevention, and I have depicted my opinion of the framework of the ladder by which we might rise. Let's look upward, build, and climb!▲

REMARKS OF ALBERT P. ISKRANT

chief, Operational Research, Accident Prevention Program,
U. S. Public Health Service, Washington, D. C.

Research into the causes of accidental injuries is one of the most vital needs in public health today. We talk about the 90,000 deaths from accidents each year, the increasing proportion of deaths due to accidents and the fact that from ages one to 35, accidents are the leading cause of death.

We talk about the "epidemiologic approach," about "accident proneness," about emotional factors accounting for 80 per cent of accidents and about the medical aspects of accident prevention. We talk of the 28,000 deaths, the 800,000 lost man years of life, the four million injuries and the almost billion dollars cost resulting from home accidents. We recognize in a vague kind of way that the home accident is the leading cause of death of young children, and so we talk of slippery rugs and insecure ladders, and we decide to do a survey.

We organize the community, do a survey, and it is forgotten before the results are known. There is nothing wrong with a survey; it is an excellent method for determining the extent and nature of the problem. All praise is due to the Kellogg Foundation or the National Safety Council or the health departments and others that struggled so manfully in uncharted waters. Also the work of the national office of Vital Statistics and the Vital Statistics Bureaus of the 14 states that cooperated in the preparation of special forms for data on deaths from home accidents—all this deserves mention. Much invaluable data are contained in the report of this cooperative effort.

If we wish to apply to home accidents the same epidemiologic methods we used in combating the communicable disease we shall have to extend our efforts beyond the "survey." Tabulations regarding the who, when, and where of home accident injuries and deaths help identify problem areas and the need for control measures, but they *do not* provide solutions or identify causal relationships.

RESEARCH PINPOINTS PROBLEMS

Much research has been done in the field of home accidents, especially in children.

In poisoning, in particular, a great deal of practical knowledge has been obtained. And the subject of "accident proneness," and the personality traits of accident repeaters, has been dealt with widely, though sporadically. But the findings don't "hang together," and there is no organized research expected to come to fruition within a definite time.

In spite of the repeated declarations that we must apply to home accidental injuries the same epidemiologic techniques used in determining the etiology and control measures for communicable diseases, we have not gone past the stage of the survey. If we really believe home accident injury, disability and death constitute the health problem, and that we need to know more about the circumstances surrounding them to develop preventive efforts, then it is high time we started a research program commensurate with the problem.

The immediate goal of a research program for home accident injury prevention is to identify and eliminate the basic causes to reduce accident frequency and/or severity, save human life and decrease disability.

Ordinarily we consider epidemiologic studies as being concerned with the host (person who has the accident), agent (physical, chemical, or biologic), the environment (physical, biologic or socio-economic), and their interaction. Hypotheses developed from studies should be tested by the most stringent statistical tests possible, and through controlled experiments whenever feasible. The team approach should be used in these epidemiologic studies to give the investigations the maximum talent available, and to exploit to the fullest the opportunities presented. Physicians, engineers, nurses, psychologists and investigators can all contribute. In addition to a statistician and clerical help, the composition of a team would depend on the type of investigation. Poisoning investigations of children take different talents from one of falls from ladders in young adult men.

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ACCIDENT PRONENESS UNREVEALING

The subject of "accident proneness" should be explored. To date the term describes a series of personality traits not yet identified. Scattered studies have identified various traits which might be the product of the author's imagination, or his pet belief, or else traits found in most people. Characteristics suggested by epidemiologic studies should be subjected to the most vigorous tests under controlled conditions.

Apart from any inherent "accident proneness" which may exist in individuals, attitudes developed because of social or environmental forces affect human behavior and safety. Workers who are extremely careful on the job may be careless around the house. A person cautious around the house may drive like a lunatic. While many authors feel the key to the accident problem lies in this area, virtually nothing is known, although much is speculated. There is great need for developing and using methods of assessing attitudes, to identify those which predispose unsafe behavior, and to modify or change attitudes and behavior.

A particular problem in home accidents concerns older people, which account for more than half of the home accident deaths. We must convince older persons they are not as young as they used to be, and modify their behavior pattern for greater safety. Very young children must be protected against accidents, but older children, especially those attending school, must be instructed in safe behavior. More needs to be known about children's conception of, and attitudes toward accidents at each stage of their development to plan realistic safety instruction for different age groups.

EFFECTS ON ACCIDENT OCCURRENCE

Organic disease, impaired functions, and aging processes increase the accident potential of individuals, but their effect on accident occurrence is largely speculative. The extent people "compensate" for deficiencies is not known, and differences in exposure make comparisons difficult. When we find greater than expected prevalence of specific conditions among accidents, we must then compare the accident experience of a group of persons with the condition and a control group without the condition, matched on age, exposure, and other variables.

Because of the difficulty of selecting appropriate groups with particular conditions or defects, and following their accident experience, it may be more appropriate to give physical examinations to entire groups of persons, and then do follow-ups for accident experience. In this way many hypotheses could be tested in the same group of persons. Another approach would be through records of an organization which provides routine medical care and physical examinations. Here both the physical condition of participants and also all accidental injury experience needing medical attention would be known.

The prior or future incidence of accidental injuries in persons with particular defects or conditions can be compared with a control group. If the organization enrolls families, additional studies can be done on family accidental injury experience.

In considering the relationship of physical conditions to accidents, children's growth and development and their effect on their activities offer a very fertile field for developing realistic safety education for children of different ages.

SECONDARY PREVENTION

The term "secondary prevention" in the health field designates measures to minimize disability and death after the illness or infection occurs. To a large extent the first aid and medical care given to injured persons are important to determine whether the injury results in recovery, permanent disability, or death. Accident victims who are not killed immediately can best recover if they receive early and adequate first aid. Proper training in first aid is important but little is known about teaching methods or effectiveness. Present methods of teaching and administering first aid must be studied to be sure that first aid manuals include latest medical information. Medical treatment of injuries also must be continuously appraised and evaluated.

Accidents are a function of the hazards to which people are exposed and a function of peoples' way of living. Socio-economic and cultural patterns help determine the type of accidents people have. Children who accidentally ingest aspirin come from families where aspirin is accepted, probably in childhood medical care. Poisoning from kerosene

ingestion obviously occurs in a different cultural pattern from poisoning from tranquilizers and barbiturates. There needs to be definite research into various cultural patterns and ways to motivate people to safer conduct.

MUST STUDY ENVIRONMENT

Epidemiologic research in the field of home accident injuries can not be limited to identifying susceptible individuals nor can they be removed from the environment after identification except by making them less susceptible. The role of the environment in its relation to the host must be studied for general and specific accidents. The contribution of various environmental factors to accidents may offer more immediate control measures than identification of "accident prone" personal characteristics.

For both the environment and the agent, research which identifies causes of specific accidents will produce "pay dirt" most quickly. For example, changing door locks on refrigerators, or removing doors from abandoned refrigerators, may be more immediately profitable than attempting to modify childhood behavior to keep children from entering refrigerators.

This does not mean that a wholesale program of research, such as one directed at housing design for maximum safety would not be a profitable undertaking. On the contrary the elimination and control of hazards by efficient planning design and construction of homes and installation of household appliances and equipment, is of highest priority. It is rather futile to tell householders about even treads or standard risers when they buy or rent houses already built. Research into the design of homes for maximum safety is a vital need, particularly in homes for the elderly.

The differences between the epidemiologic research we propose for home accidents and that ordinarily reported in public health is that the former case deals with a whole spectrum of events and causes. Each innovation brings new ways of injuring, maiming, and killing. The introduction of the

tranquilizing drugs immediately presented new opportunities for childhood poisoning and other accidents; the rotary mower brought new opportunities for cutting off toes and putting out eyes.

We must carry out a two-edged research program—general and specific. The general approach is new in public health. To my knowledge, an epidemiologic investigation into "illness" as such has not been conducted although yellow fever, malaria, tuberculosis and syphilis have been studied, and the causative agents isolated. Cuts are not caused by a single agent, but rather by an ever-changing gamut of events, from slipped nailfiles to crashes of huge airliners. Anyone who has looked at the results of a home injury survey, or reviewed the certificates of deaths from accidents could see the almost infinite variety of accidents. Therefore, we must identify the common causes as well as the specific causes of accidents.

RESEARCH INCLUDES CAUSE, EFFECT

Our epidemiologic research will become more specific as sufficient numbers of accidents with common causes are identified. When we learn that power mowers are cutting off toes, we must proceed to try to do something about it. If children are being burned by falling in fires, we must introduce a program of fire-screens.

But all the time we must work toward the goal of identifying common causes—the effect of weather, climate, topography, training, education, personal factors, fatigue, drugs and alcohol and housing design. Otherwise we will just be plugging holes, while other holes appear as fast as the economy and technology advance. The *Daily Tribune* of Gallipolis, Ohio, wrote an editorial which illustrates my main point: "The number of serious accidents is appalling. Fractured skulls, broken limbs, mutilated faces, scalps and ears torn off, and spines crippled, are the daily record. And almost without exception every accident is the result of fast and reckless_____." The year was 1897. The agent was the bicycle!▲

REMARKS OF FLOYD A. VAN ATTA

industrial hygienist, United Automobile Workers, Detroit, Mich.

One of the primary needs in accident prevention research is to know what we are really talking about. And I do not find it easy—or even possible to distinguish home accident prevention research from any other type of accident prevention research in this respect.

This necessity for knowing what you are talking about is simple and primary, but the human mind is so constituted that we make it complicated—almost all of us make every new question hopelessly complicated before we even start to look for an answer. One of our favorite ways of complicating matters beyond any hope of recognition is by means of our own sloppy speech and slovenly thinking. This is a very fundamental part of our problem.

One example which annoys me more than most, mainly because the habit of speech becomes or signals the habit of thought, is the almost universal trait of talking about accident rates when what are really under discussion are injury rates. There may be some a priori reason to assume that accident rates will follow a course parallel to that of injury rates. I do not know, nor do I know of any objective attempt to find out.

FIND INJURY CAUSES

Certainly there is no good reason for not finding out the causes of injuries and means for preventing them if possible. And in recent years we have made some progress in this direction. But let us do it in the knowledge that we are preventing injuries and not preventing accidents. We are accustomed to filling out an Accident Report on every disabling injury in industry and to collecting many of our home accident statistics from hospital records.

I am quite sure also that one of the things which has made the investigation of home accidents peculiarly uninviting to any research people who would not have been repelled by the general tone of accident prevention propaganda has been this same peculiarity of the basic data. It has generally been collected for clinical, for insurance, or for other purposes not necessarily related to accident prevention or even to injury prevention.

I once had a desire to find out something about the causes of window washing accidents. I set myself an easy task by looking for the ones which resulted in compensated injuries because there had to be a complete report on each of them in the custody of the compensation authorities. The Industrial Commissions of three of our larger industrial states were quite cooperative and in each of them I read the original "accident" reports on every reported injury of this type for three years.

NO CAUSAL INFORMATION

At the end of this rather tedious chore I had, in addition to sore eyes, a great deal of information on the nature, location and extent of the injuries; the clinical course of the patients; and the amounts of compensation and medical payments. The only thing which I lacked was any clue as to where to start to look for the causes of any of these accidents.

This is a specific example of a general condition. To look a little closer to home I might suggest a look at the rather famous "heart kitchen." I do not wish to suggest that the idea of the "heart kitchen" is not good or even that its practical effect has not been desirable, but I do wish to suggest that the whole thing was set up in the presence of a woefully inadequate amount of evidence.

The general idea is to save effort, and presumably strain on the heart, by saving steps and by saving stooping. It would seem logical before going into this project to determine in an objective manner what types of activity would demand the maximum metabolic price and, presumably, put the maximum strain on the ailing heart. A preliminary determination of the metabolic cost of a number of movements of this sort has since been made for quite another purpose and it turns out that the values are surprising, at least to me.

RESEARCH—CRITICAL STUDY

This brings me to a second general point, that research in general is not only a close

or intensive study of a phenomenon or substance. It is also a critical study. I have seen a Master's Degree thesis on the use of articles by Shakespeare. It certainly represented a close study of some parts of Shakespeare's writing but it was, in my estimation, about as much a research project as it would have been for the young man to have spent the same amount of time in counting his toes.

It established with an unspecified precision a series of numbers which were already known with an unspecified, although presumably lower, precision. I do not classify it as useless research; for all I know it may have some very practical application, and I think that it is generally both risky and unprofitable to comment on the practicality of any project.

I criticize only the fact that it is completely uncritical and, as a direct consequence, adds nothing to the sum of human knowledge. This is the fundamental difficulty with a great deal of what has frequently passed as research in home accident prevention. It has been more closely related to propaganda or education than to research.

RESEARCH—UNGLAMOROUS

It is an unfortunate fact that research is seldom glamorous and seldom spectacular—that is something which the press agents have thought up for the purpose of capturing the public's money for medical research to the probable detriment of the research.

Research is normally a process of isolating a part of a phenomenon small enough that you can begin to understand, or at least observe, the conditions which control that part. Having picked out the controlling conditions it is necessary only to arbitrarily vary each of them in turn while holding the others constant to arrive at an understanding of that particular system.

Sometimes we are lucky enough to be concerned with a relatively simple system—a rigid ball on a rigid plane perhaps—in which we can observe the significant conditions directly and unequivocally. In this instance any single ball from a universe of balls and any single plane from a universe of planes will tell us all that we require to set up a mathematical formulation of the system.

Sometimes the situation is more complex and we cannot observe the boundary condi-

tions directly—perhaps we are concerned with the molecules of a gas. In this instance, if we are really lucky, the unobservable may follow the simple laws of probability and by observing a sufficient number of instances their effects will cancel themselves out, permitting us to observe the effects of the conditions which we can control or which we can observe. We then have become in some sense statisticians.

HUMAN EXPERIMENTS DIFFICULT

If the universe in which we wish to make our examinations happens to be a human population there is generally an unwillingness on the part of the experimenter to apply experimental conditions with rigid controls and an even greater reluctance on the part of organized society to permit him to do so even if he has the desire. Normally this makes it extremely difficult to carry on meaningful investigations of any sort with human populations.

If we can locate two closely similar populations in one of which chance has provided us with a condition—perhaps a smallpox organism—which is not operating in the other we have a controlled experiment provided by chance and in observing it we become not only statisticians but epidemiologists.

Obviously it is not necessary for the experimental variable to be an organism. Any defined variations between two recognizable and otherwise homogeneous populations will yield results by the methods of the epidemiologist.

It is, however, necessary in any such investigation to be able to define the populations involved, to demonstrate that there is a single defined cause or a finite number of defined causes at work, and to demonstrate that except for these causes the populations are homogeneous.

DEFINING ACCIDENT CAUSES

In accident prevention investigations the difficulty which the epidemiologists have lies in the fact that there has been, up to now, no demonstration that there are two or more definable populations at any point in time or space one of which is contracting accidents as the result of one or more definable causes while the other is not contracting accidents because of the absence of these causes. It would be more hopeful if you

could demonstrate two otherwise homogeneous populations one of which was contracting accidents.

R.S.F. Schilling has expressed this situation well for industrial health investigations when he says:

"It seems we must await the development of better techniques for assessing mental illness and determining its cause, and we must define health in measurable terms. Until this is done the research worker will be inclined to leave health and mental illness aside and study disease which can be measured. As he grows older and becomes more aware of the immense difficulties of methodology in occupational health research he will derive more satisfaction from planning and completing neat and conclusive investigations than from making heroic attempts to achieve unattainable ideals."

