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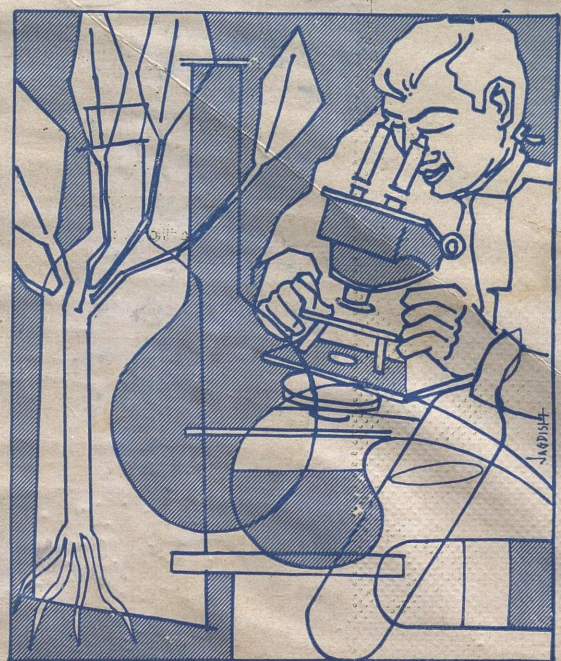
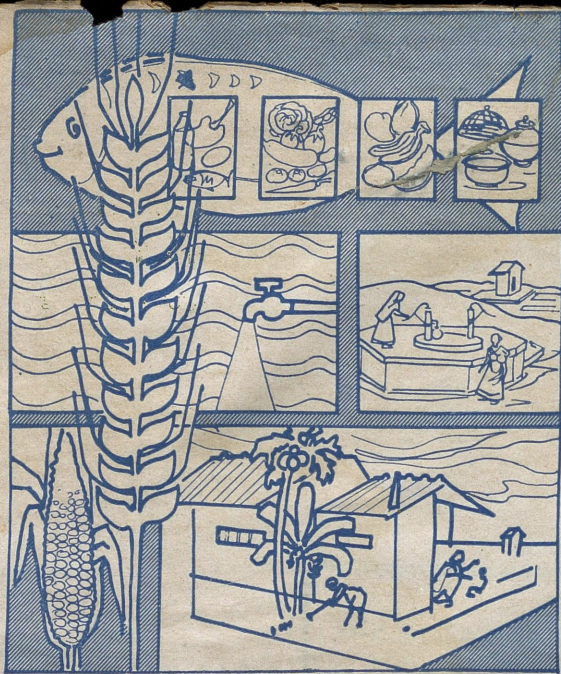
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**HEALTH
EDUCATION
NUMBER**

Health Education
is to help the
people to achieve
health by their
own actions and
efforts





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FAMILY LIFE EDUCATION IN INDIA

RECENTLY, a group was discussing some of the factors leading to difficulty in the family planning programme. One of my Indian colleagues ventured the idea that the lack of family life education programmes in schools and communities was, perhaps, an important consideration. He said that without acceptance by people of the goals oriented towards the future, we must, in family planning education, start "from scratch" in each new undertaking. I have thought about this. Is it true that there is no family life education programme in India? To answer yes or no, it is necessary to know what family life education is.

Defining Family Life Education

In my own country, the U.S.A., the professions that have worked the hardest to define family life education are the home economists, social workers, nurses, psychiatrists and child psychologists. Not only have they drawn a picture of the field in sweeping strokes, but also they have filled in the details indicating the responsibilities of each of us in our own professions. For, according to them, family life education is education for *living*. It focusses on the child and adult alike; it is a dynamic kind of education as its form must change as society changes; as values change; as the world brings its millions of people closer and closer to each other. Thus, in 1900 in the U.S.A., which was still a rural society, education for children and parents had far different goals than today in 1962.

But specifically what are the concerns of family life education? Would it be of interest to see how these goals have been stated in my land? They are objectives which we keep in mind in the education of both children and adults.

- (i) To help individuals develop a family milieu

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and the kind of community which will foster the health and happiness of all members of the family and all neighbours.

- (ii) To aid each person in recognizing the new ways of protecting life; new ideas of cooperative sharing and planning; to teach that the world is changing and that "change" may bring better living for all.
- (iii) To teach each family member to accept the responsibilities that are *his* simply because he is a member of a family group, a community group, a nation and of world.
- (iv) To help each person explore his own emotional relationships to the members of his family and to his work and living groups.
- (v) To nurture the very young that they may have a chance to grow physically and to use the creative energy which is theirs.
- (vi) To enrich personal and family life through active or passive participation in the arts, history and cultural traditions of their own country and of others.
- (vii) To help in clarifying the values essential to the stability of the culture and assessing the place of these values in individual conduct.
- (viii) To help the old and young alike to work through the conflicts which arise when "change" meets "old values" head on.

Home economists and other professional workers would have additional specific goals pertinent to their specific contributions to the "good life". But most of them would agree that many of the goals listed above are inherent in their daily work.

In India

By now, it is clear that India has indeed a family life education programme. Education towards this end is taking place everywhere. How interesting it

would be to listen to a staff meeting of maternal and child welfare workers in an urban or rural health centre. Which objectives is the physician seeking to further ; which the lady home visitor, the public health nurse, the social worker ? And what contributions to family life education is the sanitarian making ? Is there a public health worker in any department who does not have responsibility of seeing beyond his *immediate technical task* to the larger tasks of family and community education ? I think not.

But the public health family plays only a part in India's programme of family life education. Think of the contributions being made by community development organisation workers ; by the extension divisions of agriculture and education ; by every teacher in every part of India ; by the extended plan for nurseries and parent education of the social welfare board ; by the Red Cross and many other voluntary and official agencies whose names would make this article a directory rather than a sign post which says, "India is at work to bring a better life to its people".

No, the problem is not that India is doing little in family life education. The problem is how we can improve what is being done. Where are the areas in which nothing or little is being ventured ? What are the stumbling blocks to doing a *better* job ?

To an attempt to answer these questions I bring, naturally, the prejudices of my own background, that of a psychologist and public health educator. It would be exceedingly valuable to know how other disciplines and professions would, (i) see the needs, and (ii) propose solutions. Perhaps such help may be requested.

Basic Needs

The basic needs, as I see them, to strengthen the programme fall under three headings :

1. To coordinate the many activities at Central, State, District and block levels.
2. To define goals, and to introduce training for professional and auxiliary workers to prepare them to achieve the goals appropriate to their level of training.
3. To undertake research whose results will give sound bases for training of personnel and teaching of both adolescents and parents.

Let us take a brief look at each of these.

Coordination

I am sure that within every agency concerned with the welfare of people one would find written objectives and a list of the activities conducted towards meeting these objectives which bear on family life education. But I wonder if there exists a list of goals upon which a number of agencies agree. I wonder, too, if there have been opportunities for agency directors to say to each other, "*These* goals can be part of the work of our staff as well as of yours; *these* goals are outside our framework of operation." If such coordination and assumption of responsibility have taken place at the Centre, it is not always evident at State or block levels. One does not get the feeling that the workers in maternal and child welfare may be acquainted with the details of the programme or the personnel of the community development organisation who are working with families towards many of the same goals. One may see, too, little communication between public health educators and family planning officers or extension workers in agriculture and teacher education or the professional schools or the voluntary agencies. There are many reasons for the lack of communication and of joint planning between departments and agencies. Some of them are formidable. But a soundly based family life education programme will not be identifiable or in action until each agency knows what the other is doing and they supplement each other's efforts.

Goals and Training

As stated earlier, the goals for family life education which were listed earlier are those with which workers in the U.S.A. are fairly comfortable. That we are far from reaching them is true ; but an examination of the *objectives* of education to be found in many State Departments of Education ; the *objectives* of State Bureaux of Maternal and Child Health ; the objectives of the home economists working in both agriculture and secondary schools ; the *objectives* of scores of voluntary agencies will reflect these goals. And the training of workers for each agency is under continual change to incorporate psychiatric insights, and methods of working with people in personal interviews, in groups, and in classroom teaching, which will make the worker more sensitive to the needs of others and more effective. It is a long road.

And our efforts are spotty. But there is agreement as to where we want to go.

Does this agreement on goals exist in India? For the goals of each country in family life education must be unique and precious. They represent the aspirations for the future and the best of the cultural heritage. If these goals have been formulated then they need to be communicated to every agency in India whose staff is helping people; they need to be incorporated and implemented in the training of physicians, nurses, teachers, social workers and a host of other. And they must be implemented through action.

There is so much fine leadership in India at all levels of government. It matters little what person or which agency takes the initiative in bringing about the coordination, the goal-setting, and the explorations in training that are needed.

Perhaps, it will be done in the States by the Bureau of Health Education or the Bureau of Maternal Health and Child Welfare or by the growing Bureau of Family Planning. Or perhaps the Departments of Education or Community Development Organization or the Social Welfare Board will take the lead. It really doesn't matter.

What does matter is that gaps should be plugged; that inconsistencies be uncovered and that workers know for which parts of the programme they have major responsibilities. For example, in the U.S.A., it was found that a great vacuum existed in the education of adolescents in high schools and colleges as to their roles as members of their present families and as husbands and wives in future families of their own. Previous studies had shown that information about the physiology of reproduction and attitudes toward sex were learned early in life, usually erroneously, from friends and the overheard comments

of adults. The public schools in many places are now trying to fill this particular gap through teaching the facts and discussing the implications. This has brought with it the need for introducing in teacher's colleges special units of instruction for the future teachers.

Research

Teaching in any field cannot be better than the data which constitute the content of teaching. What data are now available in India on the myriad of problems in values, aspirations and responsibilities which parents of varying social classes hold for their children? Are there fundamental differences? Are these consistent with the economic and sociological changes that India is experiencing? What conflicts in roles do young men and women have? Do their aspirations differ from those of their parents? Are there common aspirations and values? How far do feelings of responsibility go for neighbours, village or city, state and nation? Are concepts of infant and child-care changing? To what degree can parents and young people work for "deferred rewards" rather than for immediate results? This is only a sampling of questions whose answers are needed before marriage counselling centres can really function, or work with parents and youth can be based on data as well as theory. A collation of all studies that have been done would be of much help to goal-setting committees and training centres. Suggestions for research to fill in gaps of knowledge would surely be welcomed by social scientists.

Family life education is a going and growing concern in India. My comments have been made only with the view of strengthening this concern. Coordinating the presently diverse efforts, agreeing to common goals, enriching the training of professional and auxiliary staff, and bringing together the research on family inter-relationships and aspirations are suggestions in this direction.



HEALTH EDUCATION IN THE ARMED FORCES

HEALTH is of paramount importance to a soldier, sailor and airman. On health alone depends his capacity to be trained and be fit to fight 24 hours a day and everyday in his career. It is not merely the absence of disease but the positive health capable of resisting extraordinary stresses and strains—physical, bacterial, nutritional, psychological or emotional and various privations—that is necessary in the case of service personnel. Preventive and social medicine in its modern concept, is, therefore, truly practised in the Armed Forces and the Armed Forces medical man is a true practitioner of social medicine.

Morbidity-rates in the Armed Forces have been constantly falling down during the post-War years. Much of the improvement in the health of the soldier, sailor and airman has been achieved hitherto by enforcement of orders and instructions leading to achievement and maintenance of healthy environment and, to some extent, habits. Endogenous efforts in maintaining high standards of environment and health habits have been assiduously made by the regimental administrator aided by exogenous efforts by the health services and sanitary staff. Fortunately, Armed Forces personnel are restricted communities, strictly bound by code of strict discipline and subject to obedience of orders and instructions, unlike the civilian population.

The improvement made through these methods is reflected in reduction of the morbidity rates due to communicable diseases as shown in the chart on the facing page.

Some diseases are conspicuously rare among the Armed Forces personnel, *e.g.*, typhoid, smallpox and cholera. Given all facilities, instructions and orders cannot achieve results beyond a limit unless the person himself acquires healthy habits and lives a healthy

Major S.Y. Bhagwat
Army Headquarters, New Delhi

life of his own freewill. The final result of all health education is to establish healthy habits as an integral part of the cultural pattern of people. This can only be achieved by education. For example, a person can be ordered to take TAB inoculation, to use the lavatory or not to enter an undesirable catering establishment but in order to make him wash his own hands before handling others' food or eating his own, requires conscious efforts by the person himself. This can be achieved only by education.

Health Education—Integrated Programme

Health education in the Armed Forces is an integrated programme included in the training of personnel. Each person in the Forces has to undergo three types of training schedules, the basic training as a soldier, sailor or airman, professional training and educational training.

On his achievements during these training assignments depend his advancement in his career. Health education is integrated in training programmes of all these training schedules.

The recruit gets his initial practice to live an organised community life. Coming from a village he may not be used to an organised community life—he may spit around, he may ease around, he may drink and eat wherever and whatever he likes and he may not be usually well-fed. He does not care for his personal hygiene and a good environmental sanitation to allow others to live a healthy life.

Having come to a training centre, he soon realises that in order to enjoy a full healthy life he has to abide by rules of hygiene. By putting himself under certain restrictions he himself lives a healthy life and allows his colleagues to do the same. He starts appreciating the inevitability and the benefits of being

subjected to restraints. He knows the value of being discrete regarding the type of food he eats, the place where he eats, the manner in which he eats and in general food hygiene. He gets an insight in the most fundamental rules of healthy living. He gets his vaccination, TAB and TT inoculations—probably for the first time in his life. These and other health regulations like the compulsion to carry and use a mosquito-net while on move, compulsion to visit only the approved catering shops, compulsion to use water from authorised sources and so on—which seem restrictions on personal liberties serve, as media to inculcate healthy habits unknowingly. The doctor, senior NCOs and his officers teach the soldier through incidental talks, elementary lectures, demonstrations, group discussions, etc., and by providing healthy surroundings and facilities for acquiring and practising healthy habits.

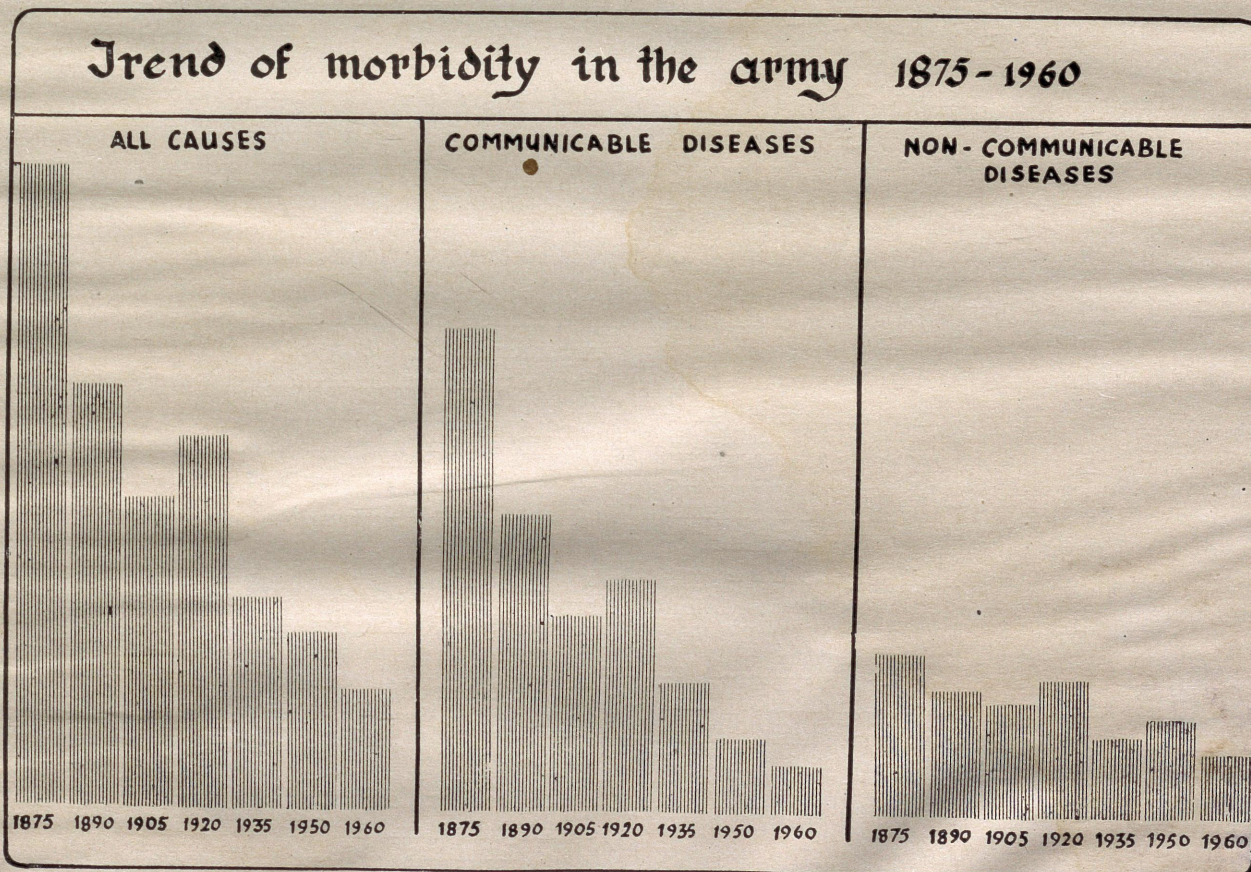
Role of Trained Soldier

By the time the recruit becomes a trained soldier he acquires healthy habits necessary for community

living. He is then influenced by the periodical talks from his seniors, officers and regimental doctor. By the time the sepoy becomes NCO, his knowledge and practice of healthy habits becomes quite mature.

As NCO, the soldier has to be responsible for the health and well-being of the men in his section. He has to be vigilant to see that no man disregards health precautions.

Some of the NCOs are called upon to perform special duties like a cook house NCO, water duty NCO, sanitation NCO, malaria NCO, sick report NCO and so on. They are trained for these duties through special instructions under the arrangement with station health organisations or field health sections. The sanitary duty NCOs are also responsible for the prompt and proper installation of field latrines, urinals, soakage pits, swill and rubbish bins, as soon as a camp is pitched. The special training given to them helps them in training others towards healthy living.



As JCO, the soldier's responsibility increases. He is responsible for the health of a larger number of troops. He has to look to the welfare of men under his charge or sub-charge. He is, therefore, further trained so as to make him better equipped to carry out his increased responsibilities.

