

Evaluating Program Progress

By ANDIE L. KNUTSON, Ph.D.

EVALUATION is concerned with determining value or worth. Each of us is constantly making evaluations in our everyday lives. We judge ideas or actions in terms of right or wrong, good or bad, honest or dishonest, and practical or impractical so frequently and so quickly that we are often unaware that we are doing so.

We draw upon the full range of our experiences in making these judgments or evaluations, testing each one against our personal and professional patterns of value or concern and against estimates of their relevance to the situation at hand. This weighing process may be either conscious or subconscious, objective or intuitive. Thus, decisions are often made without adequate consideration of pertinent facts available; sometimes they are made without considering the possibility of obtaining such facts.

Program evaluation is concerned with determining the worth or value of efforts to achieve a given purpose or objective. The specific purposes of evaluation in this situation are to provide objective estimates of achievement and to provide guidance for the conduct of program activities. To achieve these purposes, two types of evaluation are required—first, “evaluation

of program achievement” and second, “evaluation of program progress.”

Sound evaluation studies of program achievement are essential if we are ever to know whether or not we are attaining the goals for which we strive. The public, too, has a right to know whether our efforts and money are well spent.

Concrete and valid evidence of the achievement of public health programs is frequently most difficult to obtain. Many of the objectives are broad and hard to reach. Often we may not reasonably expect observable positive results until the program has been under way for years. With some hold-the-line operations, failures are easier to define than successes. Many outside influences quite apart from public health efforts may effect the achievement of the long-range objectives in positive or negative ways. On-going program activities must be continued in the best possible manner even in the absence of the measures of achievement which are only available after the program has been in operation for some time.

Program Progress

Thus, the process of evaluating program achievement is not adequate for satisfying the second of the two objectives of evaluation—providing guidance for program activity. To achieve the purpose of program guidance, objective data need to be obtained and applied throughout the phases of program planning, development, and operation. Objective evaluation must take its deserved role as part of the daily routine of each health worker.

Dr. Knutson, chief of Behavioral Studies, Division of General Health Services, Public Health Service, presented this paper in part at Pennsylvania's Third Annual Health Conference held at State College, August 1954.

In the course of evaluating program progress, it is possible to identify difficulties or barriers as they occur and to make necessary changes on the basis of the best objective data available. Sound evaluation of progress made as a program continues day by day can help to assure that each new phase of the program is built on the positive achievements of the preceding phases.

The concept of evaluating program progress is of value whether we think in terms of the health department program as a whole, in terms of a particular program, or in terms of the efforts of the individual health worker with his personal and team responsibilities.

The purpose of evaluating program progress is to improve the quality of decisions made at any point during the planning, development, and operation of a program.

Since many programs are in operation concurrently in any health department, different types of decisions may have to be made at the same time. Overlappings occur, but for the purpose of this discussion, I have grouped the program decisions to be made into the four broad types of those concerned with:

1. The nature of the interests, wants, or needs the program is intended to satisfy.
2. The broad purposes of the program and the philosophy of approach or policies to be followed in trying to achieve these purposes.
3. The selection or development of the methods, techniques, or procedures to be used in the program.
4. The application of philosophy, policies, and methods in carrying out the operation of the program.

Interests and Needs

We all tend to assume that other people want and need the same things that we would want and need if we were in their situations. We assume we know what they need, without recognizing that in making that assumption we are making a decision. An important question of progress evaluation is: Have the interests, needs, or wants we are trying to satisfy been adequately identified?

Exploratory fact finding is one way of assuring adequate identification of needs or wants.

Questionnaires, interviews, projective tests, group discussions, analysis of statistical data—all sorts of techniques can be used to gather necessary data. Whichever method is used, it is important to try to obtain the other person's identification of needs or desires from his point of view—as he describes them. We need to be careful that the very nature of our questions or approach does not limit his thinking to our own ideas about the possibilities.

The methods of obtaining data for use in evaluating program progress do not need to be complicated. In fact, often the simplest method yields the greatest return.

The nurse who encourages a mother to pour out her troubles and waits patiently for her to identify the things with which she needs help is applying one of the best exploratory techniques. Sometimes simply helping the mother to formulate the problem clearly will enable the mother herself to identify some constructive action to take. Maximum value of the technique occurs when the nurse makes sure that she has given some help on as many as possible of the specific things identified. Referring the mother to some other source of assistance is sometimes as effective as providing her with materials or guidance. Knowing how the mother perceives her problem may be the key to developing an effective solution. If the solution is meaningful to her, there is a much greater likelihood that she will carry out the action after the nurse leaves.