MUST PIN-POINT CONDITIONS

Change the industrial health phraseology to accidents and it applies perfectly and

completely. When we come down out of the clouds, stop being do-gooders, strip our problems down to a size where we can actually see the important conditions, define precisely what it is that we wish to know, and consider critically how to find it out, we may begin to make some substantial progress in accident prevention research.

This is not nearly as glamorous a prospect as looking at the "big picture" and writing erudite papers on the "accident prone" or on the "wish for self destruction" or on "guilt feelings in accident causation" but it will eventually bring some definable results. When it has proceeded far enough that it is possible to set up a reasonable research project with definable and possibly achievable goals it might even become easier to get some money to carry on the work.

As a start on the language side, which I think is an essential ground-work, I would recommend to you the definitions in the September 1957 issue of Home Safety Review.▲

THE ROLE OF NATIONAL SURGICAL ORGANIZATIONS IN PUBLIC SAFETY

by DR. JAMES K. STACK

secretary, American Association for the Surgery of Trauma, Chicago

The American Association for the Surgery of Trauma was founded in 1938, and Article II of its Constitution states:—"The object of this Association shall be the cultivation and improvement of the science and art of the surgery of trauma . . . and the consideration of such other matters as may properly come within its sphere." We feel that public safety comes within our sphere.

The Association has 250 active members, approximately 80 senior members and 25 honorary members. The founding members felt that the surgery of trauma would be of increasing importance and set out to stimulate the medical profession of this country and Canada to a correspondingly greater interest in this field.

The fellowship is made up of surgeons who are active in the practice and/or teach-

ing of surgery, or one of its branches, and are in a position to bring about this influence in the communities in which they work.

The Association has no administrative staff. Its activities are directed by its officers and Council and participated in by all of its members. They are in a position to influence medical school curricula, hospital teaching programs, and the trends of post-graduate education on the local, state and national level.

COLLEGE OF SURGEONS

The American College of Surgeons was founded by the surgeons of the United States and Canada in 1913 and its fellowship numbers about 16,000. It is divided into state chapters, and, in the larger cities, metropolitan chapters. Of particular interest

to you, is its Committee on Trauma—a group of 42.

This Committee was originally established in 1922 as the Committee on Fractures, and its appointment was stimulated by the generally poor results that were being obtained country-wise in that era. Later, it became the Committee on Industrial Medicine and Traumatic Surgery, and its present title—Committee on Trauma—was authorized by the Board of Regents in 1950.

There is a similarity between you and us, and a difference between another part of you and us. Let me illustrate. Most of you are dealing in your everyday work with individual problems arising, usually one at a time, with the accident victim, with the colleague who is responsible, with the morale of a single worker who can set the mood for a group.

We, too, are dealing, for the most part, with a succession of individual problems of people, and for that reason we both are concerned with the question of individual variability. Let us say that none of your "accident-prone" workers, and none of our patients will react in the same way in point of time regardless of other similarities they may have.

DATA NOT APPLICABLE

When you deal with a single person for whose safety you are responsible, you are practicing an art, and you cannot validly apply data you have on him to conclusions reached by data drawn from a group. There are others, especially those within the organization of the National Safety Council itself, who are practicing a science, namely, that of statistical measurement.

They are safe in applying statistics to a given problem and passing them along for your consideration, but, no matter how accurate their tools of collection and assimilation become, you will err if you attempt to apply it exclusively to a single problem.

In our work, the temptation to do so is great. To statisticians, the five people killed when their car failed on the curve are five rectangular holes in one of St Peter's IBM cards. To you, they are five different problems causing you to review your off-the-job safety program, and to us they are five deaths on which to ponder cause, from the

medical standpoint, and prevention, perhaps through closer contact with you.

I am sure that we are closer together than we may think. "Whatever the values of a manager or supervisor, whatever wonderful potentialities he may have, he is limited on the job by the skill with which he is able to guide, lead, teach, direct, control and motivate others." Isn't that also a characterization of a dedicated doctor? Newer trends in medical education are leading the student away from the statistical trap and emphasizing more, both in the pre-professional and professional years the art of understanding and handling people.

FRUSTRATING PROFESSION

Medicine is unique in that its professed purpose and highest end is its own oblivion. It is on our road to this oblivion that we meet with many frustrations, and these keep us from getting there as quickly and directly as we would like.

There are many road blocks and detours over which we have no control, and we find ourselves stopping too frequently to classify repair or dispose of human debris. The road block of poliomyelitis, for instance, still has some debris around it, but the wall is lower now because a large crew under a man named Salk is at work on it with much modern machinery provided by both private and government funds.

There is a long and ancient detour lined by many dead and many more pulmonary and skeletal cripples, and these have for years slowed our journey. It seems that they are mostly people who have been underprivileged and social and economic conditions made it difficult for them to combat tuberculosis. This detour is, however, a little smoother than it used to be because streptomycin and other drugs and surgical advances have been so helpful.

But just when we think we are making good headway to this oblivion, and the road seems clearer, other obstructions keep appearing, and there is one with a frightening potential that seems to be developing fast. It is labeled "highway accidents" and it is unusual in that it is at a place which is quite wide and smooth and generally attractive, and also in that the human debris around it seems to include all ages and types and all socio-economic groups, too.

YEARLY DEATHS

It is striking, though, how many are young and would have been in the prime of life. This block is said to be increasing in size, and, of the 93,000 deaths at all ages from accidents in 1955, almost 40,000 are piled up here. Home accidents are not far behind—28,000 of the same 93,000 in the same period. This increase is taking place in spite of the many groups of people who seem busy in this area.

These workers do not seem to be always as well coordinated as they might be. Some are working in a plodding manner, observing, measuring, noting, while others are working feverishly, almost vengefully, as one might spit into the hurricane that has just destroyed his home.

These are homely examples of the many frustrations and disappointments in the daily life of a doctor. There are so many instances in which safety directors and workers can correct potentially-dangerous machines and locations; you can erect guards, change design and install fire-doors to make sure that such an accident will not happen in just that way again.

But we cannot change the design, for instance, to restore calcium in aging bones so that the left hip won't give 'way a year after recovery from the fracture and pinning of the right. You can solve the problem of the hazardous, incompetent alcoholic who has been wrecking your safety record by letting him go, but we are unable to reach the underlying cause that will enable him to keep from injuring himself or others in the area of everyday living when constant conduct supervision is impossible.

SUGGEST HABIT CHANGES

You can grant a pension to the old employee who has developed a Parkinsonian tremor and whose unsteady gait makes him liable to fall, but we cannot protect him because we do not know the basic cause of the degenerative changes occurring in a certain part of his brain.

The surgeon's contribution to accident prevention consists most likely of suggesting little changes in the mechanics of living. You had better take up those throw rugs in the parlor so grandma won't trip and fall. You had better move that window seat or radiator so father won't hurt his back

when he leans over with his knees straight to open the window.

It would be best to put a guard on that open gas heater or Sally will be burned again (but the question of flammable clothing is not such an easy one). Why don't you send that rotary lawn mower back to the factory so that shrapnel-like flying broken blade won't cut the tendons of your other foot the next time.

MUST BEGIN PREVENTION

Surgeons, through their organizations, especially the two groups I have described, have done somewhat more, particularly along the lines of education of the medical profession toward better results in the treatment of accident victims, but here again we are dealing with the wreckage after the fire and not helping to hold the hose that is pouring water on the base of the flame.

We surgeons, because of our first-hand knowledge of the immediate and final results of accidents, in our emergency rooms and wards, and in practice in general, are, we think, in a position to contribute more to accident prevention.

We certainly are in a position to have impressions, and, even if we do not always have statistical evidence, these impressions are passed along to our colleagues through the medium of meetings, publications and the like, so that those of us in one community may know the nature of the problems in another, and be ready should they strike.

We may know by having things told to us through privileged communication that would not appear in an accident report, and these could be acted upon in an indirect way that would be helpful and still not be a breach of professional confidence. The accident victim may not admit to an investigator that he has had trouble recently adjusting his insulin dosage, that he had some strange feelings and slight seizures that made him wonder if he was going to be like his uncle who "used to have fits."

PEOPLE CONCEAL FACTS

He might not reach into his bedside table and show the insurance adjuster the little tablets he takes when he gets attacks of shortness of breath and dizziness. His wife would not repeat to the safety man from

the company that John drinks heavily over the week end and that she hates to see him leave home on Monday morning so shaky and depressed; besides, she wanted him to give up the job of structural steel worker a long time ago. Thus, we see the effects, but could we, by, a posteriori reasoning perhaps throw more light on the cause.

How many people suffer really serious injury or death in their first accident? Is this the first time they have had an impressive injury (one that requires special treatment other than household care)? What is the percentage of repeaters and is this high enough to be a factor in the patient-surgeon relationship the first time?

In other words, if all surgeons caring for accident victims the first time were more prevention-conscious, could they, during the time of this care, make such an impression on the patient by word, deed or opportunity to observe other casualties, that the chances of this person ever getting into another accident would be lessened?

To put it another way, would the primary accident victim be less likely to have another, perhaps worse accident, if he was in some way impressed with the people around him in the ward, in the physical therapy department, who were so much worse off than he? What is the role of such comparison? What is the role of remorse?

VICTIM RECEIVES NOTICE

I am sure many of you are aware that the accident victim becomes the center of attraction as his family and friends surround his hospital bed. Later, he may wear his cast, crutch, brace or sling as a badge of merit, or, certainly, as a comment-inviting device. We know that children just gloat on a bandage or cast, as witnessed by the present-day vogue of signatures on it. The more signatures, the greater the triumph. "Your cast just went up to your knee; that's nothing—mine went all the way to the hip."

We must not forget that in the care of the injured we are dealing, for the most part, with the average person, and I need not remind you of the intelligence or educational level of the average. Does it make any difference whether the patient was truly an innocent victim or not? Whether he was hurt because of his own ignorance or foolishness or not?

Should we, as surgeons, use a different

personal approach (naturally, the quality of the medical care will be the same for all)? In other words, should some accident patients be treated as if the cast on the arm should be a dunce cap on the head? For awhile in Chicago, a traffic judge sent certain serious violators to visit the larger fracture wards of the Cook County Hospital so that they might see the actual results of their violations. Is such a course effective?

What do the parents do when the son riding his bicycle illegally on the sidewalk, carelessly rounds the corner and injures the aged pedestrian and, of course, falls off his bike? Does the abraded knee get the same loving care; are the tears kissed away in the same way as if he had injured the knee on the catcher's cleat while sliding home with a winning run in a Little League game?

MAKE PATIENT AWARE

Can we utilize the time (and it may be considerable) and relationship (and it may be close) to impress the patient so that it will really make him be more careful and observant? Can we help in this way? Last year 30 some inmates of a Georgia prison farm fractured their legs simultaneously by sitting down, putting their foot up on a rock and hitting themselves on the shin bone with sledge hammers.

The management of these patients, i.e. the medical management, will be discussed at the coming meeting of the American Association for the Surgery of Trauma, and perhaps we will learn of an effective method to keep them from becoming repeaters.

We, as doctors, are at the grass-roots level of any safety campaign because we participate from the beginning. As far as highway accidents are concerned, local or state police are also there from the beginning, and, at least in Illinois, a medical report is sent by the treating doctor to the Secretary of State which completes the statistical picture.

REPORTING PROBLEMS

The reporting would be somewhat similar in railway, aviation, industrial and marine accidents, but, supposing the victim is taken to his home and no hospital report is available; then only the doctor knows of it. Is the reporting of these accidents vital in prevention? You will immediately answer "only if something is done about it."

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If I, as an individual doctor, see a patient with, let us say, serious fractures and lacerations because of a defective electrical tool or lawn mower, or the like, to whom do I report? He is admitted to the hospital as a private patient and the police, therefore, are not notified.

Do I report it to the retailer who sold him the gadget, the wholesaler, the manufacturer, the local Better Business Bureau, the Consumer's Research, the Underwriters' Laboratory, the National Safety Council? The first three may have a financial stake in the patient's predicament and be on the defensive. The next four might say that it is out of their field and they might or might not be able to help.

They might not think that a single mishap such as this was important, or they may even consider it a case of personal negligence. If, on the other hand, one of these surgical organizations had a means of collecting a number of such mishaps country-wide and then presenting these data to the National Safety Council, to the manufacturers, to the Consumer's Research, would this add to the safety of the product, and, thus, promote the public safety, at least in this instance?

PROMOTING PUBLIC SAFETY

Or would it be like getting the slum landlord to repair the third floor back porch railing, or the city to fix the sidewalk after the third broken ankle? You may think these are very foolish questions, but I am sure that in asking them I represent the average doctor's wonderment about his position in regard to public safety. He may know his duty as a citizen, but does he know his duty in this area as a doctor? Or does he have a duty?

Each year many new products come into the market to beautify the home, to decrease the burden of those who live in it, to expand their recreational activities, both at home and on vacation; just like each year many new medications come on the market. Then later it is found that these new medications are not as effective as first announced, and that some have produced under certain conditions dangerous complications or unpleasant side effects.

These announcements are not necessarily made by the manufacturers of the product, but are published by those doctors whose

patients have been involved. The article may not condemn; it may simply show that under certain circumstances this is what happened. We, in the medical profession, are helped in this way. Is this an equally effective way to protect the public against the new non-medical products that may be equally hazardous and equally disappointing to their originators?

KNOW THE HAZARDS

Does the salesman, selling the home tool, know about the potential hazard as much as the doctor writing the prescription, and, in the event it does not live up to its expectations, does he, the salesman, have the benefit of this knowledge presented in a factual and timely way?

Would a trade journal accept an article published under the aegis of a committee of a national surgical organization, outlining the surgical experiences that prompted it to be labelled a public hazard? Or would such an item be more properly presented to the public through the National Safety Council, or some other medium? In other words, could we as an organization, promote the public safety in such a way, and would the end result justify the time, effort and expense involved?

The medical profession is pretty well tied down, so to speak, to the job of practicing, teaching, learning and disseminating information at the postgraduate level, so that most of us do not have the opportunity to acquire the answers to the questions above. We can't be sure of our own knowledge of the motivation of those who manufacture and distribute products that are related to public safety.

ARE YOU SURE?

Can you, who are not in the insurance business, be sure that the advertisement that you read, cautioning you to do this or that, or advising you to have an examination at this or that time, is prompted by the company's true interest in a long and healthy life for you, or by the fact that more people healthy means less waiver of premiums and more people older means more annual premiums?

In the efforts of one of our sub-committees to promote the installation and advertising of safety devices, they were told that one doesn't sell automobiles by calling the cus-

tomers attention to the fact that he will be less likely to be killed in it if certain equipment is included. Judging by the automobile advertisements, the pitch is beauty in the sweeping line, plus power and comfort. The safety part of it is the customer's option; he can take it or leave it.

At a meeting of the American College of Surgeons in April of this year, Dr. George M. Wheatley, vice president for Homes of the National Safety Council, said, "It is gratifying to have surgeons begin to turn their attention to the study of the cause and prevention of trauma . . . the public has learned to look to the medical profession for this kind of leadership."

DOCTORS PREVENT ACCIDENTS

I should remind you that, in spite of the numerous questions I have asked, indicating perhaps a frightening ignorance of many phases of public safety, many doctors are already actively engaged in accident prevention.