The Station Health Organisation at each military station and the Army School of Health at Lucknow, organise exhaustive training courses for JCOs and junior officers. These courses deal with subjects like environmental sanitation, personal hygiene, health education, national and international health programmes and acquaint the trainees with fundamentals of modern concepts of positive and social health.

Each unit is supposed to have a sufficient number of officers, JCOs and NCOs trained in health and also to maintain a sufficient reserve. Units are responsible to carry out all environmental sanitation measures themselves with technical advice and aid from the Station Health Organisation.

The Army School of Health also conducts more advance courses of instruction on health for the officers. Senior officers undergo refresher courses from time to time. In field formations the training programmes include lectures, demonstrations and discussions on health subjects. For purposes of aiding the training, each Station Health Organisation and Field Health Section maintains a demonstration area for various sanitary amenities for use in the field as well as in peace stations. The units also maintain health museums.

Officers for their promotion in their careers have to qualify by regular courses and examinations on various military subjects; these include man-management, social psychology and health subjects. The Staff College at Wellington trains officers of all arms for staff duties. Health subjects find a place in the training here.

The National Defence College is intended for very advance training of senior officers from all arms of armed forces and also senior civilian officers. Here also, health subjects find a place.

Doctors in the Forces

Doctors commissioned in armed forces are further

trained at the Armed Forces Medical College initially. Refresher courses are given after 6-7 years. During these two training programmes, the medical officers get a thorough grounding and orientation for their role as practitioners of social medicine in the Forces. Besides these training courses, the College also trains specialists in social and preventive medicine, para-medical personnel for their work in the field of preventive medicine and health education.

The Army School of Health and the Armed Forces Medical College maintain museums/demonstration areas for field appliances on much larger and more exhaustive plans than the Station Health Organisations and Field Health Sections.

This article will not be complete unless an account is given of the method employed to disseminate the health gospel through the officer down to units. At each Station, Officers Commanding units assemble on a day in the month under the Chairmanship of the Station Commander to discuss the health of the troops and their families. Ways and means to improve their health are discussed and definite actions are decided upon by discussion. The senior medical officer acts as the adviser or resource person. The specialist in preventive and social medicine acts as the organising secretary of the group. This method has always paid dividends because the action decided upon is the voluntary decision of the whole group and not an order from a third party.

Other methods and media used for aiding these measures are the use of cinema films. The *jawan* is fond of pictures and it serves as an excellent medium to give him training in the right direction. Health Weeks are observed at all stations from time to time. These serve to focus the attention of the personnel and their families on the health problems in the Army.

This is the way our troops are kept healthy. More and more of the health measures are integrated in their daily life, more and more emphasis is being laid on self-education, self-discipline and self-help in matters of acquiring healthy habits; they are encouraged to realise felt needs, and demand appliances and services.

Health education in the Armed Forces is thus an integral system closely knitted in the whole pattern of the training schedule of its personnel.

Swasth Hind

SOME CONTRIBUTIONS AND LIMITATIONS OF BEHAVIOURAL SCIENCE IN PUBLIC HEALTH*

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THE recent convergence of interest between behavioural science and public health derives from two obvious, but fundamental, aspects of the nature of health and of public health activity:

- (i) Social and cultural behaviours are important factors in the etiology, prevalence, and distribution of many diseases. How people live, what they eat, what they believe, what they value, what technology they command are significant determinants of their individual and collective health.
- (ii) Public health is a social and cultural activity. Both its practitioners and the human targets of its services are, in their various interactions and transactions, fulfilling socially defined roles in culturally determined ways, and much of their behaviour is motivated, oriented, and constrained by the social and cultural contexts in which it occurs.

Public health thus must take account of certain types of behaviour that are also of concern to the behavioural sciences, and public health activity itself

consists of a complex of behaviours that are of intrinsic interest to behavioural scientists.

By a happy circumstance, public health has now come to a stage in its development where it is confronted with emerging problems involving social and cultural behaviours at a time when the behavioural sciences are beginning to have something to offer and a disposition to help make it available. As stated by the editors of the *American Journal of Public Health*: "Health workers agree generally that we are now in a period when the human factor must be taken into account if public health is to handle its problems successfully. Many of the areas of health with which public health is today concerned involve individual voluntary action on the part of many people. There is also an increasing awareness that attitudes, beliefs, motives affect the willingness and readiness of people to take voluntary action with respect to their own health or that of members of their families. . . . A central question of public health has become: Why do people behave as they do—why do they behave like human beings? And for answers to this question public health workers are turning increasingly to those sciences whose central concern is human behaviour and the conditions that affect and determine it—the social sciences"¹.

*Condensed from a paper prepared for the Institute on Behavioural Sciences and Public Health, Santa Monica, California, April 9-11, 1961.

The terms "public health" and "behavioural science" are used throughout this paper as if each denoted a distinguishable empirical entity. This, of course, is not so. Public health is a complex of professions and activities of considerable diversity; behavioural science is a convenient term for referring simultaneously to several academic disciplines that concern themselves with social, cultural, or mental behaviour. When public health is mentioned herein, it will refer to organized governmental activities that have as their object the protection and promotion of health among the population of a political unit. When behavioural science is used, the term will refer (as has become somewhat conventional) to the disciplines of cultural anthropology, sociology, and social psychology. Should a wider range of disciplines be indicated—e.g., economics, political science, social psychiatry—the term social science will be used.

¹Unsigned editorial, *American Journal of Public Health*, 49: 536 April 1959.

In the developing relationship of public health and behavioural science, there is a considerable potential for benefit for both groups. There are also some potential dangers and difficulties. The latter are not great, but they could be a source of disappointment and discouragement to those who permit their expectations of collaboration to become unrealistic.

Limitations of Collaboration between Public Health and Behavioural Science

For one thing, the two groups are differently oriented. Public health is an activity of practising professions. It is goal-oriented, programme-oriented, and service-oriented. It draws scientific knowledge from a number of disciplines and seeks to make application of that knowledge towards the amelioration or solution of practical problems. It is concerned with action, and its success is measured in terms of changes it is able to induce in the environment or in the knowledge, attitudes, behaviours, or health states of its publics. Its basic value premise is "health is good", and its ultimate goal is to protect and augment that good.

The behavioural sciences, on the other hand, are academic disciplines, not professions. They are knowledge-oriented, theory-oriented. They are concerned with study and research and their success is measured in terms of the scientific knowledge they produce. Their basic value premise is "knowledge is good", and their ultimate goal is to create more of that good.

These orientations are complementary. There is nothing in them that will necessarily prevent behavioural scientists and public health people from working fruitfully and harmoniously together. But they do suggest that there are certain limitations that influence collaborative relations.

Limitations of the Disciplines

A first limitation arises from the relatively narrow range of human behaviours behavioural scientists are interested in or competent to deal with. No behavioural scientist, as such, is concerned with behaviours on the molecular, cellular, tissue or organ levels of complexity. Rather, their interests are centred in those behaviours that derive from or can be identified with membership in social systems, the

possession of culture, or certain psychic structures and processes such as personality, learning, and motivation. A given behavioural scientist may be competent in one, but rarely in several disciplines. Since public health people are frequently interested in "total" behaviours cross-cutting personality, culture and social memberships, the competence individual behavioural scientists are able to bring may not always be broad enough for the problem at hand.

A second limitation lies in the general inability of behavioural scientists to predict or control the behaviour of individuals. Their interest and competence lie in understanding group behaviour, whereas it is often individual behaviour that public health is interested in and wants help with. It is a plausible hypothesis that in collaboration with public health workers the help available from behavioural science varies inversely with the specificity of the problem.

Another obvious limitation is the relatively undeveloped state of behavioural science knowledge. We have been observing people for much longer than we have been studying atoms but we probably know more about the behaviour of atoms than about the behaviour of people. There are still some who think that human behaviour is not amenable to scientific study. However, we are beginning to use in behavioural science the rigorous procedures and mathematical methods that have produced such spectacular results in the physical and biological sciences. The best of behavioural science is now approaching a high level of conceptual and methodological sophistication, and the quantity of output is exhibiting the same tendency towards exponential increase that has characterized other sciences. For all its recent gains, though, behavioural science knowledge is still limited. However, limited as it may be, it is the best knowledge we have in these areas and, as a guide to action, is more reliable than the commonsense procedures we so frequently use in attempting to understand or control social behaviour.

A final limitation in this category arises from the rigidity of human behaviour patterns. As anthropologists have long known, social and cultural behaviour patterns are interlocked into larger systems in such a way that change in one area often produces or requires change in another. Spontaneous social and cultural change is constantly occurring as a result

of the dynamic interplay between people and their human and physical environments, but directed or planned change, such as public health is interested in inducing, is hard to achieve.

Limitations in the People

A second category of limitations is to be found in differences between the people who work in each field. Relatively few public health people have had extensive training in behavioural science, and relatively few behavioural scientists have had much professional exposure to public health. Thus, each is likely to bring to the collaborative situation some lack of understanding of the other.

For the behavioural scientist to work effectively on a public health team, George Foster has pointed out, he must not only see how his work makes a contribution to knowledge, but he must also be able to find satisfaction in seeing public health goals achieved, and must have an understanding and appreciation of the values that orient the work of his public health colleagues. For their part, public health workers must know something of the values of the behavioural scientist and "must realize that he is judged by his associates by different standards than they, and that if these standards cannot be met, he will be a frustrated and dissatisfied team-mate, however well prepared he otherwise is."²

Limitations Resulting from the Nature of the Collaborative Situation

Any multi-disciplinary collaboration is subject to difficulties resulting from differences in concepts, language, working methods, and objectives. Specific to the relationship between behavioural science and public health are at least three problem areas that can be mentioned.

1. One is the relatively unstructured position of the behavioural scientist who works in public health. There is not much question about where physicians, nurses, sanitarians, health educators, nutritionists fit into the pattern of public health activity, but there is not the same consensus about where a behavioural scientist belongs or what he does. The behavioural scientist who goes into public health runs the risk of being himself confused and becoming

a source of confusion for others. There are things a behavioural scientist is competent at, and thinks he is not. Unless these areas are clearly understood by both himself and others and used as the basis for fitting him into the organizational structure, he runs the danger of becoming anything from a general handyman to an esoteric hermit dealing in mysteries and speaking a language that no-one else understands.

2. Another limitation lies in problems of the application of knowledge. Behavioural scientists, on the whole, have perhaps not been good at and not much interested in practical applications of their knowledge. Some may even give an impression of aloofness towards research problems growing out of practical needs. But if this has been true, the situation is probably changing. Behavioural scientists are coming to accept the idea that it is reasonable and legitimate for others to expect that the knowledge they produce will have practical applications. A respectable number are engaged in or have completed studies relating to immediate action problems. There will continue to be a substantial proportion of behavioural scientists uninterested in practical problems and many also uninterested in health. But more, particularly among the younger social scientists, are coming to be concerned with both.

3. A final limiting factor is that arising from the fact that in collaborative efforts, public health people or programmes become the *object* of study as well as an *agent* of study. Behavioural scientists who study efforts to influence behaviour generally think that to understand their problems they have to look at the innovating agency or programme as well as at the target population. They tend to see effective influence as something resulting from the interactions and transactions of two groups rather than as something that can be understood wholly in terms of the internal dynamics of one. Again, to quote George Foster: "This makes the work more difficult not just because there are twice as many variables, but because of the emotional element that enters the picture. The professional worker in an action program has little difficulty in seeing that the culture of the group with which he is working will determine how people react to him. He can see that patterns of authority and concepts of role in the

²George Foster, "Public Health and Behavioral Science: The Problems of Teamwork". Paper presented at the 1960 Annual Meeting of the Western Branch, American Public Health Association Denver, May 23-26, 1960. Mimeographed.

client group will affect the way in which he must direct messages or ask for cooperation... It is not so easy for us to accept the fact that an understanding of *our* attitudes, values, and motivations—which we pretty much take for granted—is just as important in successfully bringing about change. It is sometimes painful to realize that we accept implicitly assumptions that have little validity beyond tradition, that much of our work is program-oriented, based on what we have learned and accepted uncritically, rather than problem-oriented, tailored to the job that faces us.³

Contributions of Behavioural Science to Public Health

Despite these limitations—and the many that have not been mentioned—behavioural scientists can and do contribute to public health. Their contributions come from two sources—*knowledge* generated by behavioural science disciplines and *activities* of behavioural scientists. They take the form of substantive knowledge, research methods and techniques, and what might be called perspectives; and they occur mainly in the three broad and familiar fields of teaching, service and research.

Behavioural scientists are studying a great many things of considerable interest to public health. They have, in the words of Reader and Goss, “given fruitful attention to the growing place of medicine and medical practice in the social system of the Western world, and to the different attitudes and values which various segments of the population have toward health, illness, and medical care. They have made noteworthy advances in mapping out the social organization of health personnel; the social structure and functioning of hospitals have been studied to advantage, as have the social roles played by patients and health personnel as they interact in different settings. They have paid particular attention to the situation of health personnel who are professionals, and to the social processes through which these persons acquire the outlook, standards and competence considered necessary for providing satisfactory professional service. They have also undertaken investigations which relate various social and psychological factors to different kinds of disease in patients as well as to the course of certain diseases”⁴. Sociological studies turn up findings that are potenti-

ally useful to public health even though the investigators may not have had any conscious concern with health.

Behavioural science people can be used in a number of ways short of formal collaboration or employment in health agencies. Conferences can provide for an exchange of information and opinions; some social scientists may be receptive to invitations to present their work or their ideas at public health meetings; some may be willing, if asked, to review work being done in their fields of interest or to provide information or advice about substantive or procedural question. One valuable contribution that is available to almost any health department near a college or university with departments of behavioural science is consultive help in precisely formulating objectives, goals, and procedures in research, demonstration or service programmes concerned with social behaviour.

In the field of teaching there is not much going on yet in India. But in the United States, at least half the schools of public health have behavioural scientists actively engaged in teaching their disciplines; schools of nursing, particularly collegiate schools, are increasingly offering social science content in their curricula; and a number of schools of medicine, particularly in their departments of psychiatry and preventive medicine, use social scientists in their teaching. Public health personnel thus have a triple opportunity to acquire some formal training in behavioural science as part of their regular study programme: in their undergraduate course of study; during their primary professional training; and in a school of public health.

Behavioural science contributions to service programmes are perhaps best made indirectly through research. There is little in the training of behavioural scientists that would make them adept at assisting directly with the giving of health services. Some fairly direct help can perhaps be given through studies of programmes and evaluations of what goes on in public health programmes and what they accomplish. Slightly less direct are studies of the organization of public health agencies and the possible effects of internal structure on service programmes.

³ George Foster, *op. cit.*, p. 11.

⁴ George G. Reader and Mary E. W. Goss, “The Sociology of Medicine” in Robert K. Merton, Leonard Broom, and Leonard Cottrell Jr., eds., *Sociology Today: Problems and Prospects*. New York, Basic Books, 1959. pp. 233-235.

Contributions can also be made through research on the social, cultural, or psychological characteristics of target populations and on the relations of these populations with public health people.

In considering contributions of behavioural science to public health it must not be forgotten that the inter-change is not one of unilateral benefit. Behavioural science and its practitioners profit tremendously from the association. Enhanced prestige in the scientific community; the satisfactions of being loved, wanted, and needed; more readily available funds for research; a testing ground for the empirical trial of their knowledge and theories; easier access to human materials for research purposes; a wider range

of job opportunities; and even increased salaries are some of the forms their benefits take. One broad contribution to the course of science in general lies in the fact that public health and medicine provide a meeting ground for the biological and social aspects of behaviour where problems are frequently of such nature that somatic, psychic, and socio-cultural aspects of behaviour are all relevant. The awareness of a need to attend to all three of these areas simultaneously may provide an opportunity—even a necessity—to move more surely and more rapidly towards the development of the factual and theoretical knowledge that will make possible a unified approach to and understanding of human behaviour.

WHAT IS THE INTERNATIONAL UNION FOR HEALTH EDUCATION

The International Union for Health Education is a world-wide organization seeking to promote better health through education. Founded in 1951 in Paris, France, the IUHE collaborates closely with the World Health Organization with which it is in official relationship. The Union's aims are:

- To provide an effective bond to link together organizations and people working in the field of health education, and to enable them to pool their experience and knowledge
- To stimulate and facilitate health education activities
- To provide an international clearing house for the exchange of practical information on developments in health education
- To promote research into the most effective methods and techniques in health education
- To promote professional training in health education for health workers, teachers, social workers and others
- To provide through international conferences and regional seminars opportunities for study and constructive discussion on the promotion of health through education

Its programme includes

- Calling an International Conference on Health Education every three years
- Organizing regional seminars on specific health education problems
- Publishing the *International Journal of Health Education* quarterly in English and French
- Studies by its standing committees, including committees on research and professional training in health education
- Use of consultants, drawn from among health education leaders in the various areas of the world
- Provision of selected lists of publications, studies, articles and audio-visual learning aids
- Promotion of the organization and work of national health education councils.

HEALTH EDUCATION FIELD STUDY AND DEMONSTRATION CENTRE IN UTTAR PRADESH

THE scheme for the establishment of a State Health Education Bureau in each State enjoined the institution of a Field Study and Demonstration Centre as one of its important limbs. These centres are to be the field laboratories in which the most effective methods and media of health education can be developed for wider application. The Central plan has laid down the following scope of activities in these centres :

- (i) To develop the Centre as a pivot round which various health education problems are investigated and activities tried, tested and developed. (This would include survey of present knowledge, attitudes, beliefs and practices of people regarding health and sickness and collection of such baseline data as a part of pre-evaluation or post-programme evaluation as would be helpful to health education programmes, etc).
- (ii) To find out the most suitable, effective and economical methods and media of health education which are sustained by the various local socio-economic factors as related to health and disease.
- (iii) To develop the Centre to serve as a field training area in health education.
- (iv) To develop the Centre as an appraisal area and also utilise it as a laboratory to establish scales of measurement and standards.
- (v) To develop the Centre so that after some years it may be able to develop programmes which would demonstrate the utility of

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educational approach in solving public health problems.

Selection of a Centre

The Central plan suggests the establishment of one or more centres in each State depending upon its needs and its varying cultural, social, religious or administrative patterns. Evidently studies in rural areas can bring out findings different from those in urban areas and thus the application of these findings cannot suit every type of area. The Central plan also suggests the establishment of the Centre in an area covering two community development blocks, preferably the one where a local medical college may have established a rural health centre as a part of their activities in the field of social and preventive medicine.