No public health worker has the time and opportunity to make a thorough study of the other person's interests, wants, and needs every time a decision has to be made. But all of us can profit by identifying as a decision each assumption we make about needs and by being as objective as we can in making that decision. We can all profit also by trying out the more thorough method of exploration with a part of the case load. For example, it might be possible to apply this principle regularly on the first home visit or restaurant inspection carried out each morning. Although initially more time will be spent in these instances, the additional effort may help to identify and solve problems that might otherwise drag on indefinitely.

The same principle applies in identifying community needs. Recently a health educator

in a local community seeking to identify the needs upon which to build a sound health education program first made a survey of public health needs. She identified little that was new or unexpected and was unhappy with the findings because she was certain many health problems were not being reported.

She reviewed her approach and found that she had used questions about health needs and public health problems that meant more to the public health worker than to the people she was interviewing. She had encouraged responses in terms of existing services only and her own ideas about new possibilities. On the basis of this evaluative review, she changed her approach and tried a more open interview which encouraged the respondents to discuss freely the little things families run into when they first move into the neighborhood.

Using this new method, she found that many were concerned about uncontrolled dogs roaming the neighborhood. Others mentioned the need for some type of recreation facilities for preschool children who were playing in the streets since there were no sidewalks. Expectant mothers did not know where to reach the nearest physicians. Mothers with young children desired help on behavior problems. Thus, the open question approach, which was focused toward identifying the problems from the mothers' point of view, yielded data of great value in defining the goals for a community action program.

Purposes and Philosophy

The second major type of program decisions to which progress evaluation can contribute are those concerned with the development of the purposes and philosophy of the program. The second question can be stated as follows: Have the program objectives and philosophy and policies been fully agreed upon, formulated, and written down?

Misunderstanding about the broad purpose of a program and the philosophy of approach or policies to be followed in trying to achieve this purpose is a common source of friction. Often sources of potential conflict can be identified in the beginning of the program through frank and open discussion by all persons directly con-

cerned. Writing down agreements helps to assure clear and workable formulations.

In one instance, discussion along these lines after a program had been in operation for 5 years revealed serious misunderstandings among the members of the staff. Some had perceived the project as a community demonstration program to be discontinued as soon as the local health department was prepared to take over. Others saw it as a research project to test methods of diagnosis and control. They were unaware of the problem of preparing the community for its role. A few perceived it as a program to provide services and seemed unaware of any other purposes. Those who clearly identified the purpose as a demonstration were in disagreement about what they were trying to demonstrate and to whom.

Stating the goals of a program in terms of specific health practices is a good way of keeping plans concrete and practical. This is more than an exercise; it is a test of sound planning. Unfortunately, some of our health objectives are long range and hard to pin down. When they can be specifically identified in this way, however, methods of achieving them can be selected with greater confidence.

If the goal is to influence a specific health practice, such as food handling, it is possible to find out how this particular practice is related to the habit patterns and interests of the people concerned. We need to know how the program ties in with their ways of thinking and behaving, with their way of life. For it is unreasonable to expect ready acceptance of health practices that conflict with personal interests or deep-seated habit patterns.

Clear formulation of objectives requires identifying the intermediate goals that need to be achieved in order to attain the program objectives. Almost any program can be broken down into intermediate steps that can be measured. If the measurement shows that the step has been achieved, one can feel confident in going forward to the next step. If the data suggest that this intermediate step has not been attained, it will be important to find out the reason for failure and pause long enough to find a more effective method for achieving the intermediate goal.

In evaluating progress, it is important to dis-

tinguish between the housekeeping type of data required for administration and data that yield evidence of progress. For example, the number of home visits or restaurant inspections made are administrative types of data, as are also the number of telephone calls, pamphlets or leaflets prepared and distributed, films used, and meetings or discussions held. They are accounts of activities carried out as part of the program. They may or may not contribute to the achievement of either intermediate or long-range goals. Accounts of such activities do not yield valid evidence of program progress.