For instance, the team physician who supervises or applies preventative bandages or appliances to vulnerable parts of athletes; the boxing commission physician who decides that the fight will stop to prevent lasting injury to a participant; the industrial specialist who confers with the safety director and industrial hygienist about certain potentially-hazardous working conditions; the flight surgeon, or specialist in aviation medicine, or his counter-part in the submarine and diving activities; those doctors engaged in protecting against radiation injuries in the ever-increasing expansion of nuclear energy programs.

Other medical organizations are also awakening to their responsibility in prevention. The American Association of Plastic Surgeons in 1954 began to participate in prevention efforts because, as one of them

said, "In spite of all surgery and medical care can offer in the way of repair, there is bound to be residual scars of body function and mind."

In 1950 the American Academy of Pediatrics established its national committee on accident prevention, and the surgical section of this Academy is playing its part. For example, they established shortly afterward the Chicago Poison Control Center. This aroused great national interest and similar centers are now established in some 44 other cities. Dr. S. D. Woodward, Chairman of the Committee on Automobile Crash Injuries and Deaths of the American Medical Association did much to persuade manufacturers that designing safer cars was part of their business.

NSC POLICY

I started this talk with a quotation taken from the published policy of the National Safety Council, and now let me conclude it with a further excerpt from this same statement of policy:—

"The Council is also properly engaged in . . . helping formulate model safety legislation when the force of law is required, in participation in planning and executing educational programs, in disseminating accurate information to the public and in encouraging the establishment of community and state safety organizations."

Surely in such a varied attack on the factors that kill and cripple so many Americans each year there is a place for the particular outlook and ability of surgical organizations. Let us not continue to go our parallel but separate ways like the ships in the *Tales of a Wayside Inn*—"That pass in the night and speak each other in passing. Only a look and a voice; then darkness again and a silence."▲

THE ACCIDENT PREVENTION PROGRAM OF THE PUBLIC HEALTH SERVICE

by DR. JAMES L. GODDARD

chief, Accident Prevention Program, U. S. Public Health Service, Washington, D. C.

In no field is the work of the voluntary organization more valid and appropriate than in the area of accident prevention. In many of the major problem areas of public health the conscientious private citizen finds that his chief contribution at the present time is limited to the support of medical research.

But everyone can take direct action to help prevent accidents. Only when everyone is persuaded to take action—personally and consistently—shall we see a significant reduction in the toll of death and disability caused by accidents in this country.

RECENTLY ORGANIZED

The National Safety Congress has for 45 years demonstrated the value of organized effort in the accident prevention field. Compared to this history, the record of my own agency, the Public Health Service, is a brief one; although we have carried on activities in the home accident prevention field for many years, (for example, the Division of Sanitary Engineering Services established a home accident prevention unit in 1949), it was only recently (1956) that an official entity, designated as the "Accident Prevention Program," was established in the Division of Special Health Services of the Bureau of State Services.

The State Health Departments—cooperation with which is one of the leading functions of the Federal Public Health Service—are also considerably junior to the National Safety Council in the accident prevention profession.

The public agencies have, indeed, received support as well as inspiration from private sources interested in home accident prevention. I refer to the generous contribution of the W. K. Kellogg Foundation, which has awarded grants making possible demonstration projects in home accident prevention. Three local health departments were thus enabled to undertake such projects in 1951, and eight State health departments received Kellogg grants in 1953 for state-

wide demonstration projects (California, Georgia, Kansas, Kentucky, Maryland, Massachusetts, North Carolina, and Oregon).

AGENCIES CONTRIBUTE

At a recent meeting in Washington of representatives of these state and local demonstration projects the Public Health Service received the benefit of some half-dozen years of experience by typical official health agencies engaged in home accident prevention work, and we participated in a detailed evaluation of that experience. In all the reports and discussions of the group, great emphasis was placed on the value of cooperation with local branches of the National Safety Council.

It was the hope of the Kellogg Foundation, in sponsoring these projects, that the states involved would perpetuate the activities in the form of permanent programs, and it is equally the hope of the Public Health Service that this development will be a major result of the demonstrations.

It is still too early to tell how many of the seeds thus planted will grow into vigorous plants, but we have faith in this method of program development, and, indeed, are committed to it as a principal modus operandi of the Public Health Service in carrying out its function of providing leadership to state and local health departments.

The public health movement in this country recognizes accident prevention as one of its prime responsibilities for the same reasons that carry weight with your own organization.

Accidents are now the leading cause of death at every age from one to 35. Accidents are now what tuberculosis was a half-century ago—the leading health menace to young Americans.

NEED INTENSIVE EFFORTS

These two grave and disturbing facts are in themselves, and standing alone, sufficient justification for intensive public health pre-

ventive effort at every level—federal, state, and local.

The last 50 years have witnessed many public health victories over communicable diseases. The last decade, in particular, has seen an amazing advance in preventive as well as curative medicine. The techniques of prevention, perfected during the long fight against infectious disease, are now being employed in the chronic disease area to minimize disability through early detection and to maximize rehabilitation. Accidents would seem to qualify as chronic diseases in this country, and we are all dedicated to the proposition that accidents are preventable diseases.

Accidents don't just happen. They are caused. And home accidents are quite as definitely caused by human behavior as are motor vehicle accidents. In both cases, alteration of human behavior patterns is the ultimate solution to the accident problem.

RESEARCH, CONSULTATION

The Accident Prevention Program follows a traditional Public Health Service procedure by emphasizing two basic functions, namely research and consultation. On the one hand, we have, during the few short months of our "Programs" existence, drawn up plans for research studies designed to probe more deeply into the behavior problems that underlie accident causation.

On the other hand, we attempt to supply consultation service and technical assistance to state and local health departments concerned with accident prevention. We hope to make a contribution to the accident prevention education field, to the extent that this is appropriate at the federal level.

The three operating sections of our Program are designated as: Operational Research, Program Services, and the National Clearinghouse for Poison Control Centers.

OPERATIONAL RESEARCH

Operational Research is concerned with identifying the basic causes of accidental injuries, in developing and testing hypotheses for accidental injury reduction, and in developing and operating a program of accidental injury reporting, which is basic to evaluation. Areas of research in which we shall concern ourselves in the future include:

1. *Studies of the behavioral and "attitudinal" aspects of accident prevention.*

Much more information is needed along the following lines: possible relationships between individual characteristics and the tendency to have accidents; the effect of individual attitudes on accident experience; possible methods of altering individual attitudes to achieve accident prevention; and evaluation of the effectiveness of attempts to produce safety-mindedness.

The ultimate goal, that of changing unsafe behavior to safe behavior, requires, we believe, extensive research in the directions enumerated.

2. *Epidemiologic studies into accident causation.*

In 1948 Dr. John Gordon, at the seventy-sixth meeting of the American Public Health Association delivered his now famous address on the epidemiology of accidents. In that speech he stated that the home accident problem should be approached in the same manner as any other public health problem, namely 1) epidemiologic analysis, 2) establishment of causes, 3) development of preventive measures and 4) evaluation.

EPIDEMIOLOGICAL MEANS

We in the Accident Prevention Program sincerely believe that the epidemiologic approach will produce many tentative hypotheses which can be tested in accident prevention programs. Much of our effort in the years to come will be placed on epidemiologic investigations into accidents.

We propose to use the team approach in some of these studies, utilizing the skill of many professions, including engineering, social science, psychology and statistics as well as medicine. During this fiscal year we have planned an epidemiologic study of accidents in old people and one in children. We have planned an epidemiologic study of injuries due to kerosene explosions in a southern state, and a large scale study of poisoning.

3. *Effect of physical conditions on accident causation.*

While we generally agree that physical conditions seem to affect accident occurrence, we are not sure to what extent they do so. While we feel sure that persons with diminished reflexes and failing sight are "more likely" to have an accident, we do not know

to what extent people compensate for these defects. We propose to find out more about the relationship of physical conditions to accidental injury experience in a group of old persons who have a complete physical examination and a continuous medical history.

ACCIDENT HISTORY

A complete history of their accidental injury experience will be maintained. Also in a large organization where physical examinations are given every two years, and a complete history of accidental injury experience has been maintained, we propose to compare the physical status of those with frequent accidents to that of the accident free.

For our major research project in this area we propose to study a large prepaid medical-care plan, where complete medical care is furnished, including treatment of injuries, and where periodic physical examinations are performed. We propose to abstract the records of approximately twenty thousand members, and relate the accidental injury experience to the various physical abnormalities.

4. *Effect of socio-economic and cultural factors in accident causation.*

It would seem obvious that accidents are, in large part, a function of the hazards to which people are exposed, which in turn are functions of ways of living. For example, injuries caused by accidental ingestion of poisonous substances occur mainly in younger children, while injuries from falls are frequent both among young children and old persons. Deaths from automobile accidents are highest in the late teens and early twenties, and are much more frequent in males than females.

These are obvious differences in the types of accidents that occur to persons of different ages. Some states have non-automobile accidental death rates twice as high as other states, and automobile death rates five times as high as other states. Evidently geography affects the occurrence of accidents. The effect of income, education, family size, weather, etc., are less clearly defined.

STUDY POISONINGS

During fiscal year 1958 we intend to engage to a limited extent in studies of accidental poisonings, from data collected in connection with the National Poison In-

formation Center. We also intend to extend studies into accidental mortality in an attempt to identify some of the socio-economic factors associated with excess mortality.

5. *Study of methods of secondary prevention.*

During the year we expect to engage in a study to obtain information regarding the types of persons administering first-aid or emergency medical care, and the kinds of emergency care given for different types of injuries resulting from various kinds of accidents. We hope, through this research, to improve the quality of first-aid, and thereby prevent much disability and death through more effective teaching methods.

Currently we are participating in a study of the effectiveness of various types of treatment for kerosene poisoning, and we expect to expand this type of therapy evaluation to treatment for other types of poisoning.

I should like now to mention briefly, some of the Program Services operations of the Accident Prevention Program, which supplement and complement our research work.

STATE AIDS

Services to states have included assignment of a medical officer to the New York State Department of Health. This officer helped to design a project for a Driver Research and Testing Center, a cooperative undertaking of the Bureau of Motor Vehicles and the State Department of Health. A public health representative was also assigned to assist the California State Department of Public Health in activities connected with the Cornell Crash Injury Studies.

These studies have been conducted since 1952 in the Department of Public Health and Preventive Medicine, Cornell University Medical College, New York City with support of outside grants from the Commission on Accidental Trauma of the Armed Forces Epidemiological Board and the National Institutes of Health of the Public Health Service.

Assistance was provided to several states in developing portions of institutes on principles of epidemiology, which presented the epidemiological aspects of accident control.

Consultative work done in various states had some specific results. In Wayne County, Michigan, for instance, experimental nursing records were revised to include recording and coding of specific work in accident prevention. In Pennsylvania long-range plans were developed for improving nursing services in home accident prevention.

In Rochester, N. Y., analysis of data concerning accidental injuries collected over a three-year period by the staff of the Visiting Nurses Association resulted in revision of the record form to provide clearer information. In Arkansas a plan was developed to begin evaluation of nursing services in accident prevention and to provide a basis for staff education conferences to be conducted during 1957.

AID UNIVERSITIES

Assistance was also extended to educational institutions, such as the University of North Carolina and the University of Puerto Rico, in preparing and presenting courses on accident prevention to nursing, sanitary engineering, and medical students.

There has been increasing acceptance of accident prevention responsibilities by state and territorial health departments during the year. Thirty-eight reported specific accident prevention services as part of their total public health programs. Eleven additional departments, in their official state program plans, expressed an awareness of the problem and a desire to undertake accident services.

Following broadening of the scope of the Public Health Service Accident Prevention Program, there was an extensive movement among the state health departments to expand activities formerly directed toward prevention of home accidents. These enlarged activities are in such fields as traffic, school, recreational, and farm safety.

PUBLIC HEALTH TRAINING

The training function is always an important operation in public health. This principle applies with more than usual force to the field of accident prevention. We plan to conduct training in accident prevention methods and techniques through assignments to schools of public health (and other specialized schools,) organization of seminars in various parts of the country, assignment of personnel to training situations in state and local health departments active in accident

prevention work, and through financial aid to schools to develop course materials and curriculum content in accident prevention.

The third operational unit of the Accident Prevention Program is the National Clearinghouse for Poison Control Centers.

POISON CONTROL CENTER

Staffed by a pediatrician, a pharmacist, an education specialist, a records analyst, and statistical and clerical personnel, the Program's Clearinghouse for Poison Control Centers has been set up to service the rapidly expanding network of local poison control centers which are now operating in more than 101 communities in 38 states and the District of Columbia.

The first local poison control center was opened in Chicago four years ago as a co-operative undertaking under the chairmanship of Dr. Edward Press, jointly sponsored by the heads of the pediatric services in major local hospitals, by the Chicago Health Department, the Illinois State Toxicological Laboratory, and other state and local agencies.

From this beginning the poison control center movement has spread throughout the country, preserving the initial purpose of supplying essential information on an immediate and round-the-clock basis to physicians who are treating cases of poisoning. Research, follow-up, reporting, and similar functions are closely related to this primary operation.

PURPOSES OF CENTER

The National Clearinghouse for Poison Control Centers, which was established following requests for such a national service from the American Academy of Pediatrics and the American Public Health Association, has the following purposes:

1. Interchange of information with local poison control centers throughout the country.
2. Stimulation of development of new or improved methods of prevention and treatment of poison cases, and encouragement of research, both basic and clinical.
3. Assistance to states and local communities in establishing poison control centers by providing technical assistance and consultation.
4. Study of national and area trends in

poisoning and successful methods of prevention and treatment; preparation of news releases for professional and lay health education.

5. Serving as a repository of information voluntarily provided by manufacturers.

In connection with this last item, the almost endless list of household products containing harmful ingredients has created perhaps the greatest potential accidental poisoning hazard. The American Medical Association estimates that a quarter of a million brand-name chemical products are now on the market.

Here are a few categories of such products, suggestive of the extent to which these goods have become a common feature of the average American home: laundry and dry cleaning chemicals; cleaning, polishing, and deodorizing products; auto care and repair supplies; art and hobby materials; and the garden-group, composed of fertilizers, weed-killers and pesticides.

CENTER AIDS COMMUNITY

The Public Health Service believes that, whatever the organizational pattern of the local poison control center may be, the local health department belongs in the center of such a community activity. In New York City and in Florida, for example, it has been demonstrated that operation of a poison control center has strengthened the cooperative relationships between the health department and the local hospital and medical groups.

It is inevitable that the long experience of health departments in liaison and advisory operations can be of great value in pooling efforts and facilities that must be achieved

if a successful poison control center is to be created in the community. Furthermore, the traditional public health techniques, such as epidemiology, casefinding, and follow-up, lend themselves naturally to poison control work.

The processing of information received from all over the country will be a major activity of the National Clearinghouse.

The analysis and tabulation of this material, and the preparation of summary reports, will be supplemented, from time to time, by the issuance of special reports devoted to new treatments, changes in formula of trade name products, new toxic materials or toxic materials encountered under new conditions, and the like.

MORE RESEARCH NEEDED

Opportunities for further research will be brought to the attention of individuals and groups having competence in the areas involved. We need to know more, for instance, about the action of certain poisons, and experience has shown that some current forms of treatment are unsatisfactory.

Our plans for the future of the Accident Prevention Program of the Public Health Service have been formulated in cooperation with the leaders of many groups, both public and private, having long experience in the field.