The scheme for the expansion of the Uttar Pradesh State Health Education Bureau (established in 1920 as the first of its type in the country) according to the Central plan was accepted by the end of 1960. Recruitment of suitable staff with aptitude for health education took considerable time. Once some staff had been recruited, it became imperative to train them in the methods and techniques of health education so that they could effectively develop their activities in the various sections of the Bureau. Side by side with this training programme, the selection of a community development block was started. The district medical officer of health, the district planning officer and other health and social workers of Lucknow district were contacted to help select a block on the basis of the following criteria.

- (i) The block should be located close to the

Health Education Bureau and should be easily approachable during all parts of the year.

- (ii) To begin with only one block may be selected and as the staff gains experience, their activities may be extended to another block.
- (iii) The block should have a primary health centre with full staff eager and willing to extend maximum cooperation in the promotion of the Demonstration Centre's programmes. They should be interested in health education and have some record of activity to show that they have been doing something in that field.
- (iv) The development staff of the block, particularly the block development officer, his assistant development officer (social education) and village level workers, etc., should be interested and willing to extend cooperation.
- (v) The experience of health and social welfare workers in the villages within the block should be encouraging as far as eagerness and willing cooperation of villagers are concerned.

The above criteria were based on the feeling that some foci or nuclei of interest in health education and of willing cooperation should be evidenced among the workers and the village leaders in one of the nearby blocks. The staff of the Bureau made repeated contacts with several people in various blocks and finally it was decided to select Gosaingunj Block located 16 miles away from Lucknow to be the Field Study and Demonstration Centre of the Bureau. Similar criteria and procedures have been subsequently employed in selecting villages within Gosaingunj Block where health education programmes have since been carried out.

Staff

The following table shows the staff provided in the Central Plan for a Field Study and Demonstration Centre, and the staff in position to date in the Bureau.

May 1962

STAFF OF THE FIELD STUDY & DEMONSTRATION CENTRE

<i>Designation</i>	<i>Provided in Central Plan</i>	<i>Sanctioned by Govt. & appointed</i>
Medical officer of health	One	One
Public health nurse	One	None
Home science assistant	One	None
Sanitary inspector	One	One
Teaching assistant	One	None
Social Worker	One	One
Steno-typist	One	One
Upper division clerk	One	One
Lower division clerk	One	One
Driver	One	None
Peons	Three	Three

The staff has been given intensive training by the author and the WHO Health Educator. The Centre itself, which had been selected by then, was used for field training of this newly-recruited staff, including the sociologist of the Bureau, and four of the five health educators working in the five Pilot Health Education Units at different (selected) places in the State. The medical officer of health in charge of this Centre, after his initial orientation in health education has now been deputed to the All-India Institute of Hygiene and Public Health, Calcutta, for the Certificate Course in Health Education. Earlier, during the training programme of the rest of the staff he was involved to develop, conduct and participate in each of its phases, and gained experience in the Centre.

The staff of the Centre has since been required to stay in Lucknow for the time being till some suitable building for their living and office accommodation are available at Gosaingunj, the headquarters of the selected block. They are now required to visit the block at least four times a month, each time staying in the villages or at the block headquarters for at least four to five days at a time. The value of staying among villagers and developing relationship as well as promoting acceptance of their services among village people is recognized.

Centre As Training Field

One of the main purposes behind the

establishment of the Centre is to provide health education experiences to workers in health and related fields. To develop programmes on those lines is, therefore, necessary and from the very start, the Gosaingunj block has been used for pre-service training of the newly-recruited staff of the Bureau and for in-service training of the health educators working in the Pilot Health Education Units as pointed out above. The experiences provided to the staff in this training centre are enumerated below :

- (i) Establishing contacts and relationships with governmental, semi-governmental and voluntary agencies, including various community organisations.
- (ii) Organising staff meetings and providing learning situations in these meetings for the members of the staff of the Primary Health Centre at Gosaingunj.
- (iii) Recognizing the need for and establishing contacts with village leaders and developing health discussion groups preparing for group discussions and their evaluation.
- (iv) Conducting individual interviews for attitude surveys on various health topics (the topics studied were : causation of disease, factors responsible for keeping healthy, smallpox, nutrition, family planning, disposal of human waste, services rendered by a primary health centre, a post-evaluation study of smokeless *chulhas*, etc).
- (v) Evaluating the effectiveness of various methods in health education, *viz.*, individual interviews, group discussions and mass communication through lectures to a group of students in several schools (among groups of students).
- (vi) Organising a visit by a group of village leaders to the Primary Health Centre and holding a meeting of this group members of the staff of the Centre followed up by an evaluation discussion in the village sometime after the visit.
- (vii) Evaluating effectiveness of material like posters, pamphlets and films as media of communication.
- (viii) To compare the effectiveness of communication through material like posters in a mass display, pamphlets through general distribu-

tion and films in exhibition and their effectiveness in an organised group of village leaders.

- (ix) Developing small health exhibits for display at the primary health centre.

Combined with various other projects and learning experiences provided in the Bureau itself, the experiences gained by the trainees in the block area were of great value.

The Department of Sociology and Social Work in the University of Lucknow approached the Bureau for providing learning experiences in the field of health education for two students of the Master's Course for an entire academic session. After suitable training, these students were allotted projects in school health education in a village along the following lines :

- (i) to establish contacts with teachers in a school and create interest in them for school health programmes, including school health education.
- (ii) to develop and organize a school health council composed of students and teachers.
- (iii) to organize group discussions among students on health matters through school teachers.
- (iv) to organize a Junior Red Cross Group and to develop and help conduct such programmes as would achieve the objectives of Junior Red Cross, *viz.*, promotion of health services to others and international friendship. Greater stress was, however, to be laid on promotion of health and the members of the group were to be engaged in various health activities in the classroom, school and the community.
- (v) to develop and organise a parent-teacher association in the school and create interest in the body and its members for the health of the school-going children. (It has been the idea of the Bureau to let the staff of the field study and demonstration centre carry on these activities after the departure of the students).

Centre as Resource

As a result of establishment of close contacts between the staff of the Demonstration Centre and the

Primary Health Centre and consequent to discussion with health educators of the Pilot Health Education Units, it was decided that the best way to promote a health education programme at the periphery would be to help the staff of the primary health centres to integrate the methods and techniques of health education in their day-to-day activities. The duties of this staff were, therefore, analysed and opportunities and scope for health education in these activities were explored. Consequently, the staff of the Field Study and Demonstration Centre of the Bureau is now involved in developing health education programmes in close collaboration with the staff of the Primary Health Centre at Gosaingunj and is helping them to recognize opportunities and scope for health education in their jobs. In this regard, the association of the Bureau's staff with that of the Primary Health Centre is proving meaningful.

Democratic Decentralisation

In the process of democratic decentralisation, the village Panchayats or *Gram Sabhas* are now the peripheral administrative units. Each *Gram Sabha* is designed to have two sub-committees—viz., the *Krishi Tatha Utpadan Upsamiti* and the *Upkalyan Samiti*. The latter is concerned with the subject of health and one of the members of this *Upsamiti* is assigned the portfolio of health. For overall purposes, he is the "peripheral Minister of Health" and one who would initiate health programmes within a *Gram Sabha*. The grant for public health works available with a block advisory committee has now been given over to the *Gram Sabhas* for spending on any project they decide on. Never before has the need for health education been felt so much as now because unless the members of these *Gram Sabhas* or a their *Upkalyan Samities* feel the need and take interest in health programmes, these funds may well be utilised by them for anything but public health. Also, at most of the places, these *Upkalyan Samities* may be existing only on paper and have not yet started functioning. It has, therefore, been decided to activate one or two *Upkalyan Samities* and provide them experiences that

would develop within them an interest in the field of health leading to action programmes based on their own needs.

The staff of the Field Study Centre has, therefore, involved itself thoroughly in activating two *Upkalyan Samities* in Gosaingunj Block and considerable progress has been achieved in the reorganisation of these Samities.

Considerable educational material is being produced by the Bureau to meet an ever-increasing demand. It is presently not possible to pretest and evaluate all the material produced. Yet opportunities are being utilised in pretesting some of the material under production through the staff of the Centre. The Centre is, therefore, becoming a real field laboratory of the Bureau.

In Conclusion

The experiences gained in the Field Study and Demonstration Centre are of great value in developing health education programmes in the State and as the activities under operation develop further it would be possible to use these centres more effectively for demonstration and training purposes. The Bureau has yet to recruit its full staff, particularly for the Demonstration Centre. Supplies have yet to be received from UNICEF through the Government of India. Lack of transport facilities to and from the Centre to carry a variety of trainees with whom the Bureau deals with for field demonstration and lack of buildings will be a handicap till these are available. The progress so far achieved is helpful though not spectacular. However, experience of short duration has at least shown the path along which these centres may organise their activities. Also, the value of these centres is showing up more clearly. Establishment of more of these centres in different rural and urban areas of the State depending upon the local cultural, social, religious and administrative pattern in a vast State like Uttar Pradesh, is desirable. Only through these centres can sound health education programmes be developed for the people and for the health services.



PANEL DISCUSSION— AN ADULT EDUCATIONAL METHOD

WE are all aware of the need for more knowledge—the more we know the more likely we are to analyse carefully the situations which affect us and others with whom we must live and work with and thus reach intelligent conclusions which contribute to our happiness and well-being as well as that of our fellowmen.

In our daily social life, we talk, discuss and work in face-to-face groups—"The face-to-face group working on a problem is the meeting ground of individual personality and society. It is in the group that personality is modified and socialized. It is through the working of groups that society is changed and adapted to its times—These two processes are not separate; they are merely two aspects of the same phenomenon"¹. But the extent of personal growth and social change differs from group to group and is determined by its leadership.

Effective leadership understands and promotes these processes, recognises that every group has objectives to be achieved; that it has to organise itself and pool and utilize the resources of its members to achieve these purposes and that its members have to share their experiences and act according to their own private worlds.

The goal of effective leadership is to encourage behaviours that would lead to the solutions of these fundamental problems. Public health education needs such a leadership. To develop such leadership certain acquired techniques and devices are necessary. These techniques and devices are relatively simple.

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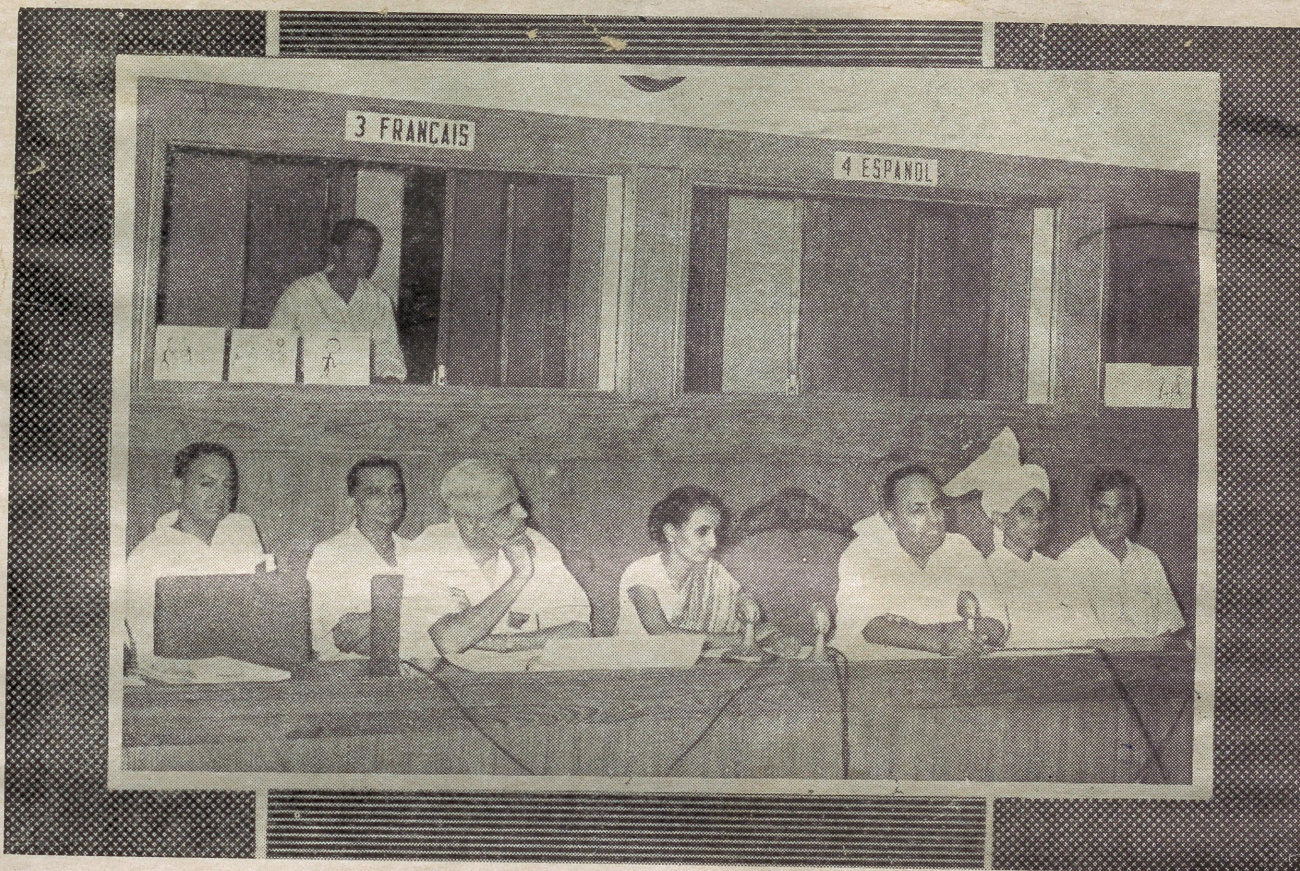
With some practice, an average person can become proficient in methods of leadership and can become a valuable asset for community health education.

Community health education is concerned with school health education and to a large extent with adult health education. Adult education differs from school education in that much of it is conducted in an informal fashion. Adults respond well to informality and they have usually more to offer to the group than younger students. Adult groups are enriched by contributions of the leader and of each individual member. Adults enjoy participation and one must learn to accomplish this effectively.

In addition to understanding some of the techniques of leadership, there are a number of devices which can be used effectively in adult educational activities. Some devices are formalised techniques such as speech and symposium and are used when a formal presentation is indicated. Other devices, such as group discussions and forums are rather informal. Panel discussion is one of such informal group methods and is discussed in the following paragraphs.

What is Panel Discussion?

Panel discussion is a conversation among several people, usually four to eight, held in front of a large group. It is usually said that discussion is spontaneous and natural. Some authors have even stated that the discussion is unrehearsed. But Thelen states: "When a panel does have spontaneity and interest, which is rather seldom, it is because it is carefully



Discussion on draft syllabus on health education for primary school children.

planned and rehearsed"². Bergevin and Morris also agree with the above view and state that panel members hold a preliminary planning meeting, prepare the material on the subject and along with the moderator, agree upon the method and plan of presentation. Experience in this field has confirmed the view expressed by Thelen and others. Panel discussion can be an extremely effective method of education provided it is properly planned and guided. The audience also participates in the discussion, and the moderator or chairman at the end summarizes the discussion. Some workers call panel discussion as panel-forum.²

Purposes

The purposes of a panel discussion are :

- I. To reveal and present.
 - (i) Different aspects of a problem.
 - (ii) different points of view of the experts

when these points of view get into conflict the audience gets drawn into the discussion. There is one drawback in this conflict of views, namely, the interest of the audience may be for the personalities rather than on the merits of the argument.

- (iii) Open up issues, clarify questions and present ideas in an interesting and stimulating manner. But if the leader is not careful, the panel may block any questioning from the audience by :
 - (a) Over-whelming the audience with its vast experience and prestige.
 - (b) Exhausting the subject by not leaving any question to be answered.
 - (c) Boring the audience.
- II. To stimulate clear thinking and expression.

- III. To create audience interest in the issues.
- IV. To promote free interchange of opinions through speech among the audience.
- V. To dispel fear and shyness about participation in a group.

Personnel Involved

The personnel involved in a panel discussion are mentioned below with a brief account of their part.

The chairman presides over the discussion meeting and he should be a man of experience with ability to plan and work out the details of the meeting. He should be intelligent, and should have a sense of humour.

The moderator is a person who conducts and directs the panel discussion and acts as a mediator for panel members. He should be skilled in the techniques of handling an audience and stimulating group participation. (Sometimes, the chairman of the meeting also acts as a moderator.)

The panel members are usually four to eight in number and are carefully selected for their particular interest and knowledge of the subject for discussion. There should at least be one member in the panel who should be able to answer all the questions on the subject.

The audience is usually composed of individuals interested in the subject, but their intellectual level and keenness of interest will vary. It is, therefore, absolutely essential that the content of the panel discussion should be couched in a language that is easily understood by the audience and pertains to their interests and needs.

Procedure

BEFORE THE MEETING

1. After the problem has been chosen and the method for its discussion is decided, the chairman considers what the panel discussion is likely to accomplish and what more will be needed to achieve the solution of the problem.
2. He then plans the requirements of the panel discussion and the different roles in the panel and selects suitable panel members for these roles and a moderator.

3. He gets the panel members together for a rehearsal. The panel discusses the outline and organization of the discussion and defines each panel member's approach to each point (method and plan of presentation). The panel members may also decide any signals to be used to get the moderator's attention to laying re-emphasis on a point.
4. The moderator who is going to direct and conduct the panel discussion, may prepare a final outline and distribute to each panel member indicating the time limit for their speeches.

AT THE MEETING

The Chairman plans the meeting and makes all the necessary arrangements. He starts the meeting at the scheduled time, welcomes the group and introduces the moderator and the panel members, and when the panel discussion is over, closes the meeting.

The moderator introduces the topic to the audience and explains the nature of the programme including the procedure to be followed. He leads and coordinates the discussion presented by panel members. He elicits information by suitable questions, makes clarifications, helps members to contribute their best, and then summarizes. He creates an atmosphere of goodwill, ease and informality. His chief role is helpfulness, unobstructive guidance and interpretation. He never makes an attempt to impress the audience and never forces the acceptance of his opinions.

Specific Duties of Moderator

In short, the specific duties of the moderator are as follows :

- (i) He should focus the attention of the panel and the audience on a point long enough so that it is understood and assimilated. He achieves this by repeating, reformulating or by exemplifying.
- (ii) He should select and remember significant contributions and weave them to indicate a progress sequence and a design to reflect combined thinking of the group.
- (iii) He should keep the discussion moving by suggestions, questions and summaries.