A public health nurse, for example, may keep a record of the number of home visits, how much of her time was spent in the home, what materials were left with the mother, and what instructions were given. Such records are often necessary for administrative reasons.

In evaluating her own progress during a home visit, however, the nurse needs answers to questions like these: Did she find out from the mother what problems she was most concerned about? Did the mother have full opportunity to define the problem? Was each question answered specifically and satisfactorily when the question was raised? Did the mother have an opportunity to tell what she already knew and what she had done in trying to solve the problem, and what important steps she thought ought to be taken? Did the nurse in some way obtain the mother's interpretation of any instructions or suggestions given, and in this way make sure that the instructions were correctly interpreted? Did she take the time to observe the patient carrying out the action recommended? Answers to such questions will help the nurse evaluate her progress in assisting the mother to solve her problems.

Methods and Procedures

A third group of decisions to which progress evaluation can contribute are those concerned with the selection or development of the methods, techniques, and procedures to be used in the program. The question of progress evaluation with respect to this third area is: Is the method or approach selected the one most likely to prove successful in achieving the objectives of the program?

If the purposes of the program have been broken down into specific intermediate goals, a long step has been taken in identifying the best methods and techniques to use.

The final choice of program method can be tested by listing in one column the objective evidence for a method, say interview, film, or pamphlet, and in a parallel column the objective evidence against the use of that method. Try this for each method under consideration. Consider questions like these: Is there any objective evidence that one method is more effective than another in changing behavior or in achieving any other purpose you may have in mind? What will it probably cost in time and money to achieve your purpose by each method? What type of personnel is required to apply it? Are the necessary resources available? Considering the resources available, is it realistic to try to apply the method as a way of achieving the ultimate objective?

For example, the sanitarian may be concerned with the problem of eliminating rat-breeding places and fire hazards in the community. One solution suggested may be to visit homes and offices to give individual instruction to persons responsible for these conditions. Before undertaking this method, he would probably find it profitable to ask: How much would it cost in time and money to visit all the homes or offices and discuss the problem with the owners? What type of person would be required to carry out these visits effectively? Are there such personnel available? Do they have the means of transportation and funds for travel to these places? How long would it take to make all the visits? Considering the answers to these questions, is the method practical? Could some other method be developed which would better satisfy these criteria?

On the same grounds, one might question the advisability of continuing other methods that require a heavy expenditure of professional time to reach only a few of those members of the community needing assistance, such as the use of professional personnel to give individuals or small groups instruction on weight control. How many professional people will it take to complete the job in your community working this way?

If the problem is to identify tuberculosis car-

riers among older men in the marginal income group, one might ask whether the diagnostic facilities are made available to them at a time and in a way that does not interfere with their prime job of earning a living. Are they all likely to be reached by the method used? Are they likely to understand the purposes of the program and will it make sense to them?

It is often useful in identifying or developing a program method to identify systematically the individuals who are in a position to influence the flow of ideas between ourselves and the person with whom we are seeking to communicate. In a local area, the influential person may be a minister, political ward leader, county agent, employer, storekeeper, or club secretary. These individuals are sometimes called communication gatekeepers since they may open the door and encourage the free flow of ideas, or they may close the door and prevent the ideas from passing through. They may influence the acceptance of an idea by lending it their prestige and support. Or they may draw influence from it by deprecating it. They may willfully distort the idea if they are so motivated. Or they may unknowingly change its meaning through failure to understand and thus err in its interpretation.

For example, a man may have a sore on his lip that does not heal. He may not know where to go to get help. After talking it over with members of his family or possibly a friend, he may bring his problem to a pharmacist, a minister, or someone else whose medical judgment he respects. Whoever it is may direct him to a physician who is able to diagnose the problem and provide adequate treatment. Or the adviser may direct him along some futile route by suggesting the use of a home remedy or patent medicine, or by sending him to some other unqualified source of information and in this way block his efforts to get expert help.

Many of the problems we encounter in carrying out public health responsibilities directly involve one or more such communication gatekeepers. We need their help. Analyzing a program in terms of the communication gatekeepers will help to identify them and to define their possible roles so that methods can be developed to enlist their support. Pinpointing efforts to these members of the community will

help open new channels through which we can effectively communicate with the public.