It was on the basis of recommendations by such groups that a categorical program in accident prevention was established at the federal level, and we look forward to many years of fruitful collaboration with organizations such as the National Safety Council in mutual efforts to reduce the alarming hazard of accidental death and injury in this country.▲

THE 1956 HOME SAFETY INVENTORY

by A. F. SCHAPLOWSKY

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No businessman today would consider staying in business without periodically taking an inventory of various aspects of his operations. His success or failure depends to a large extent upon how well he analyzes what he has done in the past and how well he plans for the future. It is just as logical to conduct periodic inventories and appraisals of health and safety programs. In this way they will continue to be improved and developed.

Prior to 1954 individuals interested in the prevention of home accidents frequently asked themselves, "I wonder what is really going on around the country in this field," and "How do the things we are doing in our community compare to what others are doing?"

At the 1954 annual meeting of the home safety conference of the National Safety Council, this very matter was discussed. Who in this country is doing what in home safety? How could such information be obtained? Would an inventory of program activities be a helpful addition to the Home Safety movement? At this meeting the home conference instructed the home division staff to implement the organization of such an inventory, guided by a special inventory committee appointed by the conference. Financial assistance was afforded by a grant from the W. K. Kellogg Foundation.

600 ANSWER TRIAL TEST

A trial of the inventory was conducted in 1955. Questionnaires were distributed to state and local organizations asking them to report their program activities. Six hundred reports were received in this initial effort.

The inventory committee and the home safety conference recognized the potentials in these reports and endorsed the expansion of the program for 1956. Two staff members were added to the home division to devote their time and efforts largely to this activity. Inventory centers were established in each of the 48 states, the District of

Columbia, Hawaii, the Virgin Islands, three of the Canadian provinces, and in more than 100 local communities throughout the nation.

The two primary objectives of the 1956 inventory were, to find out who is doing what in home safety, and to stimulate future home safety program activities.

A program summary form was prepared, tested, refined and finally printed and distributed. Some 85,000 copies of this form were sent to clubs, organizations, industries, governmental agencies, fire departments and similar organizations and groups throughout the states, territories and provinces which had set up inventory centers. These forms were distributed and the completed reports were collected later through the local and state inventory centers.

41 HUNDRED GROUPS RESPOND

By January, 1957, the replies began to return to the inventory centers. The forms collected by local centers were sent to state centers, and in turn, sent to the National Safety Council. The reports were then coded and the data was put on punch cards. A total of 4,126 organizations submitted summaries of their 1956 home safety activities. It is obvious that these program summaries do not begin to include all the home safety activities conducted throughout the country in 1956. These summaries, however, do provide more information than ever before available about what is being done. Thus, no claim is made that this inventory is a statistically accurate sampling of existing program activities. However, it does offer practices and suggestions which may be of assistance to future program planning.

A breakdown of the sources of the summaries received indicated that 145 were submitted by organizations whose programs are national in scope, 348 were from state-wide organizations, 1,600 from groups which function at the county level, and 1,993 from clubs and organizations active mainly on the community level.

Program summaries were obtained from 55 separate types of clubs, groups and organizations. More summaries were received from business and industries than from any other type of organization.

MANY TEACH HOME SAFETY

An overwhelming percentage of those replying to the inventory questionnaire indicated that their home safety activities involved educational methods. This is as one would expect, as the very nature of the problem dictates that this approach must be the main method of reaching people in their homes.

A wide variety of specific activities were listed and described in the narratives which accompanied many of the program forms. The findings revealed the tendency for organizations to pick their subject matter because it "was a good idea" or because it "was part of a regular annual pattern." Only a limited number of organizations took a survey of their local accident situation to discover whether the aspects of home safety emphasized were those which needed attention. This is a defect of many programs, as our changing environment creates new hazards each year and programs must be developed to meet them.

Inventory centers prepared reports for their states or local areas. These reports were distributed to groups who participated in the inventory. They were an important step in the process of community-wide planning, and served as a stimulus to new and improved programs. Thus every group which contributed learned what all other groups were doing. This is a brief description of the mechanics and findings of the 1956 home safety inventory. The objectives were met, in that the inventory revealed for the first time, on a national basis, who is doing what in home safety. It is now a guide for future plans and projects, and is stimulating the development of increased activity in this field, especially at the local level.

WHAT ABOUT THE \$64,000 QUESTION

In planning development and improvement of the home safety inventory field, the inventory committee during this last year asked itself questions like these: "Sure, in the 1956 inventory, we found out that a lot of different types of organizations are en-

gaging in a great variety of activities throughout the country, but what about the \$64,000 question? Do any of these activities actually prevent any accidents, and if so, are certain types of activities more productive in this regard than others, or are a lot of people merely engaging in a lot of activities with little or no effect? Can future inventories be designed and improved so that the data obtained will bring us nearer to the answers to these questions?"

To be sure if such information could be obtained, accident prevention workers could develop programs using tools which would compare in effectiveness with the Salk vaccine in its prevention of paralytic polio. Unfortunately the answers to these questions are elusive and may never be completely sound. However, when more and more dedicated workers throughout the country add bits of knowledge here and there in the years to come, the answers will begin to emerge. Inventories can play an important part in this process by periodically gathering, analyzing and disseminating details about the thousands of programs and ideas that will continue to develop.

When I become impatient with our progress, I remind myself that in the field of public health those problems with known single biologic causes have been solved and controlled. Those diseases with multiple and varied causes such as heart disease, cancer and mental health are still defying man's attempts at prevention and control. Activities undertaken in communities in attempts to control these diseases are almost as great and varied as are those employed in home accident prevention programs, and yet the time and money expended on these programs is tremendous when compared to that expended on home accident prevention.

SHOULD PROGRAMS CONTINUE?

Indeed, the causes of accidents are equally as multiple and complex as any of these diseases if not more so. Independent research and inventories with improved procedures, techniques and instruments in the years to come can provide us with data which will enable us to improve our programs and effectiveness in reducing the number of accidents.

Another question which I have occasionally been asked in regard to the inventory is, "Should we continue to stimulate more

groups and agencies to engage in activities which we aren't sure will really help solve the problem? Shouldn't we wait until we have more definite information?"

I have answered these questions in this manner. Research in other fields is not based on an "all or nothing" program. Man simply will not sit back and wait for the day when someone announces a complete cure or preventative. He does what his best information and judgment indicates will help in the situation at the present time. From his attempts, experimentations and activities will come some new thoughts and some answers. Indeed if more individuals and groups concern themselves with the problem of home accident prevention, successful techniques and activities soon become clearer and better defined. Today we might say we are using a shot gun in our home accident prevention programs; tomorrow we will be using a rifle.

The Inventory has been an important step in the home safety field. It can continue to crystalize home accident prevention activities and techniques throughout the country. The present inventory committee of the National Safety Council has recommended that

a national inventory not be taken in 1958 but that one be taken in 1959 of activities which were conducted in the year 1958. Changes have been suggested for the form to be used and the methods to be employed in conducting it.

State and local inventory centers will again be requested to conduct the inventory in their respective areas. The format of the inventory forms will resemble those now being used for the traffic inventory in that one compiled report will be developed by each center and sent in to the National Safety Council. A kit of state and a list of local forms will be developed. To assist the inventory representative in gathering information from local organizations supplemental forms will be developed.

No long range plan for continuation of the inventory beyond the one to be conducted in 1959 has been developed.

Members of present and future inventory committees of this Home Safety Conference and staff members of the home division will welcome any suggestions individuals may have to improve the procedures and instruments used in future inventories.▲

HOME FIRE INSPECTIONS BY FIRE DEPARTMENTS

by **CHIEF REYNOLD C. MALMQUIST**

first vice president, International Association of Fire Chiefs,
Chief of Minneapolis Fire Department, Minneapolis, Minn.

In attempting to prevent the loss of life and the start of fires in this country, the more we join hands with other organizations, the greater the possibility of reducing the loss of life and losses from fires. No one fire department or no one organization is large enough or capable of doing the job alone.

It is fitting that the tragic loss from fire be considered one of our major fields of activity. Each year America faces a tragic human and economic loss from fire.

When we consider that we are approaching, or probably already have arrived at the

one millionth fire per year and that our fire loss will probably exceed the one billion dollar mark, we realize the challenge which confronts us, at least economically.

Serious as these figures are, the most tragic results from these fires are the loss of more than 10,000 citizens with probably 4,000 of the victims young people who have not had an opportunity to live.

FIRE CHIEFS' DUTIES

The International Association of Fire Chiefs is truly an international organization concerned with the problem which confronts

WASTE OF MANPOWER

America today is an industrial and chemical nation. It is right that it should be for our standard of living is the highest of any country in the world. Yet, we can also brag that the loss from fire is equally high. No other country in the civilized world could support this tragic waste of manpower and natural resources year in and year out.

Hand in hand with this improved standard of living come the many new inventions and processes which make the home a better place to live. Home owners are not necessarily engineers or firemen and, while they enjoy modern scientific developments and improved household equipment, they fail to recognize that, while safe, they may contribute to a problem which is dangerous and hazardous to them.

The trained fireman can bring these points of danger to the attention of the home owner. In turn, he will develop a friendly public relations program which places the fireman as the partner in this group of public officials who are working for the safety of their citizens.

MUST PLAN DETAILS

Those of you engaged in the development of safety programs know full well that the success of any program depends upon the details of the planning. There is no spot where this is truer than in the area that undertakes the home inspection program. It is necessary that the chief completely sell his governing body on the intent and purpose of fire prevention in the home.

It is necessary that he sell the skeptics the soundness of bringing home inspections to the citizens of the community. Many will say that this is evidence of the rapidly developing theory of a police state. If steps taken by the department are so judged, and if subsequent investigations by other municipal agencies indicate that the information derived from home inspections is used for other purposes, the program will fail.

The people of the press, TV and radio can do much to bring the problem to the home owner. They can open the doors when they fairly present the soundness of the program and the reasons why it has been undertaken.

Generally, we find that fire department personnel, once they understand the need for home inspection, undertake it as a part

the chief fire officer. As an administrator, the fire chief's duties today are not solely concerned with the extinguishment of fire. He must be equally concerned with the frequency with which fires occur. The best trained men and the most modern equipment are available to help him in his fight to extinguish the fire. Manpower and sound planning are needed to help him to prevent fire from occurring.

With this thought in mind, the International Association of Fire Chiefs two years ago entered into a program of promoting the inspection of the home. When this program was undertaken, there were many who felt that because of the sanctity of the home, the right to enter it by firemen would be seriously questioned.

The home inspection program to date is successful. At the end of the year the ten millionth home in the United States and Canada will have been visited by members of the fire service.

Generally speaking, the program is planned on a year-round basis, and while it is a part of fire prevention, the activities are not limited to fire prevention week.

OFFICERS MUST EDUCATE

While it is true that any experienced fire officer can, from his desk, describe the conditions which make fire a receptive visitor in the home, the challenge to him is to bring this information to the home owner and his family in such a way that common, every-day carelessness will not sadden his residence.

We have found that where the home inspection program enjoys the support of the chief executive of the state, it is much easier to consolidate our work and effort. Some 22 states are now actively engaged in the home inspection program. In the other states many departments have developed new ways to "back the attack on fire."

While statistics are dry, cold figures, sometimes they can be used to point up areas requiring additional consideration. We found that 94 per cent of our citizens invited firemen to their homes. The remaining 6 per cent feel that this is an intrusion of the home. Wherever a program has been successfully conducted for a 12-month period, we found that there is an approximate 30 per cent reduction in calls to the fire department for fire emergencies in the home.

of the fire prevention program. They should be thoroughly versed in the reasons for the program. They should be trained on their approach to the public because usually it has not been within the scope and duty of the firemen to make good-will calls.

They must develop a spirit of cooperation and helpfulness. They must never institute inspections in the spirit of an investigation. They must assume that the conditions they find are human failures and are not developed as the result of intention or design.

In many communities the home inspection visit has been followed up by a personal telephone call by a chief officer. This gives evidence to the home owner that the program is supported by the entire department. It also acquaints the home owner with the recognized fact that he has been pledged, with his neighbor, to maintain a fire safe home.

The National Safety Council has become a partner with the fire chief in this program. Their annual home safety inventory now questions the fire activity in the communities surveyed. This, in turn, acquaints the fire chief with the fact that his work is being recognized by committees which normally undertake safety programs locally. Many times it places him on the advisory boards of such committees. To a greater degree it places before him a challenge to make his area a safer place in which to live.

Many of you, I am sure, are wondering how long an active program of this type can be kept going. As we envision it, there is no limit to the preventive side of fire fighting.

Our association is seriously considering the promotion of fire administration training on the college level. Should this be developed, we hope to include more and more fire prevention training in our teaching to firemen each year.

The day has long since passed when we considered the fire service as only an extinguishing agent, remaining exclusively within the fire station until some area of trouble develops. While it is true that there is considerable activity, which can only be undertaken in the fire house, it is equally true if we are to reduce the number of fires and the loss of lives, which are increasing each year, we must take our problems to the people who are, in fact, our customers.

HOME SAFETY NEARING INDUSTRIAL

Safety in the home has now reached the level of importance that safety in industry arrived at some time ago. This is correct because today more people are spending a greater number of hours in their homes than ever before.

There are many programs, which are being undertaken to bring to children—and through the children to their parents—the need for fire safety. We in the fire service feel that we must back up these programs by emphasizing to the parents the need for the greatest care and consideration possible in order that their homes may be kept intact and that their children have the privilege and the right to grow up and enjoy the benefits which are ahead for those living in America.▲

COMMUNITY FIRE PREVENTION PLANNING

by E. W. FOWLER

director, Codes & Standards, National Board of Fire Underwriters, New York city

The National Board of Fire Underwriters directs many of its activities to the community approach to fire prevention.

Three National Board of Fire Underwriters' activities most worthy of discussion are fire protection surveys of cities, building codes, and fire prevention codes.

FIRE PROTECTION SURVEYS OF CITIES

These surveys specifically deal with community fire prevention and coping with serious fires and conflagrations. In most of the conflagrations in primarily residential areas, wood shingle roofs on closely built dwellings of combustible construction were an important factor in fire spread. Other conflagrations, such as from hazardous occupancies or large buildings with combustible interior construction, usually developed because of inadequate public fire protection—that is, inadequate fire departments, water supply and other features for effective fire fighting.

Three large forest or brush fires known as the Malibu fires occurred nearly simultaneously in December 1956 in Southern California near Los Angeles county. In these fires 90 homes were destroyed and an estimated 1,550 homes burned. Effective work of local county fire departments kept the loss of homes down to about six per cent. Fighting conflagrations is definitely a community function.

Fire loss is also a community fire prevention problem. The community approach to this problem matches closely the approach of fire protection engineering surveys of cities made by the National Board of Fire Underwriters in larger cities, and local fire insurance inspection bureaus in smaller communities.

These surveys and reports include a detailed study, with recommendations, of public fire protection. These studies cover the adequacy and reliability of the water supply system, the effectiveness of the fire department, such as manpower, equipment and methods of operation, and the adequacy and

reliability of the community fire alarm system.

They also analyze the size, type, congestion and fire hazard of buildings and the effectiveness of building and fire prevention codes in controlling fire hazards. These are studied for possibilities of conflagrations.

A local building code is important in the community approach to home fire prevention. It can prevent conflagrations and fires from one building to adjoining ones and can also prevent the fire from spreading in the house itself.