- (iv) He should redirect the discussion when it unwittingly goes off the point.
- (v) He should be alert to detect and then handle emotional clashes and tensions by humour and transition.
- (vi) He should avoid taking sides and talking too much.
- (vii) He should recognise the one who has not spoken and should encourage his participation.
- (viii) He should decide when the subject is sufficiently developed and when the groundwork for audience participation has been laid.
- (ix) He has to maintain in the discussion the spirit and method of panel discussion.
- (x) He has to stop the meeting before it runs down, and
- (xi) Must present a general summary or provide for one by another member. The summary should run like this.
 ("This is the problem. This is what we think about the problem. This is what we are agreed upon. These are the matters that require further consideration.")

Finally, the moderator turns the meeting back to the chairman. If the moderator also acts as a chairman he himself closes the meeting.

Panel members should talk intelligently and courteously and should be loud enough to be heard by the audience. They should keep to the point being discussed and should not digress. Each member should stick to the time schedule when talking (two to three minutes). They should try to develop and maintain a friendly atmosphere.

The audience should come prepared to the meeting after reading the available material on the topic. They should also extend common courtesies to the panel members and the moderator.

The topic for discussion should be one that offers opportunity for a variety of approaches and opinions and about which some clearcut issues may emerge.

Advantages

Panel discussion helps the audience to gain new

insights and better understanding of the many shadings of a problem or situation. It helps to clarify issues and to suggest directions for further study and action. In a well-conducted panel discussion, the audience is likely to identify itself with one and then with another panel participants. A group of individuals often interest an audience more than one individual. It gives opportunity to the audience to participate and talk back. The panel discussion is a safeguard against formal speeches and it provides valuable educational experiences in an informal and friendly atmosphere.

Limitations

In spite of its many advantages it is not without limitations. They are as follows :

- (i) The time limit curbs fuller audience participation and does not allow panel members to defend themselves by counter arguments.
- (ii) Its success depends on the skill of the moderator and the prior preparation of the panel members.
- (iii) Arguments and counter-arguments may change the panel discussion into a debate.
- (iv) Timid and shy persons do not participate and aggressive extroverts may monopolise the discussion.
- (v) There is a tendency for panel members to wander away from the topic at issue.

It may be stated that the panel discussion is only a device. It is not a substitute for brain or thought. It may result in exposure of loose and confused thoughts by individuals unaccustomed to being challenged and may lead to confusion.

To summarise, the panel discussion has the following outlines :

Chairman	—	One
Moderator	—	One
Participants		Four to Eight
Points of view of panel members.	—	Individual.
Time for panel speakers.	—	Half to one hour.
Time for audience participation	—	Half-an-hour.
Speakers	—	All (Members).

- Panel members — They may or may not be experts, but should be well-qualified to speak on the subject. There should be at least one member who can answer any question that may arise (failures to answer may demoralise the meeting). Selection of the members should be such that members do not divide evenly on the main issue and turn the panel into a debate.
- Speeches — No-one makes a long speech (but only for two to three minutes).

The talk should be simple, clear and to the point.

Summary—The moderator at the end summarises in such a way that the audience is clear as to just where the panel is leaving the topic and what should be the next activity.

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Many of the principles we have been using in health education might be questioned as to whether they can be dignified by the term "principle". To me a principle has more meaning if it is stated as a hypothesis—a hypothesis which has been tested and lends itself to further testing. Thus many of the principles in current use might better be called maxims. They are simple tools like the shovel and the hoe and some of them are losing their edge for effective work because inherently they offer no guide lines as to when or how the tool should be used. For example, "learn by doing," "start where people are," "involve all the people", etc., may be good tools but what do they mean? How useful, as they stand, are they in community diagnosis, programme planning or programme evaluation? It has become increasingly evident that we who are practitioners in health education must have not tools but tested hypotheses to guide us in what is rapidly becoming a social engineering job. The practitioner needs basic concepts to help him in the diagnosis of a situation and concepts which enable him to develop and use methods appropriate to the diagnosis.

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SCHOOL HEALTH EDUCATION PROJECT

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IN India a very significant project has been conducted by the Ministry of Health in cooperation with the Ministry of Education aimed especially at the improvement of the health of school-age children. While health and education are State subjects, the Centre is expected to give leadership and assistance to the States in these matters. It was with this object in view that leaders in the Ministry of Health and Ministry of Education, with the assistance of WHO, initiated the cooperative project.

Important work had already been done prior to the commencement of the project itself. A joint committee in health education/nutrition education had been formed in 1956 by Ministry of Education, according to suggestions of the delegation returning from WHO/FAO Baguio Conference in 1955. The Ministry of Health had drawn up a plan for development of the Central Health Education Bureau and for State bureaux with provision in each for a school health education unit.

Joint Activities

Before discussing details in development of the project, it is necessary to comment briefly on the significance of joint activities in connection with health education in schools. Reports by three WHO Expert Committees have given importance to joint activities between the school personnel and the public health personnel. The Expert Committee on School Health Services stated that "health services for children of this (school-age) group are usually organised in cooperation with the school system". The Expert Committee on Health Education of the Public stated that "Public health and education agencies can help to advance health education by preparing qualified leaders to train teachers for their health education responsibilities. Cooperative relationships of the

school personnel and community public health worker; and the value of working together as members of a team should be experienced by the student teacher while still in college." The report of the Joint WHO/UNESCO Committee on Teacher Preparation for Health Education by its very title gives importance to the joint efforts of health and education at the International level. In this report it is stated: "The growing tendency for education authorities to look to health authorities and closely related agencies for cooperation in planning and carrying out the preparation for teachers is commended, and its extension is urged. In some countries advisory councils have been formed, composed of representatives of government departments."

WHO and UNESCO at the International level have jointly undertaken a project to prepare a guide for use by governments in planning for health education in schools and teacher training. Information about the work done in India in this respect was utilised in preparation of the preliminary document for this guide.

Important Accomplishment

An important accomplishment of the project in India was the establishment of the School Health Education Section in the Central Health Education Bureau having responsibility in all aspects of health education in schools and teacher training. Proposals were made for further development during the Third Five Year Plan and the head of the Section went for fellowship study in health education.

The School Health Education Section is organised as an integral part of the Central Health Education Bureau now comprising training, media, research and evaluation divisions in addition to administrative

section. Activities of the School Health Education Section are planned in consideration of work of these various divisions and in cooperation with education personnel.

A few of the more important activities undertaken will be discussed here. Early in the project, cooperative activity was developed with the Subcommittee of the Joint Committee on Health Education/Nutrition Education in the development of draft syllabi in health education. A survey, conducted as part of this work, showed that many health topics were already included in syllabi in use in schools and teacher training. The need to make the teaching more practical and related to the life of the child in the home and community was also reviewed. Utilizing these findings and the plan made by the joint committee, draft syllabi for ages 6-11, 11-14, 14-17 and for teacher training were prepared with sections

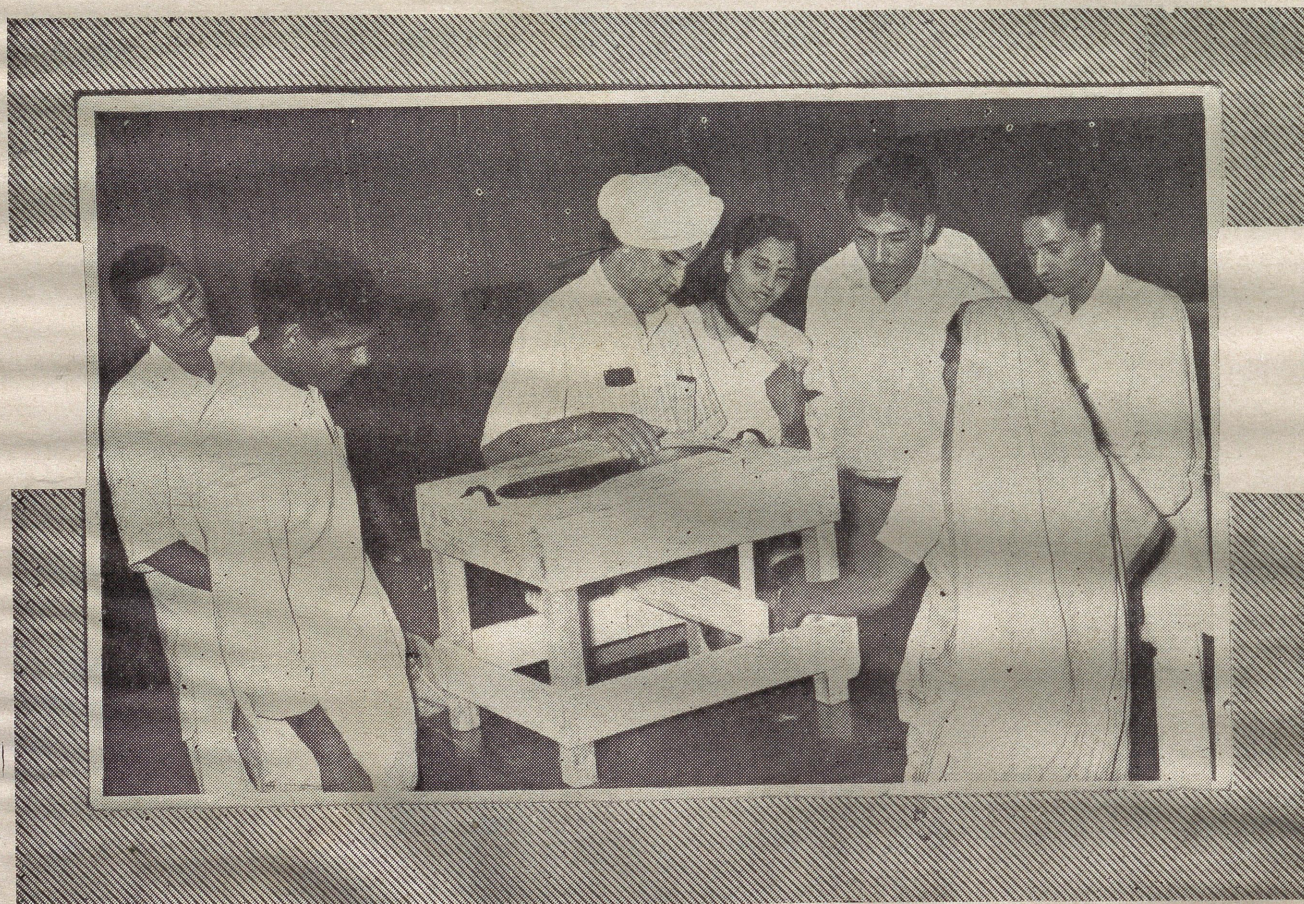
on what the student should know and what health practices he should follow.

Draft Syllabi

In order to enlist the attention and help of many leaders, as well as to get additional information for these courses of study, draft syllabi for ages 6-11 and for teacher training, were circulated by the Ministry of Education to State Governments, teacher training colleges and universities. Information gleaned from more than 100 replies was used in revision of the drafts. Later, preliminary drafts were made for age-groups 11-14, 14-17 and also circulated by Ministry of Education to State Governments, teacher training colleges and to 54 extension departments attached to teacher training colleges. Further revision will be made on basis of information received.

Additionally, many professional groups, local

Teachers being explained the model of a hand flush water seal latrine





Samples of cheap lunch recipes for primary school children exhibited by the teachers in the School Health Seminar

schools and individuals, *e.g.*, principals of basic education teacher training colleges during in-service courses, teachers from secondary schools in Delhi during seminars, and teachers from selected primary schools in Delhi were among those who contributed.

When prepared in final form, all syllabi will be distributed to States, institutions and others responsible for preparing local syllabi, writing text-books and teacher guides.

It was agreed that teachers need additional materials to plan lessons on the syllabi. A list of teaching-learning activities, under headings in the syllabi, was assembled and work began on a document to include background information for the teacher on the same health topics.

Health Teaching

Beginnings were also made to include the health teaching as a part of various other subjects and school activities. In this connection, the committee responsible for preparation of material for general science text-books was assisted with health aspects. Suggestions were also given for health activities to be included in the programme for science clubs. This phase of the work will take on more importance as the plan for implementation of syllabi is finalised.

Materials and teaching aids are important to every educational programme. Materials of this type

were collected and arranged in the Central Health Education Bureau for use as reference by staff and individuals who visit the Bureau, and for trainees. Also beginnings have been made in developing teaching aids like flannelgraphs, flip charts and puppets, and in developing materials for students. To demonstrate better use of exhibits, study guides for teachers were prepared for the exhibition held in Delhi during the XIV World Health Assembly and for the health exhibition during the year 1961 Indian Industries Fair in Delhi.

The School Health Committee of the Ministry of Health had assistance and consultation from the project staff in connection with its study. A small committee of representatives from Ministry of Education and the Central Health Education Bureau prepared health education information for use in drafting the report. The final report, encompassing aspects of a broad programme for health work in schools, includes many recommendations concerning health education in schools and training of teachers in health education. When implemented, these would further advance the work undertaken in the project towards better health for school-age girls and boys in India.

Realistic Problems

Reference was made earlier to the need to make the health teaching more practical. Training activities during the project included seminars and work-

shop where teachers made practical suggestions to realistic problems. The concrete results to a problem in nutrition study is evidence of this. In this particular study, the participating teachers undertook the planning, preparation and serving of a mid-day meal at minimum cost, using foods of high nutritive values. Small groups were formed, and each group prepared a mid-day meal for eight (children) at the total cost of Re 1, utilising information in the nutrition study during the course. Theoretical knowledge became more important to them in calculating nutritive value of foods to be selected for the lunch. Not only did much learning take place during the activity, but it was also a very enjoyable experience. This is only one example of learning during practical experience. With increasing competence from the Central Ministry leadership, many more of the practical-type training programmes and study courses can be expected.

The Head of the School Health Education Section of the Bureau was awarded a fellowship and is, at present, studying health education in a school of Public Health in the United States of America. In the not too distant future it is reasonable to expect that many leaders in education, especially those in

teacher training, will have specialized training in health education. The School Health Committee recommended that in every teacher training college there should be at least one staff member qualified in health education to teach the speciality and to coordinate the health education activities in the college. This recommendation is directly in line with that made in the Report of the Joint WHO/UNESCO Expert Committee on "Teacher Preparation for Health Education." With the implementation of Government's plan to establish, by the Ministry of Health three post-graduate centres for training in health education prospective candidates from teacher training institutions can be guided into attending these courses to become qualified to take up health education teaching and coordination in the respective training colleges.

We look forward to the opportunities of making health education an integral part of all aspects of the school curriculum, to help children, according to their stage of development, to know the facts regarding health and prevention of ill-health, to do things themselves to maintain and improve their own health and to work to improve the health of the community.

THEORY—A GUIDE TO FIELD WORKER

In the preface to Malinowski's "A Scientific Theory of Culture and other Essays," Huntington Cairns says of Malinowski : "He also saw theory in its practical aspects, not only as the instrument which enabled the field worker to anticipate his solutions, but, in the modern logical view as explanation. To him theory was the instrument which allowed inquiry to be something more than a mere fumbling with multitudinous possibilities ; it was an indispensable guide to the field worker in the selection of facts ; it was a necessary element in any sound descriptive science."

PRE-TESTING OF HEALTH EDUCATION MATERIAL

PRE-TESTING is an essential step in the production of audio-visual material, for it provides in the early stages of their production, objective measures to identify their limitations and likely barriers to their effectiveness. It makes necessary improvements possible at an early stage and at a minimum cost. Pre-testing is thus an evaluative process when the material are still under preparation and it is intended to suggest ways by which these can be modified to increase the likelihood of their effectiveness. In brief, it is a safeguard towards investment in material production.

In this article, an effort is made to discuss the *what* and *why* of pre-testing and to draw attention to some of the techniques and methods which can be applied for purposes of pre-testing material. Pre-testing of posters is taken as an illustration to indicate the steps involved in the process.

Pre-testing is not simply a study of material when these are about to be finalised and published. It rather starts from the point where the idea of material production is first conceived. A series of choices have to be made in the very beginning. These can be made blindly, or with full knowledge of the underlying assumptions and implications of the decisions taken. The latter, of course, is the best. Careful decision, for instance, should be made about the objectives the posters are intended to serve; the methods and material most likely to prove successful in achieving them; the types of contents and their presentation; and the nature of target population. Reasons for these decisions and the assumptions underlying these should be explicitly stated. Pre-testing in fact, begins with careful selection of contents and presentation variables and taking them to the

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level of explicit awareness. It is economical to reject unsuitable approaches. This process of weeding out and taking careful decisions is pre-testing.

Pre-testing begins with planning for production and ends when the material are ready for publication. It is different from evaluation, which aims at assessing the effectiveness of a programme or that of an aid in achieving its intended objectives. Though the evaluation should be planned for in the early stages of the production of a poster, it is carried out only after the poster has been put to use. Since posters, like other material are intended for use in educational programmes aimed at attitude or behavioural change, evaluation can be made only after the public has been exposed to it for enough time for its effects to be felt.

Minimum Essential Conditions

Pre-testing does not aim at assessing effectiveness but is intended to find out if the material (poster) is potentially sound and is likely to satisfy the minimum conditions essential for effectiveness.

These conditions include: the power to attract attention; (ii) ability to hold attention for such time as may be necessary; to convey a message; and to stimulate thought in order to bring about a change in the attitude of the viewer and motivate him to action. In taking account of these conditions early in the planning and production phases, pre-testing adds to the likelihood of its effectiveness, but it, of course, cannot guarantee it.

Pre-testing can be categorised under three main steps:

Informal Pre-testing

This is undertaken by the producers themselves while planning for the production of posters. The steps involved in informal pre-testing include :

- (i) Setting up an idea-group to discuss and take decisions about the exact topic, the target population and specific objectives.
- (ii) Within the broad limits set by careful selection of topic, target population, and objectives to be aimed at, choices about specific content and methods of presentation should be made by the idea-group in the light of the skills and equipment available for the design and production of the poster and the best information to be had about relevant characteristics of the target population, such as their education, knowledge of the topic, and related beliefs and practices that may influence their responses to the poster. It may be possible to gather much of this information from available literature, but sometimes exploratory studies may have to be undertaken for collecting it.
- (iii) The artist who translates the decisions of the idea-group into a poster design should make explicit the basis for his choices with respect to content, words, illustrations, and lay-out and should be prepared to rationalize them and defend them before the idea-group, with whom he should be in close and continued contact during every stage of designing the poster. Ideally, the artist should know not only the principles of good design, but also the broader conditions for the success of any poster as well as the specific variables to be considered for the particular poster he is working on.
- (iv) Critical examination by the idea-group of the first design produced by the artist and of subsequent modifications of the design until a version has been produced that is ready for pre-testing outside the production group.