Operation of Program

The fourth group of program decisions to which progress evaluation can make a contribution are those concerned with putting the philosophy, policies, and methods of the program into practice. Questions of progress evaluation concerned with the actual operation of the program include: Do people understand the purpose of our efforts? Is the purpose one they want to achieve? Do the practices we recommend make sense to them? Are these practices in accord with the ways people usually behave? Are our attempts at communication successful?

A clear understanding of purpose is essential to correct action, particularly when the individual himself is the only one who can decide when or how to act. Failure to understand why is one of the most serious sources of program failure. Yet the cause of failure can often be avoided by the simple practice of obtaining the other person's interpretation of purpose.

A nurse in Minnesota related a clinic experience that will illustrate. A mother at a well-baby clinic was advised to put her child on orange juice. A few days later the child was brought back ill, and an examination revealed that the child was starving. The mother had perceived the orange juice not as a supplement but as a substitute for the former diet. To avoid a recurrence of such misunderstanding, the nurse now uses various ways of drawing from the patient an interpretation of how she will go about carrying out new instructions and why it is important to do so.

This same technique of testing to see whether the purpose is understood can be applied to posters, pamphlets, films, exhibits, and even group discussions. It is a very useful tool for identifying words or concepts that cause difficulty. In testing one poster on safe waters it was found that some people interpreted the poster to mean that "all waters should be polluted." Changes were clearly indicated.

Members of the American Public Health Association Committee on Exhibits have had some very interesting experiences in applying this

quick and easy approach. Exhibit evaluators ask each exhibitor to complete in about 25 words this sentence: "The main purpose of this exhibit is . . ." Then they ask a number of members to complete the same sentence while observing the exhibit. In one instance all the observers wrote, "The main purpose of this exhibit is to demonstrate the various uses of isotopes." The exhibitor wrote, "The main purpose of this exhibit is to demonstrate various techniques for testing laundry equipment."

A somewhat similar approach can be used to test whether the practice recommended makes sense to the other person and whether he can easily apply it in the manner intended. A Public Health Service psychologist is studying patient reactions to a low sodium diet booklet. As part of the test, he and his wife went on the recommended diet for several days. They came out with new respect for the difficulties faced by the patient. They had considerable trouble, for example, in using the index, which had been set up from the point of view of a nutritionist, to find such common food items as peanut butter and salad dressing.

A Public Health Service nurse in developing materials for the use of diabetics tried to carry out the exact process outlined in the instructions for injecting insulin. She found it physically impossible to perform all the tasks alone as recommended.

Many health departments are now routinely using tests to tell whether their written materials will be understood by the groups for which they are prepared. The Dale-Chall and the Flesch tests of readability are easy to use. The Flesch test requires only a count of the number of syllables per 100 words and the average number of words per sentence. With these two facts it is possible to estimate the grade level of reading ability required. After some training, any clerical person can apply the test successfully.

For example, one health department, while carrying out a mass X-ray campaign for tuberculosis, received 3 or 4 calls a day from people who asked for an explanation of the notices they

had received about the X-ray findings. An analysis of the reading ease of the notice showed that about eighth grade reading ability was required to understand the message; thus the message could be understood by only about half of the adult population of the community. Since it was important that everyone understand this message, it was simplified to about the fourth grade level of reading ability; then it was tried out on a number of people with low education to make sure that they interpreted it correctly. The health officer has since reported that no calls for explanation are now received.

Major emphasis has been given to the approach of the social scientist rather than to that of the statistician, administrator, or personnel officer. Actions taken in selecting and assigning personnel, for example, directly affect most of the decisions discussed.

One frequently hears that "public health is people," that it is "everybody's business." If public health is so intimately concerned with people, then how well public health is succeeding in its programs may depend on how well our programs are wrapped around people—their needs, their wants, their hopes. The approaches I have been discussing are the types of approaches which are useful in determining whether we are wrapping our programs around people or whether we are attempting to wrap people around our programs.

Through applying the tools of measurement, we can obtain data for the guidance of program improvement as the program continues. We must always be aware, however, that the data obtained in evaluating program progress are not valid for determining whether or not the broad goals of the program are achieved. For this purpose, sound studies of program achievement are essential. Both evaluation of program progress and evaluation of program achievement are essential to satisfy the two major purposes of evaluation—guidance for the conduct of program activities and objective estimates of achievement. Neither can be neglected if we are to make certain that our efforts and money are well spent.