BUILDING CODES HELP FIRE PREVENTION

Many features of a building code relate to control of fire spread in business, commercial, industrial buildings and apartment houses. Other features deal with fire prevention in dwelling houses. Some features that relate to fire spread in buildings generally are:

1. Fire limits or zones prohibiting wood frame construction and unprotected metal construction should be established. This can reduce the likelihood of spreading fires in congested business districts.

2. Heights of buildings must be limited according to the type of construction. Any building too high for the fire department to fight a fire effectively must have floors and other structures that will resist an ordinary fire without collapsing.

3. Areas of buildings must be restricted to type of construction and occupancy. Consideration should be given to sprinkler protection and height and separation from other buildings. The larger the building the greater the difficulty fighting a fire, and the greater the likelihood to involve other buildings.

4. Exterior wall openings near other buildings must have suitable protection such as wired glass in metal frames. Such protection helps the fire department stop fires from spreading from building to building.

5. Stair, elevator and other openings to floors of buildings are important elements in fire spread if not properly protected. This is particularly important for the safety of occupants.

6. Fire walls dividing buildings must have sufficient structural stability and fire resistance to control the spread of fire from building to building. Openings in fire walls must have standard fire door protection or the walls are ineffective.

The important features of a building code related to fire prevention in the individual dwelling house are roof coverings, fire-stopping, chimneys and heating appliances and systems, and proper installation of electric wiring and equipment.

ROOF COVERINGS AND FIRESTOPPING

The combustibility of roof coverings should be regulated to control fires spread by flying brands landing on roofs. In a large midwestern city a fire in a four-story building set 70 other buildings on fire from flying brands which carried about a mile away. A good building code limits roof coverings to those Class C or better under Underwriters' Laboratories' classification of roof coverings. This class is effective against light fire exposure and has no flying brand hazard.

Wood floors and walls and furred masonry walls can be hazardous, if proper firestopping is not installed. A fire starting in any concealed space will spread throughout the building before being detected. In such cases there is little possibility of extinguishing the fire before extensive damage is done.

A house had an oil burner fire in the basement a few years ago. By the time the local fire department arrived the fire spread through the unfirestopped stud spaces in the exterior walls and smoke came out around the eaves. The fire department had difficulty locating and extinguishing the fire in concealed stud spaces and the building was a complete loss. Suitable firestopping would have kept the fire in the basement until the fire department extinguished it.

CHIMNEYS AND HEATING APPLIANCES

Among the most important causes of dwelling house fires are chimneys, flues and

vents, and heating appliances and systems. A properly enforced building code on such items can control this hazard.

Masonry chimneys should be solid masonry units, with wood beams, headers, joists and studs properly spaced from the chimney. Factory-built chimneys and special types of gas vents should be installed according to manufacturers' instructions and within the limits of their approval. Heating appliances and systems must have proper safety controls and be installed with proper clearances to combustible material.

Communities usually control installation of electric wiring through enforcement of the National Electrical Code, either by a separate electrical inspection department or by an electrical inspector working in the building department. Electric wiring should be installed in a standard manner and sufficient outlets installed to avoid overloading the circuits. In older dwellings proper extensions should be added to the house wiring system.

There are several widely used model building codes. The National Board of Fire Underwriters has published a recommended building code since 1905, the latest being the 1955 Golden Anniversary edition. An abbreviated form is available for communities which can use a shorter code.

The National Building Code recommended by the National Board of Fire Underwriters is the product of many years experience in building code writing and enforcement—experience with hundreds of adoptions, experience of specialists in all branches of fire protection and building construction.

On items which vary with local conditions, the code's provisions are flexible enough to use in any area of the country. Localities with heavy snowfall, exceptionally high winds, earthquakes or other conditions increase the requirements according to their needs.

Approximately 1,000 cities and towns use our code or have a similar building code.

In recent years several building officials' organizations produced and fostered adoption of model building codes. The three model codes of building officials' organizations are much superior in regulating building construction to control fire hazards than the average old locally prepared code.

FIRE PREVENTION CODES

A local fire prevention code may seem less related to preventing fire loss in a dwelling than the building code. But fire prevention codes do have an important relationship. A fire prevention code which specifies safeguards for oil burning equipments has a direct relationship to dwellings where fuel oil is used.

Other code provisions, such as storage and handling of gasoline, all highly flammable liquids, explosives and hazardous chemicals, are important because fires or explosions from these products could effect many dwelling houses. These fire and explosion hazards occur where these products are regularly handled and also when transported through the community.

The National Board of Fire Underwriters has been a pioneer of model codes to aid communities in their fire prevention respon-

sibilities. In 1895 the National Board published the first nationally recommended electrical code, in 1905 the first model building code, and in 1930 the first model fire prevention code.

Zoning regulations are not often considered home fire preventions, but they are significant. Zoning regulations often separate dwellings from lot lines and limit heights of buildings. Separations are helpful to a fire department in controlling a dwelling fire.

An effective community fire prevention program cannot be accomplished without the support of people in the community. The services of the National Board of Fire Underwriters are available to all communities. Communities must do their part for an effective community fire prevention program. By working for fire prevention you protect your own home as well as your neighbor's.

LET'S STOP THESE FIRE DEATHS!

by PERCY BUGBEE

general manager, National Fire Protection assn., Boston

Present estimates are that we have 5,000 fires every day of which about 1,600 occur in buildings. The great majority of all of these fires are due to simple, readily understood causes. One has only to look at the daily record of fires in any large city to realize that this is so.

As an example, I took a look at the fire record prepared by the Insurance Patrol in Chicago for one recent day. There were 80 fires recorded on this particular day. Of these, 27 were from careless disposal of cigarettes or matches, 14 from accumulations of rubbish near heaters or other open flames, 11 from defective furnaces or chimneys, nine from the careless handling of gasoline or kerosene, eight from portable oil stoves, six from defective electrical wiring, four from gas burners, and only one from a special hazard.

When it comes to deaths and injuries due to fire, the same general situation applies. Every day our Fire Record department re-

ceives reports of local tragic incidents such as these.

Perhaps one reason why the general public does not become aroused over such needless waste and suffering is that good, reliable statistics nationally on deaths and injuries in fire have not been available and these isolated cases arouse interest only in the local area where they occur.

For many years we have been struggling with this subject of reliable fire casualty statistics and the NFPA Committee on Fire Casualty Statistics has come up with a standard form for reporting fire casualties. This is being tried out at the present time in a number of states and we hope eventually to persuade all of the states to use it so that in course of time reliable fire casualty statistics may be forthcoming. Your help in getting recognition of this form and its use in your own states and communities would be very much appreciated.

EDUCATE CHILDREN ON FIRES

How can we attack this problem which is so important? How can we effect a mass education of all of the people so that as part of their daily routine they will not commit acts of carelessness that result in death and destruction? What are the forces that are or ought to be available to us in a mass attack upon this problem? Rather obviously, a basic consideration is the education of the children in the schools in the simple principles of fire prevention. The National Education Association has been tackling that problem in recent years with conspicuous success.

Teachers are overburdened and resist any attempts to introduce new material and new subjects into their courses of study. But the NEA proceeds on the principle that teachers will much more readily accept suggestions and material prepared by teachers for teachers. It produced a series of excellent manuals on how to teach fire prevention in existing courses of study from the elementary grades up to the high school grades.

The teachers that have experimented with this material and have taught fire prevention in their classes in science, English, art or civics have found that the subject is a great attraction to children and the response is excellent. In view of this development, all that remains to be done in this field is to gain the teacher's acceptance of the material so that we can insure that subsequent generations will not handle fire so tragically carelessly as does the present generation.

HOUSING INSPECTIONS

Another new and growing and very important force in the overall attack upon fire deaths is the campaign initiated by the International Association of Fire Chiefs through the Fire Prevention committee of that association headed by Jay Stevens of San Francisco. Stevens has recognized that one simple, effective and inexpensive method of attacking this problem is through the simple inspection of all dwellings in a community by the fire department.

This approach is not new. It has been tried in several hundred cities, in some as much as 20 to 25 years ago. Wherever it has been tried it has shown a marked reduction in dwelling fires with subsequent

reduction in loss of life because after all, the great majority of fire deaths are in homes and among the children and the aged. Stevens says that already on the West Coast more than 2,000,000 homes have had such inspections by the firemen and that the campaign has been successful in such cities as Los Angeles and Berkeley, Calif., Seattle, Wash., and Portland, Ore.

A third approach to this problem and also one that has been tried with great success in numerous individual communities in various parts of the country is the inspection of homes for simple fire hazards through home inspection blanks distributed to the children in the schools. Here again we have a device that is simple, inexpensive and effective, and wherever it has been done on a consistent basis it has worked.

USED INSPECTION BLANKS SUCCESSFULLY

Kansas City, Mo. was perhaps the most notable example of this type of approach when during a period of several years of consistent home inspections by the school children a bad record of deaths, injuries and destruction in dwelling fires was materially reduced.

A fourth attack upon this problem of fire deaths is the year-round educational campaign directed at home fire prevention conducted by the National Fire Protection Association through all of the existing publicity media such as the newspapers, the television and radio stations, magazines, house organs, and the like.

Sparky, the firehouse Dalmatian dog, is the symbol of this campaign and has become a familiar and well-liked figure to the American public. Hundreds of communities have organized Sparky Fire Departments for the children of the community under the sponsorship of the fire department.

We have now available, therefore, these movements and these tools that we know will do this job and we must find ways and means of utilizing them effectively. The great American Red Cross has realized through its disaster relief program that a substantial majority of all the disasters are fire disasters.

UTILIZE COMMUNITY GROUPS

Certainly we should take advantage of the widespread community organization of

Red Cross chapters everywhere to work through this now interested group to gain acceptance of the educational program, the fire chiefs' program, the home inspection program through school children, and the Sparky home fire prevention program everywhere.

The Boy Scouts of America have discovered that one of the potent sources of sponsorship for Boy Scout troops are the volunteer fire departments of the country. Here is another great nationwide organization that can be of tremendous help in a broad attack upon the problem of reduction of fire deaths.

There are other great national groups that we have yet to reach effectively but that I think can be reached. I am thinking of the General Federation of Women's Clubs, the life insurance companies and the labor unions as examples. I can see no reason why these and other groups cannot be interested in supporting in every community throughout the country the principles of fire prevention once they understand that such support is not costly or difficult or unreasonable.

Such forces working in each community with the help of the local Chamber of Commerce, safety council, insurance board, Rotary and Kiwanis Clubs, and similar local civic groups, can effectively stop these fire deaths.

I have tried to outline the simple measures that need to be taken and in broad terms the sort of support that is needed to put across such measures. Is this job too big, too comprehensive and too scattered so that we must admit defeat, or is this problem so simple and so common place that it is not challenging enough to fire protection people? I am not suggesting for a moment that we should not proceed in every way that we can to improve our standards of fire protection engineering, to improve our fire training programs, our fire department operations and our fire prevention activities in more complicated fields.

But if we are to perform the greatest public service then we must constantly hammer away at the simple, every day things that cause the greatest toll of death and destruction by fires.▲

OFF-THE-JOB ACCIDENTS HURT INDUSTRY TOO

by J. L. RIDINGER

director, safety and plant protection, Inland Steel co., East Chicago, Indiana

During the year 1956, 80,700 people died because of off-the-job accidents. If these accidental deaths continue at the current rate for 1957, the undertakers, the grave diggers, the tombstone people, the florists and the cemetery associations can say they have had another successful year.

Have we become so calloused to accidents that we are no longer impressed with the seriousness of this humane and economic problem? Are the medias of communications such as the press, radio and television, "missing the boat" to the extent that the general public has accepted unnecessary off-the-job accidents as a part of modern day living?

I have taken issue with the press and radio on several occasions, for their gory accident stories. I have been told the public is more interested in spectacular bad news than in constructive good news. How many times have you been disappointed in finding safety articles relating to industrial or civic safety accomplishments, relegated to the back pages of Section #2 of your local newspaper?

If the public is more interested in reading about bad news than good news then our job is to change public opinion. How can this be done? First there must be a common understanding of the need for safe practices and conditions on streets and highways, in

the home and in other public endeavors. Second, the public must demonstrate their desire for traffic safety, home and public safety by complying with regulations and by cooperating with the various law-enforcement agencies.

PEOPLE ARE LAZY

My experience with various public endeavors, political, civic and social, is that the average person feels he is too busy to take an active part in these affairs because he is more concerned with utilizing more and more of his time for personal enjoyment. Also I believe most people are naturally lazy, both mentally and physically, when it comes to joining a worthwhile crusade that may interfere with personal plans.

I also believe to be successful in our campaign against off-the-job accidents we must form the type of crusade that will shake the average person from his complacency. At present this crusade is in the formation stage. Its nucleus consists of the mourners of the dead, the National Safety Council, the press, the radio, the TV, manufacturers, business people, civic and political groups.

Our main objective is to get this safety crusade on the road. To do this job effectively we must have more than casual support from sponsoring groups and the public.

The National Safety News article, "The Challenging Decade," stated, "Population in the age groups 45 years and over will increase during the next 10 years because of the small families during the early 30's. In the age group 25 to 44 years it will decrease."

"If our economy continues to expand at recent rates, the gross national product must increase more than 40 per cent with the per capita share of this product to increase some 25 per cent."

"These figures all boil down to the fact that our productive population will be decreasing while our non-productive population and overall demand for goods and services are increasing."

"To keep pace with this situation we must conserve our manpower, upgrade its skill and increase individual productivity."

To illustrate the effect of off-the-job accidents upon industrial productivity, here are a few case examples.

A steel mill roller with 40 years of experience had the bumper of his car and another become locked. Trying to free his car he sustained a severe back injury and lost two months work. As a roller, his knowledge, training and experience is invaluable, and his company had to upgrade different crew members and break-in a new man to fill the crew.

In spite of close supervision there was a daily loss of production. This accident was costly to the injured and his family in terms of lost wages, to the crew in terms of a reduction in tonnage bonus, to the employer in the loss of production. Customers were dissatisfied because of delayed shipments.

CASE NO. 2

Elmer was a farmer when he was not running an open hearth hot-metal crane. Last year he helped his neighbor harvest corn. Elmer started around the corn elevator, but at a point inches from the coupling of the unguarded drive shaft, he slipped and his leg skidded against the rotating shaft. Quickly his trouser wound itself around the shaft, and his trapped leg became a pulpy mass of flesh.

This accident has changed Elmer's way of life—off and on he spent over two months in the hospital. Approximately five months later Elmer was ready to return to modified work. He lost \$2,500 in wages, aside from an estimated \$2,000 cost of living expense.

Elmer's accident also caused a chain reaction at the plant. Although Elmer's replacement had been well trained in the proper operation of hot metal cranes, additional time and experience was still required before he became as proficient as he should be on a single crane. Accident exposure is certain to be greater during such periods.

The relief craneman, in turn, had to be replaced by a crane operator learner. The problem faced by this man is a magnification of what the relief craneman had to undergo. Then another employee had to be placed as a crane operator learner. This chain reaction of operational changes created problems for everyone from the lowest hooker to top departmental supervision.

CASE NO. 3

Robert, a sheet piler was driving home, missed a curve and crashed into a ditch. He fractured his left tibia and fibula and was hospitalized nine months.

One month before Robert's accident, his department had installed a new production line. A three week training period was held on the new unit. The department was desperate for trained personnel so Robert's loss to the department was even more frustrating.