Formal Pre-testing

This is the stage that is usually referred to when pre-testing is discussed. Material evolved by the informal pre-testing processes described above can

be further pre-tested by a panel of outside experts and by a group of laymen similar in their background and outlook to the target population.

The trial poster produced should be placed before a panel of outside experts for critical review, to see that it measures up to the criteria generally agreed upon for audio-visual aids. For instance, the composition, design, colour combination, size of print, script used and style of writing, size of poster paper used, etc., can be subjected to professional judgment. The poster should be examined to see if it conveys one idea or many, if it relates to the experiences and beliefs of the people for whom it is intended, if the script used will be understood by the target population, if the illustrations and photographs depicted are related to the main theme and are likely to be attractive and meaningful to the population concerned. In brief, it is to be viewed to ascertain if the conditions essential for the success of a poster are satisfied by it.

This critical review can be undertaken either directly by a panel of experts or, if this is not possible the poster may be scored by the idea-group on the basis of criteria established by experts on audio-visual aids. A set of criteria for assessing posters has, for instance, been prepared by the All-India Institute of Hygiene and Public Health, Calcutta. This has been further referred to a 16-point criteria set by the Central Health Education Bureau. It needs to be noted that scoring a poster on the basis of standard criteria is not a certain indicator for effectiveness. It was observed in a few studies on posters conducted at Poonamallee and Najafgarh that, sometimes, those with high rating proved to be less effective as compared to those which had scored less.

Posters which measure up to the criteria formulated by experts should then be reviewed by a panel of laymen who are similar to the target population. This can be done through an informal approach and discussions with selected laymen. They can be given a check-list to help them review all the essential elements of the poster. They should be questioned to find out whether the subject matter interests them, whether the illustrations are attractive, whether they are able to repeat the message which is intended to be conveyed and whether the message is new or is

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Pre-testing in a group

already known to them. In one instance of pre-testing posters which were intended to popularise vaccination and re-vaccination, it was found that the concept of re-vaccination was not understood. People thought vaccination provides life-time protection against smallpox. Others wanted to know in intervals between vaccinations which was not explained in the posters. The illustration used in one poster was a photograph depicting many people in a rural situation where the public was being vaccinated. Though the majority of the people interviewed knew about vaccination, they could not identify vaccination in this photograph (the picture was small and crowded with many details). Illiterate villagers who formed a majority, could not repeat any message from it. Pre-testing helped in this case by leading to changes in the poster to make vaccination procedure more prominent and to introduce a different

script for indicating re-vaccination. One additional poster was planned to emphasise the need for repeated periodic vaccinations.

Scientific Pre-testing

If research resources are available, it may be desirable to subject the posters to scientific and objective pre-testing. For this, the research workers have to be familiar with the genesis of the poster, the target population and the objectives. They should also be aware of the conditions which a poster must necessarily satisfy to be effective. It is in relation to these conditions and the set goal that the research team must proceed for an assessment of the poster.

Scientific investigations to find out the extent to which a poster satisfies the general criteria and meets specific conditions, can be taken up in a number of

ways. Pre-testing of posters should, therefore, aim at finding reliable measures to some continuation of the following questions :

- (i) *Attracting attention and interest*—What proportion of people who are exposed to it stop to look at it ? For what duration is it seen ? How many people take interest in it ? What is in the poster that interests them ? What do they overlook ? What are the reasons for their interest in or indifference to it ?
- (ii) *Likes and dislikes*—What are the items in the poster which are liked ? Why are they liked ? What is disliked or disagreeable and why ?
- (iii) *Comprehension*—How many visitors are able to understand the message and how much do they understand ? What words and sentences are understandable and which are not ? What meanings are obtained from the illustrations used ? How are these meanings related to the intended objectives ?

Investigations for pre-testing of posters can be undertaken under natural or controlled conditions. Pre-testing under natural conditions is probably more desirable but it is usually expensive and may be impractical. One method is to display the poster in an area similar to the ones in which it will ultimately be used and to observe and record such details, as the proportion of those passing by who seem to notice it, the span of time for which they view it, and the casual comments they pass about it. Another method is to keep it displayed for a period of time, say a week, and then collect information from a selected sample of the population in that area as to whether they have seen it, what they remember of it, whether they have understood the message correctly, incorrectly, or not at all whether the topic relates to their interest and whether the desired actions are in accord with local values and customs.

In the controlled approach, people, whose reactions are to be studied, are selected in advance and the contact with the poster is directed and not spontaneous. While there are many forms that a controlled approach may take, the following three steps can give satisfactory results if limited resources do not permit more intensive investigation. The three

steps are observation of the viewers who are directed to the poster ; interviews with structured schedules after they have seen the poster and group discussions with the respondents about the poster.

A small sample of people who are representatives of target population may be selected and exposed to the poster. The poster is displayed in a room and people in small groups of two to three are asked to view it. They are not told that they will be interviewed after they have seen the poster. This is to play down the possibility of their becoming too conscious about it. An investigator is assigned to observe inconspicuously the overt behaviour of the viewers.

The observational method provides many useful clues to limitations of the poster. For instance, in a study on smallpox posters, school children tended to pay more attention to the picture and to details of classroom situation which they depicted. Likewise, among a rural population, it was found that although the poster drew considerable attention, most of the discussion was about the village scene shown in the poster. Furthermore, villagers' comment showed that they were confusing primary vaccination with medical examination. Another poster which showed a large photograph of a child being vaccinated could be easily identified by a majority of illiterate villagers as concerned with vaccination. The study indicated that too much emphasis on background details distracts attention from the main theme. It also showed that if the vaccination techniques are boldly depicted people who are familiar with vaccination can identify it even if they are illiterate.

After the respondents have seen the poster they can be interviewed with structured schedules to find out what they have observed and understood. For instance, the school children in the study mentioned above remembered details which the poster did not intend to emphasise such as what was written on the blackboard, number of individuals standing in a row for vaccination, the spirit lamp and the school backyard. They also could tell that vaccination prevents smallpox but most of them did not mention re-vaccination. The villagers also remembered details of the village background but hardly anyone could recollect re-vaccination and many could not relate the poster to vaccination at all. Many of those who mentioned vaccination said that it cures

smallpox and that it is meant for children and not for adults. This information was helpful in further simplifying the poster improving the illustrations and identifying the areas of ignorance and misunderstanding.

Another likely step is discussing the poster with respondents in groups of five to ten persons. This can be helpful in further probing into information gathered by the above two methods. Such discussions, for instance, helped us in changing the word *chechak* for smallpox to *Bari Mata* which is better understood. It revealed that additional material is required to introduce the idea of re-vaccination and to show that it is essential for people of all age-groups.

Summary

Pre-testing is a process of assessing the quality of material before they are put into final form. It differs from evaluation only in the sense that pre-testing is concerned with estimating whether the objectives for which the material are designed *can* be achieved whereas evaluation seeks to learn the extent to which they *have* been achieved. Pre-testing begins with planning for material production and ends when the material are ready for use. Pre-testing may be thought of as possible on three levels: *the informal* occurs at the earliest stages of planning, is carried on by the producers themselves, and can consist of nothing more complex than a heightened group awareness of the choices, assumptions and

decisions required in the production process; *the formal*, which makes use of the opinions and judgments of material experts or laymen or both and *the scientific* which requires the services of trained research workers, use of complicated methods, and is based on an elaboration of the methods used in other tools. These are not three separate procedures but rather three forms of one process which differ only in their relative complexity and magnitude of effort. (The author wishes to offer his grateful thanks to Prof. Lyle Saunders for advice and consultation, and to Messrs S.B. Kar, S.K. Mitra and M.G. Oswal who participated in a study on posters which provided the experiences and material for this article.)

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BUILDING THE NEW FROM THE OLD

PEOPLE build new things from their previous experiences and what they see now as new things. This is true in the field of public health as well. This could be seen well in the natural growth of the Health Training Institutions around Poonamallee.

Poonamallee Health Unit

In Madras State, a Health Unit was established at Poonamallee as early as 1935, to give a demonstration for providing better health services. About 39 villages were covered by the Unit. Special attention was devoted to promote health services in maternal and child health, sanitation, protected water supply, preventive inoculation against smallpox, etc. Four maternal and child health centres were developed. A staff of four health visitors and 18 maternity assistants worked under the guidance of one woman medical officer trained in public health. Regular ante-natal and post-natal clinics were organised at each Centre. Home visits by the maternal and child health staff were organised. The result was quite satisfactory as the maternal mortality rate came down from about nine to about 0.6 and infant mortality rate from about 202 to 138 per thousand live-births between 1935 and 1960. This showed that the reduction in the infant mortality was not as dramatic as the reduction in the maternal mortality. The need for attention in other areas affecting the infant mortality was felt by the health workers.

Similarly, in the field of sanitation and water supply, construction of tube-wells was promoted in all the villages covered by the Unit. The result was satisfactory. The subsidised latrine slabs along with the services to fit the slabs and free service to put bore-holes were provided. But the success was not as expected. It gave an opportunity to the health workers to evaluate that why the rendering of services

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alone in the field of health did not achieve results in certain areas.

Orientation Training Centre

In the Orientation Training Centre, Poonamallee, emphasis is laid on working with the other departments like Community Development departments and also other workers as a team to satisfy the several needs of the people.

Soon, the need for approaching the people with a view to help them in their other needs in addition to the health needs was recognised all over the country. The Community Development Scheme came into being in 1952. Along with this, the Primary Health Centre came in when both curative and preventive services were planned through one centre. With these new institutions, with a new concept to reach people to satisfy their multiple needs, special training of health workers, doctors, health visitors, health inspectors and maternity assistants was needed. So the Orientation Training Centres were started in India. One of these centres was established at Poonamallee in 1954. In the new method of training, all attempts were made to give training for team work. The emphasis was on learning by doing. Field practical work like putting in tube-wells, smokeless ovens, helping people to construct latrines was stressed.

A group of visiting lecturers from various special fields belonging to the teaching institutions in the city was organised to keep in touch with the pre-service Basic Training Institutions. The Health Unit area where intensive health services were developed, was used for field visits in the new ways of training adopted by the Orientation Training Centre.



Practical training for village level workers and S.E.O's at Poonamallee

Research-cum-Action Project

In Research-cum-Action Project, emphasis is laid on the study of problems as a basis of planning and action.

As the experience grew, the scope for intensive research and action was felt in certain problem areas, *e.g.*, in the use of latrines in villages, working with other departments like Community Development staff, medical department staff in Primary Health Centres and the school teachers. Research-cum-Action Project was started in 1956 in Poonamallee to serve this purpose. A team of workers from different disciplines, like Social Sciences, Health Education and the Public Health Engineering worked together in one Project. They took four Community Development Blocks as their area of operation. They worked for five years with the financial assistance given by the Ford Foundation. They studied the people's attitudes, knowledge, beliefs and value-systems on the one hand and evaluated the relative values of different approaches in Health Education and working with other department workers on the other. They came out with several valuable findings by using better methods of educating people. The

value of involving and developing programmes with the workers and the people, from stage of planning to execution and the value of education was stressed. The Orientation Training Centre is making an attempt to use the experience from the findings of this Project. This was one of the main purposes for locating a Research-cum-Action Project in the area of a training institution like the Orientation Training Centre.

Application of Findings

The application of such findings in other areas and in the training institutions was itself a project which needed special attention and services of the trained staff. This was done recently by creating the Health Education Bureau, with a Field Demonstration Training Centre. The Headquarters of the Centre was established at Poonamallee and close association with the Health Education Bureau was kept so that all the new ways learnt could be suitably added to the old ways of training and thus new things could be built using the valued experiences of the old. The Health Education Bureau and the Field Demonstration Training Centre along with the Research-cum-Action Project are finding ways and means to see how better ways of training could be

devised in the existing training institutions and also for providing field training demonstration areas for the trainees from such institutions.

Primary Health Centre as Demonstration Centre

As the Orientation Training Centre was mainly concerned with the training of the staff of the Primary Health Centre, Avadi, a nearby Primary Health Centre, has been taken up for developing demonstration activities. The staff of the Field Demonstration Training Centre of the Health Education Bureau and the Research-cum-Action Project work in close collaboration with the Orientation Training Centre at Poonamallee to study and develop field activities in Avadi Primary Health Centre area.

Field Demonstration Villages

As a result, certain demonstration villages have now been developed for dealing with certain local problems as felt by the local leaders in these villages. In a sub-centre village, Kuttambakkam, leaders of the village who formed the Health Committee wanted to do something for leprosy which was a problem in this village. The Primary Health Centre's staff with the guidance of the Field Demonstration Training Centre staff and Research-cum-Action Project staff organised house to house survey with the Health Committee members as a first step to survey the case incidence. Periodical meetings of Health Committee were held and progress was reported to them. Thus the professional workers and leaders of the people worked together to solve their problem. As a result, out-patient attendance at this weekly sub-centre village clinic increased from a few cases (under five) to 45 cases in five months. As the staff worked, they became more enthusiastic and they took up a survey to find the incidence of leprosy in the neighbouring villages. The Primary Health Centre staff have started another leprosy clinic on Thursday mornings to supplement the weekly sub-centre clinic activities and to attend to cases from other neighbouring villages. The Health Education Bureau is further finding ways to improve this work by bringing the Primary Health Centre staff to visit Leprosy Institutions nearby.

This interest in the Health Committee helped the staff to look into the other needs felt by the leaders. As a result, the leaders were helped to

construct a good school building with the help of the Block staff in this village.

Solving Health Problems

Likewise another village Paruthipattu was taken by the Field Demonstration Training Centre of the Health Education Bureau for a survey as mal-nutrition was seen as a problem in this village. Nutrition survey was conducted in the two schools with the help of the Nutrition Section of the State Health Department. This helped the Primary Health Centre staff to focus its attention on the prevalent local problems. The teachers who helped in the survey and who saw the problem, now organised teaching activities in the schools. They deputed the students by turns to collect vitamin tablets and capsules from the Primary Health Centre staff which visited this village once a week and then distributed them among the children with defects due to Vitamin A deficiency and Vitamin B₂ deficiency. They saw the need for supplementing the diet of the school children. They have now planned a weekly schedule for supplementing mid-day meal with greens, carrots or yellow pumpkin to provide the needed Vitamin A and Vitamin B₂ nutrients.

Thus a programme to solve real problems in the villages in the Primary Health Centre area are taken up by the Centre staff with the guidance given by the Health Education Bureau in addition to rendering curative services. Such activities will be new activities to build the old institutions which will serve as better institutions both for the purpose of training and field demonstration and promotion of preventive medicine.

Coordinating Training Facilities

The Health Education Bureau of the State Health Department through its Field Demonstration Training Centre and other wings like Research-cum-Action Project, Material Section and Editorial Section is now helping every one of these institutions to develop their special activities and using them for the purpose of organising improved training to the public health and allied workers.

Recently, 30 Mukya Sevikas were requested to be trained by the Director of Women's Welfare in Poonamallee for a Pilot Scheme of developing 500 Pre-school centres in this State.

The Health Education Bureau including Research-cum-Action Project, Orientation Training Centre and the Health Unit, Poonamallee planned a training programme which provided several field demonstration experiences in a coordinated way along with the information and method demonstration sessions. The leadership in training was mainly taken by each of the institutions, *i.e.*, Research-cum-Action Project, Orientation Training Centre, Health Unit, Health Education Bureau, Nutrition Section and State Health Department and Avadi Primary Health Centre, in specified areas. The Health Education Bureau served the purpose of helping to plan and coordinate the training activities. The Training Programme came to a close with a seminar in which the teachers from the various above-mentioned institutions met the trainees under one auspices. The trainees presented papers on what they learnt and discussed their field problems openly. The Health Educator of the Health Education Bureau conducted the Seminar. The WHO Regional Adviser in Health Education,

Mrs A.R. Moore who was present at the Seminar appreciated the value of such a seminar from the point of recognising good Health Education workers in this State. This explains the value of developing such coordinated programmes and building new ways of training, making use of older institutions each of which has been developed according to its own unique character.

Field Visits

The Health Education Bureau organises State Health Education Council meetings in field areas like Poonamallee or Gandhigram where better ways of training and improving health conditions are undertaken by special projects. The Advisory Committee members are taken for field visits to observe for themselves the change that has come in. This helps the key leadership in the State to recognise and give support to such new ways of promoting health.

POINTS TO REMEMBER

- * Flies bring disease. We must get rid of them.
- * Prevent flies from breeding by getting rid of their breeding places. Flies breed in any decaying or rotting vegetable and animal matter.
- * Do not allow flies access to any article of food by keeping it covered.
- * A clean house with clean surroundings is the best answer to the fly problem.
- * Cultivate the habit of using latrines. Exposed faeces attract and breed flies which lead to spread of disease.
- * No filth—no flies.

LIMITATIONS IN HEALTH EDUCATION

THE programme of Environmental Sanitation has been in progress since August 1958 in 16 villages of district Lucknow Chinhat Shadow Block. The objective of the programme is to provide sanitary latrines in each house and to either reconstruct existing insanitary wells according to P.R.A.I. design or to provide new hand pumps. The construction part of these sanitary installations is being done by the Engineering Department. The people's participation and their willing cooperation is obtained by a variety of Health Education methods through specially appointed staff. The people have to contribute 25 per cent of the total cost in cash and also provide voluntary labour wherever required.

In the early stages of the programme, it was discovered that the problem of village water supply was rather difficult. The people take water from open shallow wells and the number of these wells varies from three to 90 from village to village. To deal with the problem of the village water supply for the whole village, substantial amount of money from the villagers and their appreciation to use the alternative source are required though the source may not be as conveniently located as the present one. Evidently, when the people are satisfied with their present source of water supply, this is not an easy task.

It was decided, therefore, to take one village in the project where a systematic Health Education Programme could be tried to improve the entire village water supply. Village Kamta was selected for the trial.