His replacement created additional work difficulty and presented greater accident exposure which had to be offset by additional supervision and personal awareness of the new man. During the new man's training period as piler, lifts had to be repiled, sheets rejected, and everyone on the line had to cope with the added consideration of working with a new man.

Because Robert had to be retrained for the piler job, the entire training period in wages alone was a complete loss—about \$200. Wages paid Robert during his training periods when he returned to work were beneficial since they were an investment for future job needs, but this was a needless cost, amounting to \$900 or \$1,000. Other cost figures not available, were wages for repiling badly piled lifts, and other incidental costs in connection with handling of same. Finally, additional services were required from the staff and departmental personnel to integrate Robert into the work force.

These are but a few of our off-the-job case records. Others involve supervisors, clerical workers and a variety of skilled craftsmen.

PUBLIC RESPONSIBILITY

Most men and women involved in off-the-job accidents are parents of children, or have parents or relatives dependent on them for support. Although more than 90 per cent of our employees are covered by off-the-job insurance we cannot expect insurance to replace the worker's wages for an indefinite period of time. When insurance payments run out, various types of tax-supported welfare aid begins, which means tax bills and industry pay the greatest share of the country's tax.

The public should be interested in accident prevention work to prevent pain and

suffering from accidents, and at the same time eliminate the need for public charity.

Whether your business employs one or a thousand workers, accidents hurt industry too. Workers are part of the assets of any business. Whenever a worker is fatally or seriously injured on or off-the-job, both the worker and business suffer an economic loss.

Although much credit must be given the National Safety Council, local safety councils, civic groups and law-enforcement agencies for reducing off-the-job accidents, our crusade against accidents will not be successful until all business and industrial groups take an active part in off-the-job accident prevention work.

During the past three years the Inland Steel company has spent considerable time and money to make our workers more safety conscious about off-the-job accidents. We have used the following programs with a favorable degree of success:

TRAFFIC SAFETY CAMPAIGN

- Inland Safe Drivers club—Membership in the club is voluntary. Workers are solicited by their foremen at safety meetings. Those that sign a safe drivers pledge are given a reflectorized bumper sticker for their cars. This is a continuous campaign.

- Safety seat belts—In addition to equipping all company cars and trucks with seat belts, our employees can purchase seat belts and have them properly installed at a reduced rate. Seat belts should be considered standard equipment on all cars and highway trucks.

During the past year you have had the opportunity to read many articles on the pros and cons of seat belts. Seat belts should not be considered as a panacea for all automobile accidents. Like safety glass, tires and highway rail guards, their use can only help to minimize injuries.

- Safety car checks—During the past two years we have cooperated with the local police by checking all company cars and trucks. In addition we have set up check lanes to check all cars driving in the plant.

- Education program—(a) Traffic safety films are shown at group safety meetings. (b) We publicize and post pictures of local highway accidents, furnished by the Indiana state police. (c) Our employees are kept

abreast of traffic safety activities in the state by information we receive from the Indiana Traffic Safety foundation. (d) Facts and figures published in the National Safety Council *Traffic Safety* magazine are used extensively.

HOME AND PUBLIC SAFETY

—Home inspections—At intervals our safety engineers inspect the homes of employees for unsafe acts and unsafe conditions. Pictures are taken and safety stories are published in the plant newspaper. These inspections are made at the request of our employees.

—Cartoon Contests—Safety cartoons showing unsafe conditions and unsafe acts, in the home and on city streets, are published in the plant newspaper. Wives of employees submit a list of unsafe acts and unsafe conditions found in the cartoons and are eligible to compete in a turkey drawing contest.

—First Aid Training—Each year more than 10 per cent of our employees are trained in first aid. Some employees have saved lives because of their knowledge of first aid. This year we expect more than 40 plant teams will compete in our annual first aid meet.

—Safety eye glass program—Employees who must wear prescription glasses are encouraged to purchase safety glasses. The company pays for part of the cost. With safety glasses the worker is safer in his car, at home, on the golf course and while participating in other sports and activities.

INJURY STATISTICS

For the past two years we have publicized throughout the plant on-the-job and off-the-job injury statistics once a month. Figures for the first eight months of 1957 are as follows:

Plant disabling injuries	54
Fatalities	0
Off-the-job injuries	144
Fatalities	13

Employees spend more time away from work than on the job, but this is no justification for people to have more injuries at home, on the streets and highways, or while on vacation and week end pleasure trips.

There are several reasons why workers should be safer on-the-job than off-the-job,

even though exposure to injury is greater on-the-job than off-the-job:

1. Industry, whenever possible, selects the proper type of person for the job.
2. Workers are trained to develop and use safe work habits.
3. The employer's machines and equipment are equipped with approved safeguards.
4. Workers who willfully disregard safety regulations are subject to disciplinary action.
5. Last, but most important, employers know that accident prevention programs can not be successful without a continuous campaign to improve the worker's attitude toward his own safety and that of his co-workers.

Over the years industry has made tremendous progress in the scientific field. This has resulted in fewer accidents, increased productivity, push button control operations and better working conditions.

Many of the new technological devices such as automatic switches, safety interlocks, electric eyes, television and radar controls prevent accidents and injuries to workers.

... BECAUSE OF HUMAN FAILURE

We still have not reached the push button stage insofar as using it as a positive control for human behavior. Human failure is still responsible for 85 per cent of the industrial injuries. However, the total number of industrial injuries has been considerably reduced because of our accident awareness program. We believe that because of this continuous program to prevent injuries anywhere, we have helped to make our workers' homes and communities a safer place in which to live.

Many of the safety control measures used in industry can be used to control off-the-job accidents if properly applied.

EDUCATION is most important. There must be a common understanding of what is right and what is wrong, by all agencies such as schools, churches, civic, social and political groups.

LEADERSHIP—There must be leadership and cooperation. Every person must assume his share of responsibility for his safety and that of his family.

The National Safety Council and the American Society of Safety Engineers are well qualified to provide leadership on a nation wide basis. But each community can be best served by its own local safety council in cooperation with the National Safety Council.

Our big job is to stimulate an awareness within people to want safe homes and safe highways and other public places. Until people develop this awareness they will continue to destroy themselves and others, at home and on the highways and in other public places.▲

FLEXIBILITY AND FEEDBACK PROGRAMMING FOR A MULTI-LOCATION OPERATION

by M. FRANCES DEVINE

personnel supervisor, Northwestern Bell Telephone company, Des Moines, Iowa

We are keenly aware of what safety means to people and what people mean to industry—people alive, healthy and whole. There is nothing more important in the whole world. People mean life. Abraham Lincoln said, "next to creating life, the greatest thing a man can do is save a life." We are interested in this since we are vitally concerned with the number of bodies being needlessly dismembered, disabled, and lives lost from not realizing the dividends of safe living.

How can industry get more and more people imbued with the knowledge of living safely no matter where they are or what they are doing? Industry has accomplished a great deal in promoting safety on-the-job. Of recent years many have expanded these activities to safety off-the-job, many with special emphasis on home safety. The Northwestern Bell Telephone company, like all Bell System companies, has had active on-the-job safety education for many years and with splendid results. Results earned the National Safety Council Award of Honor five out of the last six years.

Telephone work is safe and is becoming more safe as time goes by. But how much of this is being carried away from work? Our company examined off-duty lost time injuries three years ago. Our off-duty injuries far surpassed those on duty. The need to expand our program for preventing off-duty injuries was urgent. This problem is far reaching, involving not only employees but their families. How does industry ap-

proach such a problem? A challenge indeed—off-duty safety promotion requires a different approach than on-the-job. To be of assistance when needed is a basic characteristic of human nature. We knew if our people were informed of the problem and enlisted to prevent painful injuries, we would get some effective action.

Our problem was to reach the 7,000 employees in the Iowa area. We have offices of varying sizes in many locations. On-the-job safety education is to a great extent departmentalized, but off-the-job safety lends itself better to an interdepartmental set up.

COMMUNICATIONS IMPROVED BETWEEN DEPARTMENTS

Number one in importance: effective communications from one location to another. This required a multi-location operation by expanding existing safety committees and organizing additional ones, such as:

1. Area interdepartmental safety committee, Iowa area headquarters, expanded activities to off-the-job promotion.
2. District interdepartmental committees organized in each of the eight districts and
3. Local interdepartmental committees in most of the 64 exchanges in Iowa.

The program had to be adaptable to all locations. Because every person is different in background, motivation, previous experience and viewpoint, the information had to

be able to reach not only each force group but each individual.

People should not have to experience injuries to learn to live safely. Our objective was to generate interest and participation from our people to think of their responsibility in the prevention of injuries and then to act. This requires a program flexible in all phases with many different approaches and ideas. What will interest and appeal to one will have no effect on another. Our objective could be accomplished if enough interest was sparked to get each location actively engaged in formulating ideas of their own.

Initially the material was referred from the area to the district committee and then to local committees. After the interest was stimulated and various committees produced ideas and material of their own, a feedback of what is being done and how, is necessary. It is valuable information for passing on for use elsewhere and also for appraising results. This requires sustained interest and effective communication at all points in our multi-location set up, from our top executive down. The better the communication the better the feedback.

MULTI-LOCATION OPERATION

A letter signed by department heads containing comparative figures of on- and off-the-job injuries was forwarded to 32 district heads in our eight districts. The letter emphasized knowing what the situation was to stimulate their thinking and lead to corrective measures. To assist them and safety committees, printed matter and visual aid material was sent to the district interdepartmental committees for all employees. The area interdepartmental committee assisted in organizing district interdepartmental committees and supported them. The area group also encouraged reports of the program from each district.

District interdepartmental committees were organized and the names of the chairmen and members sent to the area committee. The committee chairmanship is rotated in some locations. Many existing departmental committees in the local exchanges were expanded to interdepartmental membership. The committee membership in the local exchanges is on a rotating basis to reach and interest each individual and stimulate ideas and suggestions from the group. Their meet-

ings are held monthly during working hours. Here is some of the material forwarded (and some on a continuing basis) by the area committee to the district committees for a review and distribution to local exchanges to stimulate interest and participation:

1. *Living Safely Off-the-Job* prepared quarterly.
2. Summary of off-the-job employee lost-time injuries.
3. *What's the Answer*—booklet about child accidents, also samples of universal antidotes for poisons.
4. Copies of Home Safety News Service (N.S.C.) and subscriptions for this service for each district head.
5. *Industrial Supervisor*, another N.S.C. publication.
6. District chairmen placed on mailing list for *Targets for Home and Traffic Safety*. National Safety Council. Also mailing list of Iowa State Department of Public Safety.
7. Promotional material for national campaigns for traffic safety and campaign to prevent falls.
8. Minutes of area interdepartmental safety committee meetings. Supervisors informed of problems and expansion of activity to prevent off-the-job injuries.
9. Bell System booklet—*Safety In the Bell System*—pertaining to both on- and off-the-job injuries.
10. Safety buttons for safety committee members.
11. Safety films suggested.

FEEDBACK MATERIAL

It wasn't too long before we started getting "a take" so to speak. The district and local committees began originating ideas of their own and securing material from other sources. Following is some of the feedback we received from them:

- Employee made posters—poster contests.
- Join the crusade—Against home accident prevention.
- "Could This Be You or Yours"—for posting.
- Newspaper clippings submitted by employees.

- Rickard's method of artificial respiration for children under two years of age — reproduced from Home Safety News Service and mailed to all employees' homes.
- Danger of using carbon tetrachloride—reproduced from Home Safety News Service—also mailed to employees' homes.
- "Let's Make April Fall Free"
- Bulletin on safely cleaning yards
- Open Season Booklet—Outdoor Activities
- Safety Slogan Contest
- First Aid Training
- Home Safety Displays
- First Aid Charts
- Safety Jingles—Act put on from wheelchair demonstrating various kinds of injuries.
- Article on Power Lawn Mowers
- The Road Ahead—As You See It
- Various pamphlets from National Safety Council—*Vacation Safety—10,000 Mile Living Room, Take It Home With You, Dennis the Menace, On Safety* and many others.

We knew there was a great deal going on in various locations, but it wasn't until all this information was compiled for the National Safety Council 1956 *Home Safety Inventory* that we saw it all together.

How has this effected results?

OFF THE JOB LOST TIME INJURIES

1956		
No. of Cases		Days Lost
83		1138
1 Fatal Auto Accident		
Two Major Cases and Most Serious		
Falls — 36	—	623 Days
Auto — 17	—	319 Days
1957		
No. of Cases		Days Lost
73		699
0 Fatal Auto Accidents		
Two Major Cases and Most Serious		
Falls — 33	—	317 Days
Auto — 21	—	282 Days

Approximately 50 per cent of the accidents occurred in the home.

As can be noted from the results, the first six months of 1957 had 10 less cases and 437 less days and no fatalities. Safety ac-

tivities are more far reaching than we know —there are others, such as family members, friends and neighbors who no doubt have also been saved from injuries. For instance, in one case an employee used the Rickard method of artificial respiration on his six day old baby and feels this saved the child's life.

These results are immensely encouraging and satisfying to all who have helped promote safe living. It makes us realize even more the big job to be done. Programming for a multi-location safety operation is not simple or easy. It can present some real difficulties, such as, some of our barriers to a successful safety operation:

1. Sustaining interest at the area, district and local levels.
2. Breakdown in communications.
3. Failure to plan ahead.
4. Failure to follow through.
5. Recognition—insufficient or none.
6. Effective distribution of material.

Constant attention to these barriers is essential to a continuous safety program. Promoting safety, especially off-the-job requires time, patience and persistence because we are dealing with people and the habits of people and some people are more adaptable to changing habits than others. Industry can approach the problem of educating people to be safe at all times by:

1. Employee participation — people who work on safety, become safety conscious.
2. Effective communications — two-way—through all lines of organization.
3. Recognition—for participation—results and interest.
4. Flexibility—throughout to reach all people.
5. A feedback of what is being done, will in turn strengthen and reinforce the entire program.

When this program is actively under way, an ever increasing circle of employees, their families, friends and neighbors will work and live more safely, and spread the message of safety. Every action we take in support of such a program has its compensating effect somewhere—on someone. It can truly become, a crusade for safe living!

CONSUMER EDUCATION AND PROTECTION

by JACK H. CORNELIUS

manager, Community Relations, The Peoples Gas, Light & Coke co., Chicago

In a story on safety in a magazine that crossed my desk recently there appeared this quote, "Unguarded machines cause less than five per cent of total accidents; unguarded minds cause 95 per cent."

At Peoples Gas we are not quite sure of the accuracy of these percentages, but to be on the safe side we have developed a full program in both areas.

The appliances on our lines must be soundly engineered and properly constructed to utilize our fuel safely. The gas industry as a whole, long has recognized this basic fact and as a result has for many years conducted a program of laboratory testing of gas fired appliances. This laboratory testing program, conducted by the American Gas Association, has led to the development of a set of performance requirements to be met before the appliance can be granted a seal of approval.

The gas appliance manufacturers fully approve, in fact, financially support this program and work closely with industry testing people in developing new features to be incorporated into modern gas appliances. The industry has been responsible for the attachment (by manufacturers) of clear, simple operating and lighting instructions to all automatically controlled gas appliances.

TESTS APPLIANCES

Peoples Gas also has a laboratory in which it tests appliances distributed in the Chicago area. This may seem like gross duplication since we test appliances previously approved by the American Gas Association industry-wide laboratories, but I hasten to point out that the AGA tests hand-tooled prototype models while we test production models. Often there is a considerable difference. Then, too, Chicago has some problems peculiar to this area, such as the large number of small stove heated dwelling units, that make it desirable for us to have more rigid safety requirements.

Our testing people also help find practical solutions to service problems which may arise as a result of a serviceman or engineer

visiting a customers premises. Testing also closely observes the performance in the field of newly developed equipment. At present they are conducting tests of gas air conditioning installations.

Another way in which we attempt to upgrade the quality of appliances attached to our distribution system is through a dealer education program in which we urge the dealer to sell a better equipped gas appliance. Our sales division has a dealer contact section to administer this program.

INSTALLATION INSURES SAFETY

In order to get top efficiency from a well designed appliance it must be properly installed and adjusted. Peoples Gas makes few installations of appliances. Recognizing the need for improving the knowledge and ability of outside service personnel who install and adjust appliances the company has established a training program at one of our public schools, the Washburne Trade School, where plumbers and steamfitters are taught proper installation practices.

In addition, our sales engineers cooperate with heating contractors in advising them on proper space heating equipment installation methods. We inspect all completed water heater and space heating installations to make certain they meet safety standards and that they are operating efficiently.

So you see, we do recognize the importance of the machine and men in any safety program and we have developed this comprehensive plan to insure a minimum amount of trouble due to appliance failure.

Our late president, Mr. George F. Mitchell, often said, "Wherever you have concentrated energy, you handle it with respect." The gas industry has long recognized the truth of this statement and has developed programs to implement Mr. Mitchell's philosophy. This problem is not peculiar to the gas industry alone. The electric industry faces the same situation. Each industry has of necessity recognized its responsibilities, and has developed educational programs to

teach customers to handle these forms of concentrated energy with respect.

ADDED ODOR FOR PROTECTION

Natural gas in its original state has no taste, no smell, nor can you see it. In order that uncontrolled gas can easily be detected we have added a very unpleasant odor in the form of a specially developed chemical—and we have made it just as “stinky” as we possibly could and still have it smell like the manufactured gas we remember so well.

Then too our customers receive, from several sources, instructions on how to use their gas burning appliances. It starts when the salesman is making a sale. Part of his pitch is what the appliance will do and how it does it. This necessarily entails an explanation of proper operation of the gas appliance.

If after the customer has received delivery of the appliance he or she does not understand fully its operation, one of our home service representatives will, upon request, visit the customer's premises and give on-the-spot instructions.

SERVICEMAN AIDS CUSTOMERS

Another source of customer education is the serviceman's call. Thousands of such visits to customers' premises are made each working day of the year. And in many instances the serviceman is called on to explain to the customer what has gone wrong and what should be done in the future to insure efficient operation of the appliance.

For example, if the serviceman finds excessive grease on the range burner or in the broiler he will point out this is a potential fire hazard; then he will instruct the customer in the best way to clean the burner and how to keep it clean easily.

Our public contact employees, those who talk with customers coming into our offices and those who answer telephone calls to the company, have all been instructed in safety measures to be observed in appliance operation. As a matter of fact, each of these persons has undergone a course of training in our Fitters School, originally established to train our servicemen. Each newly appointed customer-contact employee is given a course in appliance operation and in safety precautions to be observed, and each year all customer-contact employees are sent back to school for a refresher course.

During the war, when we had a shortage of servicemen, our customer-contact employees advised customers how they could correct many of the minor difficulties affecting the operation of an appliance.

PAMPHLETS, EXHIBITS EDUCATE

Pamphlets have been developed which instruct the customer in the safe, economical operation of the gas burning appliances. Here are some examples of booklets available at Gas Company offices:

Helpful Information on Gas Heating.

You Can Have More Hot Water Faster For Less Money.

The Gas Water Heater Installation Guide.

Practical Chimney Construction.

We also maintain at our main office location a customer display floor where we exhibit examples of proper installation of gas appliances and heating systems; where we have diagrammed and constructed models showing proper insulation of buildings; the proper construction and lining of chimneys; the correct venting of gas appliances and all the other safety features that lead to respectful handling of this concentrated energy. There are on duty at all times sales engineers to answer the questions about gas appliance installation from customers, contractors, and builders.

When a customer plans remodeling or adding a new gas appliance, he or the plumber can call the Gas Company and ask for an experienced inspector to advise on how the piping job should be done. One of our supervisory people will visit the premises in question and outline in detail what steps to follow and the pipe sizes to use to insure safe, efficient operation.

COOKING SCHOOL TEACHING

In furthering our program of consumer education we periodically furnish to the daily and neighborhood newspapers feature articles describing best practices to be followed when using gas appliances and instructions for proper maintenance to keep the appliances operating at peak efficiency.

Another phase of our consumer education program, which also is part of our sales promotion effort, is that of conducting cooking schools for our customers and the placing of gas ranges in Chicago schools to

teach high school girls how to use these appliances properly. This teaching includes operation and care of the equipment, safety precautions to be observed, and helpful hints in the efficient use of the appliance.

This then is the program we have developed to teach the public that properly controlled gas is a wonderful servant.

To complete our safety picture we follow-up these two programs with one of inspection—to insure our teachings are being heeded.

First let me point out that we cooperate fully with the municipal authorities—not only in the development of housing and building code regulation of gas appliance installations, but also, because of our frequent contacts with our customers, in helping secure compliance with the codes.

Some of these regulations have to do with proper venting of appliances, restrictions on location of various appliances, room sizes and materials to be used for piping. Because we make literally hundreds of thousands of visits to customers premises each year, our people can discover and report installations which are not in compliance with safety requirements.

We notify the customer he is in violation of a given ordinance, tell him what must be done to correct the violation and after a reasonable period of time has elapsed, inspect the premises to insure compliance with the statutes. The offending appliance is disconnected and left disconnected until the violation is corrected. All our people who visit customer premises (these include servicemen, meter readers and inspectors) are trained to recognize these violations.

CHANGING METERS

Just consider one phase of our customer premises operations—that of changing meters. We do a volume of 100,000 each year because we adhere to the requirements of the Illinois Commerce Commission in changing a meter each 10 years to insure its accurate registration.

By the way, we find, of the few meters not accurate within the allowed range, most of them register slightly in favor of the customer. In addition, meter readers read our more than one million meters six times a year, and our servicemen average about 2,000 calls a day on customer premises.

We are careful to set meters in locations where they can easily be reached and read, and we insist on the customer maintaining easy access to the meter location so our service people will not have difficulties.

In addition we have a program of renewing service pipes in areas where needed. And in the areas of substandard housing, where most of the breaking up of large apartments into small takes place, we make a house-to-house inspection looking for house piping installations which do not meet safety requirements.

How effective has this program been? It is difficult to measure accurately the results of such a program, but we know we are on the right track when reading the following report of the National Board of Fire Underwriters for the decade 1946 through 1955. Of the 19 categories of causes of fires, gas ranks 14th.

Fires in U. S. Resulting from Known Causes (As reported to National Board of Fire Underwriters) For the decade Jan. 1, 1945-Dec. 31, 1955

CAUSES	PER CENT CLAIMS
1. Matches, Smoking	26.36
2. Misuse of Electricity.....	14.69
3. Lightning	9.85
4. Petroleum and its products..	6.99
5. Stoves, Furnaces, Boilers and Their Pipes.....	6.76
6. Exposure (fire originating off premises)	6.43
7. Ignition of Hot Grease, etc..	4.36
8. Overheated or Defective Chimneys, Flues, etc.....	4.28
9. Miscellaneous: Cause Known but not Classified.....	3.49
10. Hot Ashes and Coals: Open Fires	3.48
11. Open Lights	2.88
12. Rubbish and Litter.....	2.49
13. Spontaneous Combustion	1.74
14. Gas; Natural and Artificial..	1.73
15. Sparks on Roof.....	1.63
16. Friction, Sparks from Running Machinery	0.94
17. Sparks Arising from Combustion	0.89
18. Explosions	0.86
19. Fireworks, Balloons, etc.....	0.15
	100.00

These figures indicate our program has resulted in some measure of success, but we will not relax our vigilance or curtail our program. Safety is a full time, unrelenting job. We shall continue to work in the fields of appliance design and installation, to educate our users in safe practices, and to continue our inspection program to insure that all our customers can handle this concentrated energy called gas—and handle it with respect.▲

WOMEN'S SAFETY COUNCILS— THE BEST WAY TO THE MEN

by J. H. WILLIAMS

superintendent of safety, Texas & Pacific Railway co., Dallas, Tex.

We, of the Texas and Pacific Railway company, have found through study that an accident occurring to a member of a worker's family often is the direct result of the worker himself being injured, or by his mind being elsewhere causing others to be hurt or causing damage to company property. This was my first real concern with home safety prior to the time that I became the safety officer of our company seven years ago while I was a division operating officer.

There have been occasions where it was necessary to relieve an experienced man of long service from duty immediately when an accident at his home involved his wife, mother or children, due to mental anxiety brought on by grief and worry. It was for this reason that as soon as I took over the responsibility of safety among our employees, I, together with our superintendents, gave serious consideration to doing something that might bring about desired results—"safety among our workers' families at home."

We knew that the women of our employees had to be reached and in such a way that they too, would become vitally interested in this subject and would assist us. The job was one that would require many people among our personnel if the plan was to succeed. With the help of our division superintendents we set out to encourage the organizations of T&P Ladies' Safety Councils at our terminal points where a sufficient number of our forces made their residence. These councils were to be made up of wives and mothers of our employees.

WHY WOMEN HELP

We felt that the women had three good, solid reasons for wanting to do what they could to help in the program by keeping things at home safe and pleasant so as not to ever send the menfolk off to work with a heavy heart and troubled mind. The wives, we knew, would cooperate because:

First . . . the man involved is the one that she loves and the one for whom she is most concerned.

Second . . . he is the father of her children, for whose safety she is also constantly concerned, and

Third . . . her future happiness and well-being, and that of her children depend entirely upon his safety.

We were successful in getting these organizations started. At the beginning a few ladies, probably four or five, whom we thought would be interested, were asked to meet with us at a luncheon where we discussed the proposed setup, it being thoroughly explained that we did not expect nor desire that these groups take any part in our safety program among employees on the job . . . but to confine their efforts strictly to the job of eliminating accidents in their own homes and to do what they could toward encouraging the wives of other employees to do likewise . . . we pointed out why.

LADIES ORGANIZED GROUP

The small group immediately caught on and by circular letters addressed to all Texas and Pacific ladies in that particular town, signed by the four or five ladies who attended the luncheon, a meeting was called of any ladies interested, explaining fully in the circular what the conference would be about. To our utter surprise and delight they came in large numbers and were enrolled.

At this meeting, without any suggestions from the division superintendent or me, they nominated and elected their own officers and were furnished a membership card and a book of by-laws, and the regular monthly meeting place, date and time were decided upon.

As the councils at various points were organized, our company magazine carried the stories, and it was not long before groups in other towns were requesting such

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an organization. We now have 11 councils at terminal points between El Paso, Texas and New Orleans, Louisiana, some with memberships running into several hundred, and most of them have been in existence for five or six years.

SOCIALIZING PROMOTED

We rarely hear of an injury in any of these homes because they meet monthly and discuss accident prevention and any accidents that might have occurred in the home must be reported for discussion. Another great thing that has resulted is that the men have fewer accidents at work. These organizations have been a fine thing in other ways, also.

The families occasionally get together for an outing such as a picnic or a party and they have formed great friendships where prior to the creation of such organizations they hardly knew each other at all. The really surprising thing that we did not expect is the part that these councils have played in safety throughout their entire respective communities. They have come to be recognized as an important organization and helpful public-wise.

I could go on and on telling you about their city-wide safety programs in the schools, their organization of baby-sitter clubs, their work with the state, county and local police departments, their city-wide bicycle safety contests, and work with the state and local safety organizations, and the many, many honors that they have received from persons in high station from the Governor down.

WOMEN BRING HONORS

For the past four years our company has been honored by receiving the coveted Public Safety Activities Award from the National Safety Council, which honor—for the most part—was directly the result of the work carried on by our Texas & Pacific Ladies' Safety Councils. Their activities have been most helpful from an employee and public relations standpoint.

They have used to a great advantage "Targets for Home Safety" which is distributed by the National Safety Council and which is reproduced in large quantities for their ready use. Much of the other material offered by the National Safety Council has

been found helpful also. They receive a lot of help in the way of safety material from insurance companies, state and local safety organizations, and others.

They have written scripts and acted out the parts in colored, sound moving pictures on home safety that have not only been shown to our employees, but to the public as well. By the use of our Ladies' Safety Councils for these films and employing magnetic sound, the cost of such films have been kept to less than \$100.00.

AID TO WOMEN'S WORK

These councils receive an unlimited amount of help in their work from ministers of all faiths, school officials, service clubs, newspapers, police departments, Chambers of Commerce, and from the state, county and city. Also leading doctors—particularly pediatricians—have helped them immensely. Any group of wives can do what they did, but they must receive proper encouragement and assistance.

Personally, I think it is a great thing, and so does our top management. In addition to helping in a small way financially, letters of encouragement are occasionally written by our Executive Officers to the heads of the councils, and to point this up I will quote a letter written to one of the councils by W. G. Vollmer, the President of our railroad, which reads:

"I was given an opportunity to read the item in the Bunkie Record of Friday, October 7, about your big bicycle safety contest held on Thursday evening, September 29th, on the Bunkie Elementary School campus.

"It gives me a lot of pleasure to extend congratulations to you, and to Mrs. Nelson and Mrs. Crouch, your co-chairman for this wonderful work. God bless you for your interest in it and in all mankind.

Sincerely,"

Many letters of this type have been written to these ladies, complimenting their work, by our top management—and I must say that if any organization of this kind is contemplated by industry, it must have continued, enthusiastic support from the management of whatever company is concerned.▲

SAFE AT HOME

by WILLIAM V. KAHLER

president, Illinois Bell Telephone co., Chicago

(Presented before the Home Safety Conference
Committee of National Organizations)

The telephone business started with a home accident.

Alexander Graham Bell—working in his rooming house laboratory—was trying out a new dilute sulphuric acid transmitter when he accidentally spilled some of the acid on his clothing. And as he called for help to his assistant in another room, "Mr. Watson, come here, I want you!" the transmitter in his hands carried his words as its first intelligible speech.

So far as I know, that is the only accident in any business that has been celebrated as a happy and momentous occasion. Ever since the telephone was invented—and made safe for all to use—safety has been the working creed of everyone in the telephone business.

For some 80 years folks in this country have been turning to their telephones when accidents occur in their lives. We're mighty proud of the reputation our operators, linemen—in fact all of our employees—have earned, over the years, for helping others in time of emergency.

TAKE SAFETY SERIOUSLY

In our handling of emergencies we take our safety seriously and that's why we take an active part in National Safety Council work. We hope that by so doing we will become increasingly conscious of—and better educated in—accident prevention and safety.

My interest in home safety is based on a practical consideration—which I'm sure motivates many other businesses, too. It is simply that in this country about half of all accidental injuries—and about a third of all accidental deaths—take place in the home.

Can we afford to be apathetic when we know that someone in this country is accidentally injured at home every seven seconds—that there is one fatal accident in the home every 17½ minutes? In one hour about 500 home accidents occur and 3 or

more of the injured die because someone failed to form reasonably safe habits around the home.