Kamta Village

Kamta is a small village with a population of 500 people, situated on Lucknow-Faizabad Road at a distance of about six miles from Lucknow. There are in all about 100 families in the village, most of whom are Scheduled Castes and Harijans. Most of the inhabitants are poor cultivators and labourers.

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As regards education, only one person in the village had High School education and is employed as a teacher. A few others had only pre-primary education. There are six wells in the village, two of which are also used for irrigation. One of these two wells, is provided with a diesel pump and irrigates most of the land. Vegetables are generally grown by the people in their fields because of the availability of water and also for their cash value. When the village was taken up for study, only one family had a sanitary latrine in their home which they had got constructed because of the personal influence of the Health Worker. It was, however, never used for fear of criticism by the other villagers.

Public Health Work

Most of the field work was carried out by a Health Education worker, Sri A. Wali, who has nearly ten years' experience of working in the villages. He is a person having pleasant personality and the knack of dealing with the villagers. In planning and conducting the health education work, he was helped by the Health Education staff at the Planning Research and Action Institute. The proposal for improvement of its drinking water supply was prepared by the Engineering Associate attached to this Institute and the actual construction work was done by the staff of the Local Self-Government Engineering Department, who are normally doing this work in the Project. After his first visit to the village, Sri Wali had desired another village for Health Education study. In his opinion Kamta was rather a difficult village for health work especially because its inhabitants belong to one or two castes and are too poor and uneducated. However, on reconsideration by the entire staff, this village was kept for trial.

Water Supply Scheme

The Executive Engineer attached to this Institute prepared a scheme for the Kamta Village Water

Supply after detailed considerations and he proposed two alternative schemes ; (i) Piped water supply for the village, the source being an existing well also being used for irrigation. The total capital cost being Rs 10,400 with annual maintenance cost of Rs 950, and (ii) The four small-diameter wells to be reconstructed in a sanitary manner, covered at the top with a platform around the well with a hand pump fitted and three new hand pump tubewells to be provided at suitable locations. The total cost being Rs 3,000 and the annual maintenance cost Rs 200.

Health Education

The Health Education study can be divided into four distinct phases from July 1959 to January 1961.

Phase I—On 21st July, 1959, the Health Education worker went to the village taking with him a cinema projector and a small medicine chest. He stayed in the Panchayatghar situated at the entrance to the village till 27th July, 1959. On the night of 21st July, he arranged a film show in the village and introduced himself as a Health Worker. The films were mainly of entertainment interest. He also announced the distribution of ordinary medicines for those suffering from minor ailments like diarrhoea, headache, injury, etc.

During these seven days, he prepared a list of 13 village leaders mainly by local enquiry. The list included only one member of the Panchayat—the Pradhan. Amongst others were the most prosperous cultivator, a school teacher and a few from the service and labour class.

These 13 people were interviewed by a questionnaire to find out the villagers' way of looking at the health problems and their particular needs.

Most of them mentioned the nourishing food and personal cleanliness as essential for maintaining good health. They also appeared satisfied with their present surroundings excepting some sullage water collecting in the lanes. The majority of them thought that going out for defecation to the fields was good and provided manure, lack of privacy being the only disadvantage in doing so.

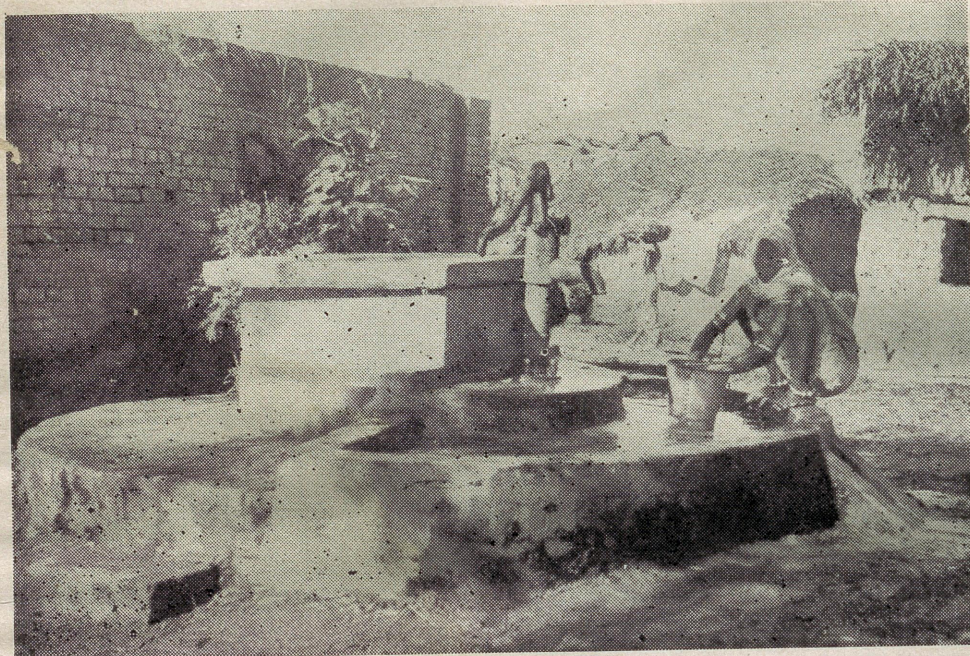
Regarding the immediate needs of the community, 11 wanted D.D.T. spray for fly nuisance. A few wanted construction of village approach road. One wanted personal help for subsidy to construct his house and another wanted to get scholarship for his son for further studies.

Before the second visit on 10th August, the two applications for aid had been forwarded to the respective authorities and D.D.T. spray was specially arranged by the Health Education worker. The next visit was a halt for four days wherein the Health Education worker further tried to develop personal relations with the villagers and arranged for group discussion meeting later.

Group Discussions

Phase II—In this phase a series of group discussion meetings were arranged. All the meetings were held at night. The 13 selected leaders were invariably contacted before the meeting started and they were present in most of them. The President for every meeting was elected by the members but usually rotated, between the Panchayat Pradhan and Mr. R, the most well-to-do farmer. The role of the Health Education worker consisted mainly in making arrangements for the meeting, preparing one or two leaders to introduce and discuss the subject of the meeting, posing questions pertinent to the subject whenever the discussion became bogged down and showing a flannelgraph story at the end. The illustrated stories were found most interesting by the villagers and conveyed whatever Health Educator wanted to say on that day. The four or five members of the 13 selected leaders usually dominated the discussion. The meeting lasted for one to two hours each time.

<i>Date of Meeting</i>	<i>No. attended</i>	<i>Subject discussed</i>	<i>A.V. aids used</i>
25. 8.59	12	Nuisance created by flies.	Flannelgraph on fly.
16. 9.59	13	Is fly our enemy ?	Flannelgraph on fly control.
30. 9.50	13	Importance and use of sanitary latrine.	Flannelgraph on Sanitary latrine.
5.11.59	20	Water	Flannelgraph on pure water.
30.11.59	35	Water	-do-
16.12.59	50	1. Importance of protected water for health and improvement needed. 2. General discussion.	Flannelgraph on sanitary well.



The improved village well
at Kamta

The group meetings held on 5th and 30th November, 1959, had discussed Clean Water and Improved Wells.

Villagers' Decision

Though a number of advantages to health from good water were discussed in the previous meetings, the only two points emphasized repeatedly by a number of members in the meeting held on 16th December, 1959 were : (i) Saving of Rs six to eight per family for purchase of ropes during a year, and (ii) convenience in drawing out water if hand pumps were provided.

At this stage, the Executive Engineer who was present in the meeting explained the scheme which had been drawn out for improving the entire village water supply. He also mentioned that the total work will cost the villagers Rs 900 in cash.

Then followed a discussion in which some people pointed out that drainage will be a problem which will have to be faced if the scheme was executed. The discussion remained lively and the consensus of opinion was that the scheme should be accepted as a whole and every family in the village should contribute both in finance and physical labour.

As per scheme II, the proposals for the reconstruction of four wells and provision of three new hand pumps were approved.

A committee consisting of seven members was formed to collect and realise the village contributions. So much so that all the seven members agreed to contribute the entire amount by themselves and then collect it from the villagers piece-meal. The first well to be reconstructed was selected and contributions for the work were promised within a few days.

This day was heralded as a big day of achievement for Health Education and it appeared that the entire village will have the safe water supply within a few months.

Operation of the Scheme

Phase III—As promised, the first hundred rupees were given by the Pradhan without any delay and the villagers were anxiously waiting to see the ideal well, the benefactor of their health.

Then followed a series of mishaps. For several reasons, the work on the well could not be started for nearly a month. As the well was being cleaned, it started sinking. It took another month-and-a-half

for the Engineers to decide that what should be done. However, when it was completed, the work was badly done. The pump fixed was rather loose. There was no slope on the platform and the drain constructed was neither enough nor to the villagers' liking as its projection interfered with the movement of the cattle.

All this period was of trial and tribulation and humiliation for the Health Education staff. A number of times women were heard to say that they never knew that they would have to bear all this hardship of fetching water from so long a distance, otherwise they would not have allowed the work on the well to be started.

The Health Education worker had cut down his visits to the village as he had no satisfactory answers to many of their questions. He also felt unhappy and disgusted as he had no control over the actual work to be done and he could make no more promises.

Progress of the Scheme

Phase IV—The Health Education work was, however, not given up. As soon as the well was completed, visits to the village were made and appropriate explanations for the lapses were partially accepted by the village leaders.

The collection of one hundred rupees for the first well was made in early January 1960, and efforts to make collections for the second well were again started in April and by the end of May another one hundred rupees were given for the construction of another hand pump. This clearly showed that people were impressed by the idea of safe water and all of them had not still lost their entire faith.

The second experiment also did not fully succeed. No good water bearing strata could be reached and the hand pump had to be laid at the depth of about 30 ft. and was not giving sufficient water.

Group discussions in progress



The present position is a status quo, with the villagers perhaps thinking that these Health Educators are good people, but they make tall promises which cannot be fulfilled.

Significant Observations

In our opinion this study has a great bearing on the future of Health Education work in India and two of our experiences need special mention.

This study conclusively shows that by a systematic health education approach, the people can be made to accept new sanitary conveniences and undertake responsibility for them, though evidently they may appear satisfied with their present mode of living.

Also, it indicates that even poor uneducated people can pay for the sake of their health provided they understand its significance.

This study also serves as a good example of where Health Education fails. If health education is an integral part of every programme, then it raises an interesting question as to who should do health education in a Public Health Programme. Specially trained Health Educators having no direct say in the execution of the field work may have to face the same fate as we had in Kamta. Possibly, if the trained Health Educators work, with the technical field staff and help them play their (Health Educator's) role in the community, the objectives of Health Education would be served better.

BRITISH FOUNDATION TO FIGHT BLINDNESS

A British foundation for the prevention of blindness will be part of Britain's contribution towards World Health Organization campaign against blindness. The Royal National Institute for the Blind and the Royal Commonwealth Society for the Blind, in collaboration with the British Ministry of Health, are sponsoring the foundation, which has a programme covering six projects :

The setting up of a central eye bank and a transplanting unit ; the establishment of a research unit to investigate the genetic causes of blindness ; research into the effects of malnutrition as a cause of blindness ; extension of the existing research programme ; the establishment of travelling fellowships in ophthalmology ; and the endowment of a research chair and a clinical chair in ophthalmology at two British universities.

These projects will cost £500,000 (about Rs 65,00,000). A sum of £100,000 (about Rs 13,00,000) has already been received as a gift. This money will go towards the eye bank and transplantation unit and the research unit to investigate the genetic causes of blindness.

The aim of the foundation is to combat blindness everywhere, for the benefit of peoples of all races and creeds.

—B.I.S.

ORIENTATION OF PRIMARY HEALTH CENTRE PERSONNEL IN HEALTH EDUCATION

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DURING the last few years, we have been observing some changes in the standard of life of our rural population. In the field of public health, this is reflected in the form of establishment of an increased number of primary health centres. The primary health centres provide integrated, curative and preventive health services. But doubt is expressed whether there is a proper development and utilisation of the integrated health services particularly the preventive services. The numerical attendance of out-patients is not the yardstick to prove the utility of the centre. Success in the preventive programme is more difficult to achieve and gives a better idea of the usefulness of the centre. This success in preventive programmes depends to a considerable extent on the success achieved in educating the public. The concept of modern health education being relatively recent, the health personnel should be properly oriented in this aspect of their work, so that health education activities will develop along proper lines so as to enlist public understanding and acceptance of the programmes. Orientation of all categories of primary health centre personnel is also necessary to enable them to develop the correct attitudes, to acquire minimum skills and knowledge and to increase their ability to communicate with individuals, families and community groups. Apart from in-service training, continuous effort on the part of the State Health Education Bureau alone can accomplish this.

Health Education in the Pre-Bureau Period

It cannot be said that health education had absolutely no place in the scheme of things before the health education bureau came into existence and health education came to be accepted as an important responsibility of the public health workers. The

public health personnel in the health centre and others, like the health inspectors, health visitors, midwives and health assistants, who were intimately connected with people in the field of health, were unconsciously doing some health education work. The sanitation workers in the field of environmental sanitation and control of communicable diseases have been conducting health education in their own way. They used to conduct what were called in those days as magic lantern lectures. The health visitor looked after the expectant mother from time to time, conducted clinics and carried out home visits. In all her activities, health education did find some place though in a crude fashion. The midwives, responsible for domiciliary midwifery always functioned as the friend, philosopher and guide of the family, perhaps not realising that she did. All these personnel have been doing health education but their methods and techniques were unscientific.

What the health personnel need to realise now is that their educational methods and techniques have to be improved and that they should make an organized effort to promote their health educational opportunities in a scientific way. Besides, many of the programmes are not getting the desired success, because of the old beliefs and superstitions still standing in the way of constructive change in the attitude of the people. This indicates that health education must go hand in hand with social education and calls for co-ordinated action between the health workers, social workers and extension workers.

Newer Changes Affecting Health Education

The community development programme with the establishment of one primary health centre for an

approximate population of 60,000 has necessitated a change in our thinking. There is now a medical officer and auxiliary health personnel. The medical officer is responsible for integrated health services and spends a good part of his time for preventive work which includes health education. But it has been our experience that the medical officer has little time and no interest for preventive work and much less for health education. The young enthusiastic doctor often fails to realise that many of his patients in the long queue are the old ones coming back with the same infection or the relatives of his own patients. Many of the cases are either re-infections or secondary cases in the same family, all of which are preventable by proper health education. To this extent and to the extent that he will discharge his moral obligation not only to his patient but also to the family and the community to which his patient belongs, though in the discharge of such duties he is likely to encounter hardships and frustrations, the medical officer of the primary health centre needs to be oriented. Apart from this, health education conducted in the curative clinic itself is most effective as the patient in such a clinic is most receptive and most interested to learn.

With regard to the auxiliary health personnel, they have now a much smaller area and population to work with. The taluq or circle or range health inspector of years back had a population of about three lakhs to cater to whereas now the health centre inspector has only about 60,000 with naturally more opportunities and better advantages for health education. The same is true with regard to the other health personnel also.

The community development personnel, especially the village-level workers, the home economists and the social education organisers have come to play an important part in the health education activities. The village level worker is a multi-purpose worker who knows the felt needs of the people and who can favourably motivate community groups towards action. He can be trained to be an ideal health educator. For every health inspector or health visitor, there are 10 village level workers. In many places, the village level worker has done excellent work on health activities. It is he, who has often detected the first case of smallpox or dysentery and taken the necessary preventive measures. He has also

done good educational work in the promotion of construction of sanitary latrines by personal contacts, persuasion and demonstration. The home economists are trained in the extension techniques of involving women and can be of inestimable value in the health educational activities.

The expansion of education has given us more teachers, who, by virtue of their influence in the village community, form our important collaborators in health education. Perhaps, as one of the evils of unemployment, more and more of voluntary organizations, some active and some semi-defunct, have sprung up, offering the health personnel a stronghold for health education. The health personnel should be oriented to the extent their communication with these parallel organisations improves.

Purpose of Orientation

Orientation to enable health workers to carry out health education as a regular part of their work and also to enable them to plan specific health education programmes and organize them recognising the resources and facilities at their disposal should be done. The three broad areas in which the health workers have to be oriented are :

(i) *Their own technical functions and knowledge required to discharge them.* Before the health personnel can educate the public, they must have a satisfactory knowledge of their own field of activity. They should constantly refresh their knowledge and be reoriented to new ideas. Before every programme of health education activity, the concerned health worker must do his best to equip himself with all the knowledge and facts necessary to carry out the programme. Nothing can weaken him more than his inability to give the correct answers to questions.

(ii) *Knowledge of the people and the community with whom they have to work.* The health workers, in their role as health educators, should have some basic knowledge of the characteristics of the people. They should know how to acquire this knowledge and what to look for in people. They should be familiar with their culture, the way of life of the people, their values, beliefs, traditions, etc., that may have a bearing on health. They should assess the knowledge and attitudes of the people on health practices, misconceptions they may be entertaining,

additional information they may need and the best way of making this available. The doctor, of course, should know the cultural and social factors affecting people's ideas a little more than the others and perhaps also the psychological factors that influence learning. In the case of the public health nurse, on the other hand, the emphasis will be more on the social organization of the community in which she works and also the customs and beliefs of the people. All the auxiliary health personnel should know necessarily the common customs and beliefs of the people, so that they may avoid recommending such health practices as are contrary to common customs and beliefs and become the laughing stock.

(iii) *Development of certain skills for health education work and knowledge of health education methods and techniques.* Thirdly, the health workers have to acquire some basic working knowledge of the educational methods and techniques and also develop some skills. They must be alive to the health education opportunities presented in their specific functions and how to use them. They must develop the habit of promoting such person to person contacts that have educational values, educational activities with existing organizations, organizing and giving instructions to informal groups, organizing community groups for health work and also using the various educational aids in their work. This implies that the health personnel should be so oriented as to be able to give short informal talks, assume leadership in group discussions, arrange demonstrations, field trips, seminars, etc., that have educational value, to produce and use material to aid their work, to keep their eyes open to the various key personnel and resources who may be useful and, most important, to plan and organize these activities in a sustained manner so that in course of time, they will produce palpable changes in the knowledge, attitudes and actions of the people. This is the whole crux of health education. The impact of health education is to be measured not so much by the quantum of their work and the bulk of their reports as by the visible changes that could be produced in people.

Certain personal qualities are very important and the health workers must make an attempt to cultivate them. They should have a genuine interest in their work, in the people, a little originality, resourcefulness, etc. Further, the health practices of the health

worker himself are important. He should practise himself what he preaches. He should also avoid exaggeration in his own behaviour and also exaggeration in the teaching content.

Modus Operandi of Health Education Bureau

During the pre-service and in-service general orientation public health training of the staff, emphasis may be given to the health education aspects of their work. The training methods used should condition the trainee's attitude to his own methods of health education later on. In the classroom, a variety of methods such as conferences, group discussions, projects, panels, committees, etc., are used. On the practical side, the trainees may be asked to select a common public health problem and consider its educational aspects. All the steps in programme-planning should be observed. They will draw up a programme of health education which will include statement of objectives, plan of action, selection and pre-testing of methods and media and mode of evaluation. The trainees may actually participate in a part of the programmes. This is in the training unit. But we cannot afford to wait. We have to quicken the pace of health education and some sort of field orientation of the health personnel in their own health centre is necessary at least to create an awakening in the personnel about health education. The following methods and techniques may be of help :

(i) Staff conference in the primary health centre. During these conferences, the medical officer may be asked to include discussions about the health education work of his staff.

(ii) Study classes, discussion meetings and demonstrations in the primary health centre with the public health staff, the health education specialist from the participating bureau. In these meetings, the topics discussed include the health education opportunities of the different personnel and also the methods and media used in health education. This may be followed by demonstration of different methods, by, say, role-playing, demonstration and discussion about the use of different aids in use, such as film strips, flip charts, diagrams, photographs, etc. It has been observed that there are often excellent material in the centre in the form of charts, diagrams, pictures and magazines that can be used.

(iii) Follow-up and demonstration in the field. This can be done by the health educator of the Bureau actually participating in some of the ante-natal clinics or family planning clinics or the immunization clinics and helping the staff to integrate health education in their work and to produce and use some common material. The health educator may arrange some other health education activities also which would involve use of different techniques with the active participation of the health staff.

(iv) Promotion of activities that have educational value with the block. This is in recognition of the principle that the block personnel play an important part in the health education work and should be interested in the public health activities. The primary health centre staff may be first briefed about this and they may then take the lead in organizing meetings with the block personnel. The Medical Officer or the Health Inspector first interviews the block officer and talks to him about their objectives. Meetings follow in which the health inspector or someone else from the centre gives a short informal talk about the role of the block personnel in health education, how this can be done, the need for better orientation of the block personnel in health and the need for better communication between the block staff and the health centre staff. These activities have resulted in such actions as the block authorities requesting for orientation classes for the village level workers, field trips to the family planning clinics, or sub-centres or some other places, film-shows, exhibitions, etc., in the area, organisation of more discussion classes for certain interested groups on variety of subjects. The block authorities have also come out with promises for allotting some funds for making cheap material.

(v) Promotion of similar health education activities with some community groups like voluntary organisations, panchayat groups, block committees, health centre committees, and teachers. The health educator from the bureau helps in the planning and conduct of these activities.

(vi) Planning and organising certain specific health education programmes. Here, the health educator takes the lead and selects a few immediate health problems around the primary health centre. All data about the health problem and the community is collected with the help of the health personnel. With regard to the latter, the social and cultural

factors affecting the problem are studied. With this background, a health education plan is developed by the health staff. In developing the plan, the objectives of the programme are set forth, steps in the organisation of the educational aspects of the programme and the organisational structure are decided. That is the responsibility of each member of the health team, the responsibilities to be assigned to the other key members and groups, the key facts which will need emphasis, etc., are fixed up. The major groups to be reached through education, the action desired in each, a plan of education for each that may lead to the action desired and the methods and media for the educational plan are drawn up. The health personnel are helped to carry out the programme rendering help at the appropriate stages.

(vii) Production of simple material at the primary health centre level for educational purposes with the help of the health educator.

(viii) Developing good public relations by orienting the staff in their approach to the members of the public for their work.

To promote activities to develop along these lines, a good number of trained health educators are necessary. The functions of these health educators must be clearcut. They only orient the personnel to health education, initiate action, give technical guidance, supplement their activities and assess the work periodically. In Kerala State, which had nine districts, (the population of each district is approximately two million, there are two field units with a health education officer and a health educator for each unit and a stock of audio-visual and other equipments. This is in addition to the field study and demonstration and training unit. This is inadequate to promote activities in a sound manner in the primary health centres and at least one health educator for each district is necessary.

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HEALTH EDUCATION IN INDIA

HEALTH education has received great emphasis during the Second Plan period since it is one of the best democratic ways to make people change their unhealthy ways of living, and shoulder the responsibility for promoting health of individuals, families and communities. The Planning Commission and the Central Council of Health have reiterated the need for organising and developing health education at the local, State and national levels of health administration. The success of different public health programmes depends upon what people learn, feel and do about their health and that of their neighbours.

In order to provide leadership for developing health education in the country, the Ministry of Health approved the organisation of the Central Health Education Bureau in October 1955. The Scheme could not be implemented immediately as trained technical personnel were not available.

However, in 1957, the Bureau started functioning with the following aims :

- (i) To interpret the plans, programmes and achievements of the Health Ministry ;
- (ii) To train key health and community welfare workers in health education and research methods to evolve effective methodology and tools of training ;
- (iii) To design, guide, co-ordinate and conduct research in health behaviour, health education process and aids ;
- (iv) To prepare and distribute 'type' health education material to States and other agencies ;
- (v) To render technical and other assistance to official and non-official agencies engaged in health education work and to coordinate their programmes ; and

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- (vi) To cooperate and collaborate with international agencies in promoting health education activities.

Media Division

One of the main functions of the Bureau is the interpretation of plans, programmes and policies of the Union Health Ministry. This was achieved by the organisation of the Media Division in the Bureau which took up the publication of the monthly journal, *Swasth Hind* from 1957 and the publication of the health education material.

Swasth Hind and Periodicals

The Editorial Section, a unit of the Media Division, started functioning with the inception of the Bureau, and the first assignment was the commencement of *Swasth Hind*—the monthly journal of the Bureau in English—from January 1957. The Journal started as a six-page bulletin and gradually developed into a 32-page magazine, which it is today. It has been endeavouring to give coverage of health events and offer informative articles on pressing health problems. Special numbers of the Journal are published from time to time to mark some important events like the World Health Day, National Cleanliness Day, Children's Day, etc. Special issues were devoted to subjects like Leprosy, Malaria, Family Planning, Ayurveda, Venereal Diseases, etc.

From July 1960 the Bureau is publishing the Public Health Engineering Bulletin—a quarterly—for the Public Health Engineering Section of the Directorate General of Health Services.

"C.H.E.B. News"—a cyclostyled bulletin, was started in October 1960. This contains information which is useful to health educators.

Other Publications

Besides the periodicals, the Bureau has brought out a number of health education and publicity

material like brochures, pamphlets, booklets, folders, posters, etc., both in English and Hindi on various health subjects.

Many of these publications have either been reproduced or translated by the State Health Departments and other organisations. Newspapers and magazines have also published articles utilising these material and press releases issued by the Bureau. So far, 121 publications and 35 posters have been brought out and distributed by the Bureau.

Visual Aids

Apart from these, visual aids like flannelgraph, flash cards, flip-charts, puppets, etc., have been developed in the Bureau. These have been found to be effective educational tools in the hands of health and welfare workers trained in health education.

A photographic library has been functioning since 1960 and it has already a collection of over 2,200 negatives on different health subjects. These will prove to be a rich source of reference material for designing different types of visual and audio-visual aids.

Films and Film Strips

Since the inception of the Bureau 11 films have been produced with the assistance of the Information and Broadcasting Ministry. Most of these have been released for general publicity in cinema houses. These films are also made in 16mm for integrated publicity and educational purposes. Eight films are now under production.

The film library of the Bureau now possesses 590 films, of which over 400 are loaned to the official and recognised voluntary organisations. On an average about 700 films are loaned annually. Forty to fifty films are previewed in a year and a number of them are added to the library if they are found suitable for educational purposes.

One hundred and seven filmstrips are maintained in the Bureau. They are found to be effective educational tools in small groups.

Exhibitions

The Bureau conducted three important health exhibitions—the Health Pavilion in the “India 1958

Exhibition”, the “Health Progress Exhibition” in connection with the XIV World Health Assembly, and the Health Exhibition of the Indian Industries Fair—1961.

Training Division

“Health education is now widely recognised as one of the essential elements of health programmes, which usually depends on the active participation of a well-informed public. Every health worker who is in close contact with the people has a potential influence on the knowledge, attitudes and health practices of the people with whom he works. In order to reap the best results from these contacts, it is essential that doctors, nurses, midwives, environmental sanitation workers and others with a specialised health knowledge become more conscious of their educational responsibilities, and approach the public with confidence, optimism and a variety of techniques.” Therefore, it is necessary that all members of the health team get a thorough understanding and training of the appropriate educational methods and means for enlisting people’s participation to help them benefit by the available health services.

With this end in view, the Training Section was established in the Bureau during 1959. When the Section has its full compliment of staff, it will perform the following functions :

- (i) prepare health and allied personnel to practice health education in their work ;
- (ii) test and develop appropriate teaching methods and guides in health education for training various health personnel; and
- (iii) train suitable personnel from the fields of health, education and social sciences as health education specialists.

Due to non-recruitment of suitable staff, it has not been possible to conduct activities fully for achieving the above objectives, but with the meagre available resources, the Division has carried out the following activities given below in brief :

- (i) 1957-59 : Training activities of the Bureau before the establishment of this Division were limited to talks and demonstrations on health education in answer to requests made by the other Sections of the

Directorate and Ministry of Education. A few batches of W.H.O Fellow trainees in health education also were provided field training.

- (ii) 1960-61: (a) First Training Course under the full-time responsibility of CHEB-Training Division for Health Education staff of the Family Planning Education Unit was started in 1960 (10 students) and since then 31 Family Planning trainees have been trained in Health Education principles and methods.
- (b) Participation in the Training Programme organised by other Sections in the D.G.H.S. and in the Ministry of Education are being continued.
- (c) A Health Education Seminar was planned, organised and conducted at Vigyan Bhavan in March 1960 for Honorary Family Planning Education Leaders. Health Educators from various States in the country also attended.
- (d) An in-service training course in health education to the staff of the Bureau has been initiated.
- (e) The Division participated in providing training in health education to Public Health Nursing trainees at Lady Reading Health School. The experience gained as a result of this participation is being utilised in working out a syllabus for Public Health Nursing Training.

Programme for 1962-63

1. In order to prepare the training personnel of the State Health Education Bureaux for imparting training to various health workers in the States, it is proposed to start a training programme in the Bureau.
2. It is proposed to study the various training programmes for the health and allied workers in the country and then standardize their training methodology (Health Education Contents) and prepare suitable teaching guide.
3. To review the progress of health education in the country and to discuss future plans for promotion of health education, it is proposed to have a seminar of health educators from State Health Education Bureaux during the current financial year.

4. Besides the Training Wing (already existing), this Division will have Field Study & Demonstration Centres, one urban and one rural. This Division will thus provide a comprehensive training and experience in the classroom as well as in the field.

Research and Evaluation Division

Research and evaluation is one of the important activities of the Bureau. Every practical functional activity needs research upon which to base the programmes. The principles of health education as well as its techniques are derived primarily from basic research in the fields of human behaviour, psychology, sociology, anthropology, biological sciences and applied research in the field of communication and education. Research focussed on specific problems of health education will increase the adequacy of programmes and increase the effectiveness of health education techniques. A beginning has been made in the Bureau to find the best method and media for dissemination of health information and for the development of healthy attitudes and habits among the people.

So far the following activities have been undertaken by the Research and Evaluation Division which was started in September 1960.

The procedure for pre-testing posters was prepared and tried in the field. According to the findings these have been revised and finalised.

Study design for educational aspects of Trachoma Pilot Project was formulated. This included preparation, pre-testing and finalisation of questionnaires and proformas before they are used for the entire project area.

Details of the family planning communication study unit have been worked out after conducting a general survey of five community development blocks under the Delhi Administration. From the findings of the survey two blocks have been selected for a study on mass dissemination of information for fuller utilisation of the services of family planning clinics.

Six types of package study programmes have been developed as a part of the family planning action

research. The proposals are now under the consideration of the Family Planning Communication and Motivation Expert Committee appointed by the Ministry of Health.

A research design has been prepared to evolve action proposed from the Smallpox Eradication Pilot Project so that people's participation for the ensuing campaign may be achieved to the maximum.

Apart from these activities the Research Division assisted in the training programme of the Bureau and in conducting family planning camps. It also assisted in evaluating the effectiveness of the Health Pavilion at the Indian Industries Fair—1961.

School health education work was started in the Bureau early in 1958 with the constitution of the School Health Education and Nutrition Education Committee by the Ministry of Education. A rapid survey was made to find out the prevailing health and hygiene curriculum in teacher-training institutions and primary and secondary schools. From the data obtained a draft curriculum was prepared for the teacher-training institutions, which was accepted by the Conference of the Principals of teacher-training institutions, and later recommended by the Inter-University Board. Some of the Universities have now included the curriculum as part of the Educational Psychology Paper in the B.Ed. Courses.

In December 1958, the School Health Education Project was started jointly by the Union Ministries of Education and Health with the assistance of the W.H.O. The Project continued and expanded the work of the School Health Education and Nutrition Education Committee. The health education curriculum for school children for age-group 6-11, 11-14 and 14-17 was drafted. The curriculum for the primary schools has been revised after obtaining the comments of the State Governments and educationists. It is now on field trial in the schools in and around Delhi. Teachers and headmasters of these schools were given training in a workshop with a view to help them to find practical ways in using the curriculum.

The Bureau has already held a workshop of primary school teachers and headmasters to prepare them for using the draft syllabi in the prevailing conditions of their schools. The workshop could

find practical solutions with regard to supply of drinking water in schools, improving the nutritional standards of students, sanitary facilities and teaching of health as a part of different subjects included in the syllabi.

Still another step in this line has been the setting up of the School Health Committee at the national level. The School Health Education Section of the Bureau has worked very closely with this Committee to prepare recommendations for comprehensive health programmes for school and pre-school children, with special attention to health services and school feeding. Three hundred copies of questionnaire were distributed in India and the replies were received for analysis. Material for 53 documents was selected, duplicated and distributed. An interim report has been submitted to the Ministry of Health in July 1960 and the final report on 2nd December, 1961. The recommendations of the Committee have a far-reaching effect.

The Section actively participated in the Seminar on Teacher Preparation for Health Education organised jointly by the World Confederation of Organisations of Teaching Profession, International Council for Health, Physical Education and Research and the International Council on Education for Teaching. The School Health Section assisted in planning and carrying out the entire programme of the Seminar. The Bureau also took specific part in the Programme: 'A Panel discussion and Presentation of a Paper'.

Family Planning Education Unit

This Unit was started in 1961 to conduct action research to find out the most effective methods of education in rural areas so that people might accept family planning and utilise the services provided by the Government to the maximum extent.

Special Activities

The Bureau undertook planning and organising various seminars, conferences, and in conducting National Cleanliness Day, Family Planning Day, Children's Day, World Health Day, etc.

Several health education schemes and technical papers were produced in the past four years. The important ones are : (i) What needs to be done to develop health education in India ; (ii) Health

Education—Past, Present & Future ; (iii) Health education aspects of family planning programme ; (iv) Health education in Malaria Eradication Programme ; (v) Educational phase of smallpox eradication campaign ; (vi) Scheme for the establishment of State Health Education Bureaux ; (vii) Scheme for starting Journals by the State Health Departments, etc., etc.

In connection with the XIV World Health Assembly a prestige publication of the *Swasth Hind*—a Souvenir Number—consisting of 352 pages, was produced and distributed to the Delegates of the Assembly besides nine other publications—including “Health in India in Pictures”.

Technical assistance and consultation have been given to other Ministries of the Government of India and to the voluntary organisations like Indian Red Cross, Hind Kusht Nivaran Sangh, Bharat Sewak Samaj, Family Planning Association, etc.

The Bureau organised and provided field experiences for WHO Fellows specialised in health education.

A number of outstanding health educators, social scientists and public health administrators of international repute have spent varying periods in the Bureau and have given valuable help in formulating plans and in organising various activities of the Bureau.

The State Bureaux

The Central Council of Health at its seventh meeting held in January 1959 resolved that—

‘While noting the steps taken by the Central and some State Governments to establish Health Education Bureaux in their Health Directorates, the Central Council of Health commends to the State Governments the scheme for setting up of State Health Education Bureaux prepared and circulated by the Union Health Ministry and hopes that in order to ensure the successful implementation of the health programmes and to enlist the active participation of the people in maintaining and promoting their health, the health education programme will be developed on the lines suggested in the scheme.’

In pursuance of this resolution and of the recommendations of several Committees and the Planning Commission, the Government of India sanctioned in February 1959 the establishment of Health Education Bureaux in the States with assistance from the Centre (details of the scheme may be found in the Agenda and explanatory memorandum of the seventh meeting of the Council). The Central assistance consisted of 50 per cent of the recurring and 100 per cent of the non-recurring expenditure subject to a certain ceiling.

All the States except Jammu & Kashmir have agreed in principal to start the health education bureaux. The State Governments of Andhra Pradesh, Assam, Bihar, Kerala, Madras, Maharashtra (Bombay), Mysore and U.P. sanctioned the scheme during the Second Plan period. Some of the States have made considerable progress in the implementation of the project while others are recruiting the technical personnel, finding suitable accommodation, etc. The State Governments of West Bengal, Punjab and Gujarat have sanctioned the establishment of Bureaux early in 1961. Jammu & Kashmir, Orissa and Rajasthan propose to set up the Bureaux during Third Plan period. The Government of Madhya Pradesh has not made any provision for the starting of the Bureau.

The UNICEF has already supplied technical equipment, books and literature and transport to Andhra Pradesh, Bihar and Madras. Three more sets of equipment are ready for distribution to other States. It is likely that UNICEF will assist the other States when they take steps to organise the Bureaux. The WHO has assigned Health Education Advisers to Bihar and U.P. U.S.A.I.D. had provided a similar expert for Madras State for a period of three years. Provision is made to render similar assistance in the future to the States requiring it.

The Committee on Health Education of the Health Panel of the Planning Commission considered the development of health education work in the States and recommended that “the States should not only continue the scheme during the Third Plan period with the assistance of the Centre but also develop it further by decentralising health education activities to the district level”. They also urged the States

“to implement the scheme connected with health education in general and that related to women and children in particular”. “Adequate Central assistance”, they said, “should be given to the States for this purpose.”