ECONOMIC FACTORS

Aside from humanitarian reasons—which in themselves are sufficient to motivate us—the economic impact of home accidents is many times that of on-the-job accidents. Business men would be foolish indeed if they didn't do all they could to promote safety both at home and on-the-job—since in fact—these are times when fringe benefits are a considerable part of business payroll costs—and any improvement in the accident rate actually helps control the price of a product or service.

Perhaps some of you have seen this statement by James Cantlen, Vice President of Pacific Telephone:

"For some reason, whenever people leave the job at 5 o'clock a big majority leave behind most of their training in safety. They rush down the stairs for the bus. They jaywalk. They do hundreds of foolhardy things to endanger their life and limbs. And they do it without thinking. In the average of the last 10 years, 173 Bell System employees have died in accidents off-the-job to 15 on-the-job, a ratio of about 11 to one. The dangers of just living seem to be greater than the hazards of working . . ." (at least in the telephone company).

And that 11 to one ratio of fatal accidents in the home to those on-the-job is more than matched by the less serious ones. In our company the ratio of all lost-time accidents is 13 off-the-job to one on-the-job.

JOBS SAFER THAN HOMES

These statistics—and I imagine they are representative of what happens in many other employee groups—all boil down to one simple fact: Our jobs are safer than our homes!

And that shouldn't be!

We have to admit to certain difficulties, however, as we look at the home safety problem. This emergency room record at Stamford (Conn.) hospital for one recent day suggests what some of them are:

A 4-year-old girl injured in the car by a toothpick-wielding playmate.

An 11-year-old struck in the eye by an umbrella thrown by a playmate.

A 10-year-old boy hit on the head by a tin can.

An 11-year-old boy broke an arm playing basketball in his own back yard.

A 4-year-old girl and an 8-year-old boy bitten by a dog.

A 3-year-old girl poisoned by a toad-stool.

A 3-year-old boy and an 8-year-old girl sprained their wrists falling from a tree.

A 9-year-old boy stung by a bee.

We can train an adult employee, but can we train a 9-year-old boy—or a bee?

MAKE MOTHER SAFETY LEADER

Busy as she is, can Mother add one more job to her manifold duties and responsibilities—that of Safety Supervisor? She's already the family chef, chauffeur, maid, and nurse—and goodness knows what else!

But in spite of these difficulties, the goal of this home safety conference is, I'm sure, no less than making our home life as safe as our business life.

As you work together for home safety, three areas of activity might be kept in mind:

INVESTIGATION CONCENTRATION INFORMATION

All of them must be keynoted by *coordination*.

Let's now look at three fields of opportunity where coordination can be applied.

INVESTIGATION

In a period of 30 years industrial management has cut accidents in half by eliminating accident causes. This excellent record of safety-on-the-job didn't just happen. It has come about because much investigation, research and analysis has been applied to individual accident occurrences. A similar opportunity exists in the field of home accidents.

Whenever a serious accident occurs in our business, we make a complete on-the-site investigation to determine all the contributing factors. This gives us the knowledge to educate and supervise our employees—to redesign tools—to change our work practices—as the case may be—so that a similar occurrence may not happen in the future.

A few months ago, an accident occurred inside our Cicero Exchange Building. A young apprentice cable splicer was identifying cable pairs at the top of a tall frame. He was standing on a rolling type track ladder, with both of his feet on the same step about eight feet from the floor.

NINE CAUSES OF ACCIDENT

Another employee was sweeping the floor around the ladder. In so doing, he moved the ladder sufficiently to cause the man on it to lose his balance and jump. He landed with all his weight on his heels. The result, the heel bones in both feet were fractured. He was off the job for several weeks.

Now this seems like a simple enough set of circumstances—and yet it was investigated and analyzed from every conceivable angle—to get at the contributing causes.

Nine factors were unearthed which combined to cause the accident—and nine recommendations were made to prevent a recurrence.

These recommendations—and all but two of them have been put into practice—involved everything from retraining our men in the use of rolling ladders—better use of ladder blocks—to best body position and other ways to provide greater body stability at the top of ladders.

Now I recognize that gathering facts from a family involved in a home accident takes some dedicated doing. But surely there is already pertinent information available in insurance company accident claim files—medical cases histories—and coroners' reports—so that a wealth of analytical material could be gathered. It seems we ought to get the material in these files in proper form for all to use. Coordination should make possible full utilization of this information, and our specific targets for attack are bound to emerge.

CONCENTRATION

In this phase we begin to use the products of investigation and analysis. If we are to

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he most productive in reducing home acci-
dents, we should concentrate on those causes
which contribute to our most frequent acci-
dents—and also concentrate our efforts by
proper timing.

Let's assume for the moment that falls
perennially lead in home accident statistics.
We would determine the period of greatest
incidence of falls in the home and their pre-
dominant causes. We would then concen-
trate our efforts on a program specifically
designed to prevent falls. We would review
safety codes—standards—design deficiencies
—explore manufacturing cooperation—and
develop effective ways to strengthen our at-
tack on this type of accident.

We would then have an opportunity to
bring to the family group (1) a continuing
consciousness of these particular hazards in
the-home and (2) specific seasonal messages
to help in avoiding falls.

NEED GROUP EFFORT

Some years ago Illinois Bell mailed to the
homes of our 2,000,000 customers an insert
with the telephone bill, a home chart on
first aid. I am certain that we went off on
our own, either without thought as to the
efforts of others, or proper timing, or proper
emphasis on most frequent accidents, or any
of the other factors of concentration. By
hind sight, we would now most certainly
want to merge our individual efforts (and
I'm sure everyone else would) with consoli-
dated group effort.

As an incidental thought about falls, I'm
sure manufacturers would—if asked—coop-
erate by putting large safety reminder decals
on ladders and appropriate signs on other
appliances. Also, directions for using appli-
ances and tools are so often ignored that
decals could be put on the appliance, warn-
ing the user to "play safe—read the direc-
tions."

A concentrated attack on home accidents,
supported by adequate investigative proce-
dures would be of little value—it seems to
me—without an imaginative public informa-
tion program.

INFORMATION

The National Safety Council has among
its membership such widely read publica-
tions as the *American Home Magazine* and
Practical Builders Magazine. Suppose it
enlisted the aid of other members of the

press and folks in allied fields—organiza-
tions like the American Newspaper Pub-
lishers' Association—and the National Asso-
ciation of Radio and Television Broadcast-
ers. Don't overlook the Advertising Coun-
cil, and the Public Relations Society of
America. I am convinced that—given the
facts—they would all be glad to help in
bringing vital home safety messages to the
public.

And how about the artists—writers—and
composers? Homes have always been a fa-
vorite theme of composers. Maybe we
should write some new songs—and re-write
some old ones—with safety as the theme.

SING OF SAFETY

"Home Sweet Home" might become
"Home Safe Home" and "Home on the
Range":

Give me a home that's not accident
prone

Where the hazards are all stashed
away

Where always is heard the right
warning word

And the stairs are not cluttered all
day.

Millions of impressions in trade papers—
home magazines—on radio and television—
all directed in unison at avoiding the same
type of home accident—would have an in-
delible impact on many households—and I'll
wager eventually would make a big dent in
home accidents.

I'm convinced that industry would help,
too, with your information program. I have
already referred to possible use of Illinois
Bell bill enclosures which go to some two
million addresses. We also have an employee
magazine which is mailed to the homes of
our 44,000 employees 10 times a year.

Our company is one that stands ready to
put these facilities to work in behalf of
home safety, and I'm sure that many other
businesses would help in this way, too, if
they were asked.

We've found at Illinois Bell that em-
ployees and their families welcome Home
Safety information and guidance.

SAFETY GLASSES AT HOME

As one phase of our on-the-job safety
training we suggest that employees who are
"do-it-yourself" fans borrow their com-

pany's safety glasses when doing any work around home involving a potential threat to their eyes. This program has already paid off. There have been at least two cases this year where employees followed our suggestion and avoided serious damage to their eyes. Pictures in our files showing cracked safety glasses are dramatic evidence of the effectiveness of this kind of safety training and practice.

Recently we gave certain groups of our employees refresher courses in automobile driving and suggested that they take printed pieces home to be read by other members of the household. One employee had this interesting reaction:

"My wife believes this type of program is better than the group insurance. For some reason she would rather have me than the money."

Whatever methods and media are used, I'm convinced that any message on home safety must have imagination and punch.

HOME SAFETY WEEK

You could launch a National Home Safety Week. If we already have too many weeks, maybe we could hitch on to one that's already well established and call it National Fire Prevention and Home Safety Week.

I've looked into a specific or two—and I wonder if there may not be opportunities to look at home safety from a longer-range information and education viewpoint.

Again realizing we're dealing with an already overworked person—can we persuade the housewife-of-the-future to be more safety conscious than her mother or grandmother? It is encouraging to find—for example—that in our Chicago high schools, girls in home economics learn safety practices as an integral part of sewing—cooking—and home decorating classes.

Girls learn not only to concoct a tasty stew—but also how to do it without scalding themselves. Perhaps there are other schools in the country that are less mindful of the future housewife's role in home safety. And if there are, there is work to do!

FIRST AID TRAINING

Here's an idea which is certainly not new—but I'm impressed by the fact that experience has shown persons who have com-

pleted a first aid course are more likely to have better safety attitudes and fewer accidents than those who haven't. Is it possible to make first aid training even more widespread than it is?

Perhaps I am talking directly to Red Cross people when I make the suggestion that block or neighborhood first aid classes for parents could be organized on a wide scale. Enlist the interest of a key family in the neighborhood to invite their neighbors into their home to learn first aid. Such a neighborhood party, which can rotate month by month, might be the motivating urge.

This idea assumes a sufficient supply of first aid instructors from the Red Cross or other sources—firemen—scout instructors—industry trained people, etc.

I learned that in one of our outstanding engineering schools, there are actually sequences on safety; however in some schools of engineering the teaching of safety and design for home safety depends largely upon the individual instructor. Can more be done in this field? After all, who should be more mindful of safety than our engineers of tomorrow—who will design our structures and appliances.

As we look at the many ramifications, we can all agree that improvement in home safety will not come easily. It will require imagination and hard work.

COMMITTEE ORGANIZED

Investigation—concentration—and information—and all other aspects—require workable coordinating machinery to be effective.

Wisely, a "Committee of National Organizations" has been set up to explore the means of strengthening home safety activities through the coordinated efforts of interested national organizations. Such a committee can be the seed that will grow into an effective national effort—if everyone will provide the necessary nutrients.

You are the policy makers—the steering committee—and the rich source of ideas and facts. But I have found in my business that matters as complicated as home safety require a point of centralized staff responsibility.

Fortunately, you have that, too, in the National Safety Council Home Safety Division.

You in the Home Safety Conference have the respect and support of all persons interested in Home Safety. Collectively you represent millions of people whose joint efforts

—if directed and focused—can save many human lives—most of them children.

And what greater work could any of us do?▲

OFF-THE-JOB ACCIDENTS

Statistics are such boresome things
And figures rather dull.
It's hundreds, millions, billions, trillions,
Over which we mull.

But facts are facts where ere we go
Regardless of amounts,
So here's some facts on accidents,
And that's what really counts.

It isn't always big machines
With blades of sharpened steel
That rob a man of arm or leg
And make his senses reel.

Nor is it always "on the job"
Most accidents take place,
But just the opposite is true
And figures prove our case.

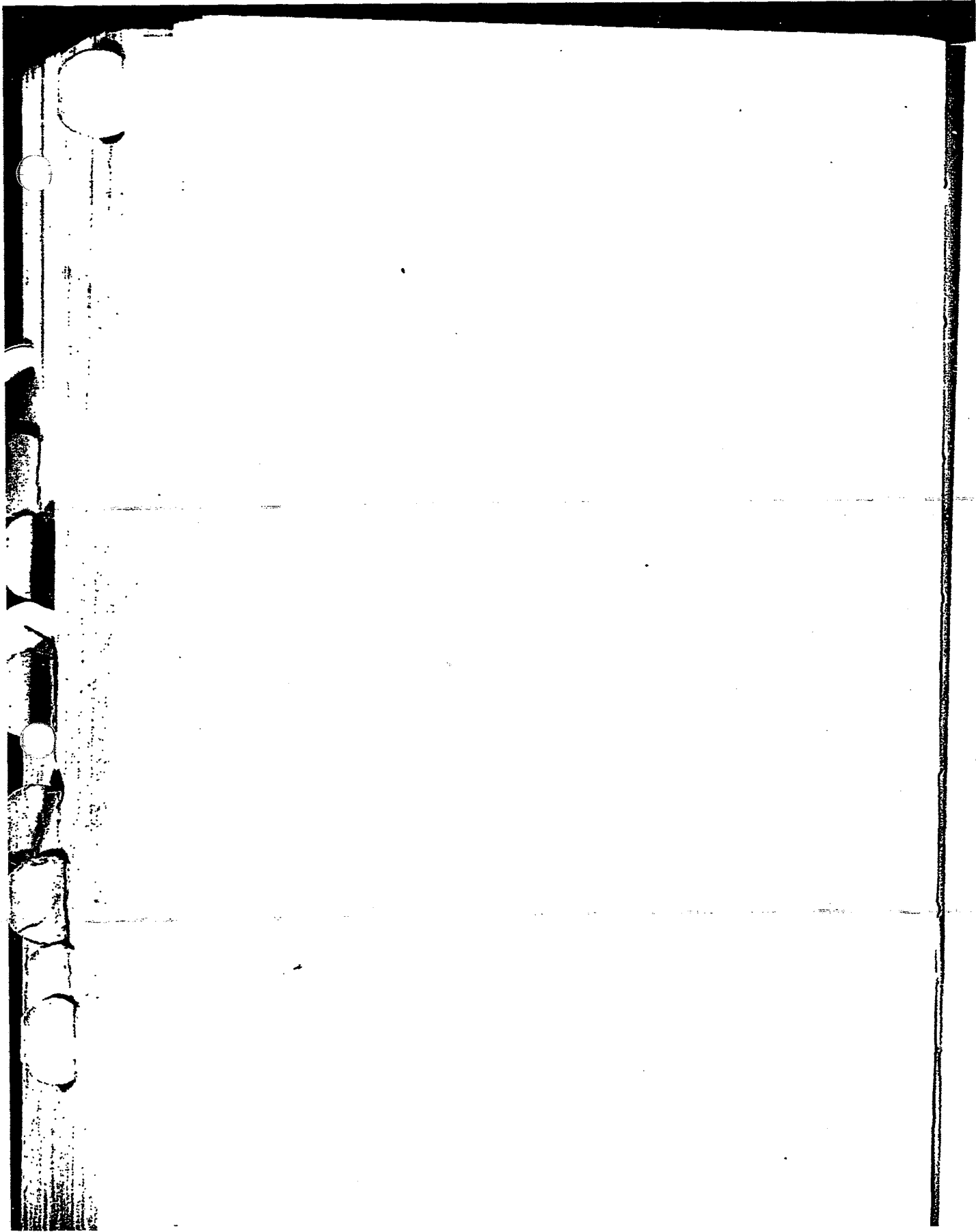
It's carelessness in little things
At home and on the street
Neglect in moving objects small
Away from running feet.

A makeshift ladder, sliding rugs.
Electric cords that spark
A disregard for cellar stairs
And stumbling in the dark.

Crossing where no crossings are
While looking at the sky.
Driving on a slippery road
With milestones whizzing by.

These are the things that take a toll
We all should frown upon
So watch for them when off the job,
As well as when you're on.

—Humble Pipe Line Company, Houston, Texas



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