The Central assistance for the State Health Education Bureaux will be continued during the Third Plan period. The pattern of assistance to be given will be decided shortly.

It is hoped that the State Governments will utilise the assistance of the Centre and the International Bilateral agencies in providing and expanding education services on scientific lines during the Third Plan period.

Third Plan Programme and the Future

The Committee on Health Education of the Health Panel of the Planning Commission carefully considered the proposals for promoting health education work in the country. It was of the view that “what has been done till now is rather inadequate in view of the vastness of the population, as well as the prevalence of the ignorance, illiteracy, superstition in all parts of the country. It is, therefore, necessary that efforts should be augmented manifold, and education of the public need to be integrated in all health schemes to gain the aims of the Third Plan Health Programme.”

“The Third Plan proposals for health education aims to find appropriate effective health education methods and media, to determine and utilise factors which motivate people to maintain and promote their health ; to train health and welfare workers ; to plan and guide health education work related to national health programmes and to coordinate all educational activities related to health. These aims are realistic and should form the basis for the Third Plan programme of health education.”

The Committee further felt that “successful implementation of all national health programmes depended upon the degree to which people actively participate in the programmes. People’s participation requires enlightened understanding on their part about the schemes, the benefits that accrue to them and the role they will have to play to reach the set goals. In order to do this, it is essential to

have health education personnel functioning at key levels”. At present training of health educators is done only at the All-India Institute of Hygiene and Public Health, Calcutta. The Committee emphasised the need for starting four or five teaching institutions located on a zonal basis to train health educators. Besides this, all health and community development personnel should receive in-service training in health education in the State Health Education Bureaux.

In conclusion, the Committee strongly urged “the strengthening of the existing health education work and extending it further during the Third Plan period so that people may participate in various health programmes of the Government utilising the services provided by these to the maximum and to re-orient their customs and habits in a manner which would ensure the maintenance of proper health.”

As recommended by the Committee, a provision of Rs 25 lakhs, besides the present committed expenditure, has been allotted in the Third Plan.

In addition, a special provision of Rs 5 lakhs has been made for establishing National Health Museum.

The programme of health education as chalked out by the Central Health Education Bureau for the Second Five Year Plan has been fully implemented. The Plan provision of Rs 17.75 lakhs has been spent.

The Central assistance was also given for either reorganising the health education services in States or for establishing them in those States which did not have.

The programme for the Third Plan period has been chalked out and it includes the following :

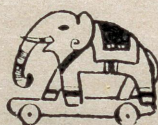
- (i) finding social, cultural and psychological factors which help in the formation of desirable health behaviour of people and to determine effective educational methods and media ;
- (ii) establishing health education specialist training programme in order to man key health education positions ;
- (iii) introduction, *i.e.*, in pre-and in-service training for health and welfare personnel including teachers ;

- (iv) introducing health education in schools with emphasis on its practical aspects ;
- (v) supporting and guiding State Health Education Bureaux and voluntary agencies engaged in health education ; and
- (vi) developing health education 'type' material.

The amount to be spent by the Centre is Rs 25 lakhs for extension of programmes and expenditure over and above Rs 17.70 lakhs required for the continuation of the schemes undertaken during the Second Five Year Plan. Besides this, the Centre will assist the States in the establishment and development of Health Education Bureaux by meeting 50 per cent of recurring and 75 per cent of non-recurring expenditure.

Health education will thus receive greater attention during the Third Plan period. All resources will be utilised which will facilitate planning at different stages. Problems have been defined and goals set. Fact will be collected and interpreted and the conclusions will be applied to the carrying out of the programme and the results evaluated.

Health education is a slow but sure method. It will help people find their own methods of solution. It will detect and provide motivation for self-effort. It believes in human dignity and value. The Central Health Education Bureau is wedded to these lofty aims. It needs the goodwill and cooperation of all.



NEW DRUG AGAINST SMALLPOX

A new anti-smallpox drug experimentally found effective in animals is receiving its first clinical trials on a patient isolated in a hospital in Yorkshire, England.

"If the results from the use of this anti-viral agent in man are as good as those already obtained in mice, its discovery should be one of the greatest advances in the control of smallpox since vaccination was introduced," writes the medical correspondent of *The Guardian*.

The patient who is the first to be experimentally treated is Dr Norman Ainley, pathologist at the Bradford Royal Infirmary, who performed an autopsy on the body of a Pakistani girl who died from smallpox some time ago.

—B.I.S.

PROBLEM IN LEPROSY EDUCATION

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WHETHER we are considering the problem of leprosy or any other major public health problem, public health education to be effective, requires careful planning and wise choice in the methods adopted. There must be realization on the part of all public health workers of the importance of their work and of their own opportunities for advancing it. The chief factor to be considered and the most important in programme development is to study the situation so as to determine not only what sort of response should be sought from the public, but also what is the best procedure in trying to get that response. This simply boils down to an understanding that education of the public, the patient and all others concerned entails knowing what tools are best suited and in what manner they may be effectively used. This precept applies to the doctor who sees a patient for the first time and must take certain steps towards diagnosing the problem in terms of what the chief complaint, history and examination have revealed. It also applies to a teacher who must use different methods and approaches in teaching a class of eight-year-olds and a class of sixteen-year-olds.

Education and Social Attitude

The problem of leprosy has not come upon us recently. We are faced with a disease that has its origins in ancient times. Our reaction to leprosy today, in many ways, hardly differs from that of centuries ago. The image of leprosy that one visualizes is that of something dreadful and frightening. In days gone by, the pronouncement of leprosy upon an unsuspecting victim had the same connotation of a death sentence today. In the Middle Ages, the fearful words "Dead to the world henceforth, now place your hope in God" cast the patient out of society

to fare as he might, shunned and forgotten by his fellowmen. It is this image that is still very much with us today and it is this that education must overcome. For years, only the religious organisations served the interest of the patient and then primarily from a standpoint of his welfare and bodily needs. The sympathetic understanding of the public towards this problem was not given the much needed attention. Frankly, an educational approach to this problem must have its roots in the social aspects presented. The environment and the emotional impact are two prime considerations in the development of a wise and systematic educational programme. An unsympathetic public will not be inclined towards being educated about a problem in which it refuses to share responsibility. A knowledge of public understanding, attitudes, concepts, beliefs and values towards the problem of leprosy must be known prior to an undertaking of such magnitude as remoulding public opinion and feeling. The common knowledge that such public feeling exists about leprosy must have tremendous effect on the person who falls victim to the disease, thus creating in him a fear of having the condition become publicly known with the consequence of ostracism from the society and his loved ones.

Let us now examine a portion of the existing situation before attempting to make a diagnosis for the future. A report in the journal *Leprosy in India*, January 1960, emphasizes the need to train field workers and particularly medical officers in the social aspects of leprosy. The report pointed out in detail that as causative factors, the social element must be viewed in two areas—the environmental and emotional factors. Evidence indicates that the environment influences the resistance to disease

through existing poverty, inadequate living accommodation, lack of health knowledge and community prejudices. There can be no doubt that poverty and inadequate living accommodation contribute to all public health problems in a relative way. The individual who suffers from poor nutrition, crowding and exposure to infection is going to be a more susceptible target. Lack of health knowledge certainly is going to be a contributing factor in terms of failure to recognise disease and to take necessary steps towards using existing facilities for treatment once the disease is recognised. In leprosy, as in other public health problems where facilities exist to bring disease under control, the lack of health knowledge among the public becomes one of the most serious defects in our ability to solve these problems, even though the means exist. We have seen time and time again how community prejudice has an effect on our efforts in promoting public health programmes. Whether it be cholera, smallpox or family planning, this factor is ever an important one and must not be underestimated when plans are made towards implementing and developing programmes. Far too often, this is the case.

Emotional Factor

In discussing the emotional factors involved in leprosy, one must recognize that such an element is often found to influence susceptibility to disease and in this case continued emotional disturbance may often tend to speed up the otherwise more or less sluggish and even course of leprosy. In terms of the emotional impact on society in general, one must consider the impact of traditional notions of the nature of the disease. Because of the obvious mutilation of limbs in advanced cases, even though it may not be directly due to leprosy, leprosy arouses in other individuals feelings of fear, hatred, hostility, social ostracising of victim and the paradoxical feeling of apathy.

The earlier mentioned report makes some serious points for consideration in terms of social consequence which deters appropriate reaction to education. First and foremost, there is a denial of means of livelihood. A leprosy victim is often denied the use of hospital facilities for treatment of other diseases. This suggests a certain lack on the part of those of us who should best be in a position to combat such an attitude. Another important consequence is the denial of family and social life once a person falls

prey to leprosy. In India, having leprosy still remains a possible cause for divorce. Another factor which cannot be underestimated is the lack of adequate facilities of rehabilitation when the disease is rendered non-infectious. With such factors as these to be faced, the problem of education certainly cannot be tackled lightly in dealing with public attitude. We must now, of course, consider the reaction on the patient of this social stress and its effect.

Effect on Patient

The first and obvious effect on the patient of the various social pressures just mentioned will be to conceal the disease. Knowing that he faces separation from his home and society, loss of livelihood and the consequences of facing life as a vagabond, he is going to avoid detection and by thus doing, he causes greater danger to himself and those around him. Knowing too, that he has fallen ill to such a disease about which he has gross misconceptions, he becomes depressed and tends to lose interest in life. The exposure to degradation is another factor which must influence his behaviour, resulting in concealment of the disease. Even when he does face up to the issue and seeks medical aid, he learns that it will be prolonged and without adequate understanding of the need to continue regular treatment, he fails to follow through with the anticipated result of serious deformity and becoming an advanced case more difficult to aid. This cannot help but bring despondency when the patient feels all hope for him is gone. He no longer can work; he is a threat to his family and friends and soon becomes a dependant on his society either as a beggar or as a public charge. With the impact of such factors as described here, one soon appreciates the immensity involved in an educational programme which is faced with such hurdles presented both by society and the patient as an individual.

There is another element—a very important one—that must be considered, namely, the patient's family. The stigma of leprosy brings about feelings of shame with the resultant tendency to conceal the patient. Perhaps, we might substitute the word fear for shame, but the result is the same. The family must face deprivation through loss of earning power, if the patient is the earner. The children of the family are often denied educational facilities and a matter for major concern is the difficulty in marriage for the children. In some instances, families considering

a marriage arrangement will make discreet inquiry regarding the history of leprosy and, if such is found, then the marriage is forestalled.

Social Implications—Need for Emphasis

With all these factors to be considered what then is the impact on society in general and the resulting consequences? In the face of such existing attitudes both among the society and the patient, obviously the control of leprosy becomes difficult. In the same token, education which is part of control becomes equally difficult. The society is deprived of the patient's productive contribution. There is forced unemployment which is unnecessary and the result is that society is forced to maintain the patient and his family either through existing facilities or see them become beggars. The obvious effect of all these factors show that the social implication of leprosy requires greatest emphasis in any educational programme.

We have mentioned at length the negative aspects that exist in considering a programme of leprosy education. One certainly must know the problems to be faced if intelligent planning for education is to be considered. We cannot just accept the fact that a problem exists and then prepare a mass publicity programme that will not result in any significant change in the situation. This has been tried and is still being tried in far too many public health programmes without appreciable results. What then must be the primary considerations which we must face?

Although we may justifiably feel that ample evidence exists in regard to public attitude and beliefs about leprosy, specific information of this nature is far too often lacking. To properly plan an intelligent educational programme, it is essential that we first undertake studies of attitudes, beliefs, the scientific knowledge and understanding, and general health behaviour as it concerns leprosy. It is suggested here that not only the public be studied in general, but that other selected groups representing as many facets as possible be considered. A study of students at training colleges and universities would yield worthwhile information as to the concepts held by a viable and well-educated segment of society, a group that will wield much influence in the future. It would be well to undertake such a study among

professionals, such as teachers, doctors, social workers and others to determine the concepts held by a group that wields much influence today. Just as important as the groups already mentioned are those in Government service who come into direct contact with the people and exert much influence. I am speaking specifically of community development, public health and medical workers. A study of their concept of leprosy is definitely in order for we must be convinced that they too have the proper scientific knowledge about the disease and that they maintain a healthy attitude towards it. They are the closest to the people and in any educational programme they will have the greatest personal influence with them. It should also be noted here that greater emphasis may be given to susceptible populations—in the age-groups of highest incidence and industrial workers in areas of high incidence. We must also consider the patient himself. Those patients who are seen at the clinics and dispensaries should be certainly able to provide us with valuable information and insight in regard to the impact of the disease with which they have personal experience. Since much of our effort must centre round patient education and family education, we certainly must know the attitude of the patient and the problems he faces, before we can hope to influence him towards a desirable course of action. His entire treatment, rehabilitation and place in society are dependent on his attitude towards leprosy and himself as a patient.

Rehabilitation of Patient

In the consideration of the patient and his subsequent rehabilitation as a useful member of the society, we must consider just what is meant by the term "rehabilitation", and its implication in educational programmes. Quoting the *W.H.O. Technical Report Series*, 1960, 189,20, we find the following:

"Rehabilitation means the physical and mental restoration, as far as possible, of all treated patients to normal activity, so that they may be able to resume their place in home, society and industry. To achieve this, treatment of the physical disability is obviously necessary, but it must be accompanied by the education of the patient, his family and the public, so that not only can he take his normal place, but society will also be willing to accept him and assist in his complete rehabilitation."

It is often felt by administrators that education is a separate entity from the health programme under

consideration. In leprosy, where the patient is often stunned by the diagnosis, it is imperative that his education and rehabilitation begin simultaneously, if one is to combat the anticipated depression and apathy, which are factors for the failure on the part of the patient to go through with the course of treatment. It is realized that the problem of rehabilitation is not so easily solved as discussed. The *W.H.O. Technical Report Series* 1960, 189,21 tells us further that over ten million in the world are estimated to suffer from leprosy. Less than five per cent can be accommodated in existing institutions ; most live in their own homes, and probably not more than 20 per cent receive treatment of any kind. About 25 per cent (a conservative estimate) have some disability. In Uttar Pradesh, according to information given in the *The State of Health of Uttar Pradesh* there are estimated to be about two lakh cases and about fifteen lakhs suffering from the disease. Obviously, the problem of rehabilitation cannot be lightly dealt with. Here, we can only suggest that with those patients on State rolls and now undergoing treatment, a plan of education must be developed for their benefit. This will obviously involve training of the workers in necessary educational methods.

Education of Public

Tackling the problem of educating the public with an aim towards changing existing attitudes, practices and the present pattern of health behaviour can hardly be expected to yield to a mass publicity type of approach. While it is highly popular to carry on such short-lived campaign, and usually and at considerable expense, we can at best expect nothing more than arousing some mild curiosity on the part of the public. What we have often failed to realise is that this offers us an opportunity to take the next step and one that has shown to be more productive, that of the most personal group approach. Certainly, before developing group interest, we much find a way to reach these groups. Obviously, workers will have to make individual contacts seeking out leaders and others of influence who can assist them in forming small groups in which the problem of leprosy can be discussed. Unless we can induce leaders to pave the way, it will not be possible to develop a well-organised group discussion programme in which people have a chance to hear and be heard. Here again, we face the problem of

providing workers with the necessary skills to promote this approach. Again, we must turn to the need for educating our field workers so that the methodology and techniques can be made part of their working equipment.

Another aspect of importance in education is the provision of a variety of suitable educational material. At the moment, there is a dearth of really good material needed to present the problem in a positive manner. Much of the available aids tend to stress the fear element by perpetuating the image of the deformed patient. Simple, well-thought-out and low-g geared educational material have to be developed to suit the needs of all segments of society. Material suitable for an educated segment of society will not suffice for the rural population where illiteracy is a factor. Material designed for use with school children must be tied up with their study of health in general with the aim of developing an overall positive attitude.

Simple exhibits at places where people gather can be the first step towards gaining their attention. The primary health centre, the hospital, the block headquarters, fairs, cinemas and other public gatherings offer this opportunity. This must be followed up, however, by personal contact with the people so that workers may learn about the existing basis of knowledge and make their educational plans accordingly.

The question that is raised is by whom shall all this be done and from where will the funds be made available. There are 11 leprosy units operating in Uttar Pradesh with five more anticipated in the Third Five Year Plan. Each has an allocation of Rs 4,000 earmarked for education and welfare services. It goes without saying that the bulk of this money find its way towards welfare services and not education. Clearly, the answer must be that we do not always know how to make proper use of this money for educational purposes and, therefore, tend to use it to provide direct services. There is no doubt that the welfare needs cannot ever be met with such a sum and that this money could best be used in carrying out educational programmes. Properly used simple material like puppets, flannelgraphs, flash cards, and teaching aids, useful for school health education programmes, could produce more effective results.

Training of Personnel

Our experience has shown us that use of these aids is not health education in itself. These are but tools in the hands of the health worker and he must be taught to use them properly. A well-trained field worker will provide the personal element needed in the use of these tools and make them more effective. He will know how to use them so as to stimulate discussion that will help remove misconceptions. Use of these aids adds to the interest of the group and helps in better understanding and retention of the information presented. Since health workers are essentially health teachers, the training of health workers must include greater emphasis on educational methods and techniques. We must begin in the basic training programme and continue with in-service training at regular intervals.

I have already mentioned the prevailing attitude towards leprosy and the vital role of education and some of the ways an educational programme can be conducted. It is recognised that our efforts must be directed towards the general public, the patient, his family and to the many professional and semi-professional workers involved. This last category serves as our source for reaching the public and carrying out our educational programme. Our foremost need is to provide basic training in educational techniques to all these workers. Secondly, we must provide them with educational material that are suitable, practical and inexpensive. Not only must the worker be made to understand his role in education, but also the supervisor—whether he be medical officer, headmaster or district planning officer. More seminars must be planned for all the categories of workers, including those mentioned above. We must begin by educating the potential educators. What are our own misconceptions and attitudes? Are we in a

position to honestly face the public and the patient to convince them that leprosy is a disease much as any other disease and should be considered as such.

The title of this paper suggests that the problem in leprosy education is greater than the disease itself. I do not really believe the problem of education is such a great one nor do I feel that the problem of leprosy is a great one out of all proportion to other public health problems. What I do feel is how we should do the job ahead of us better than we have been doing, especially when we have the knowledge and the means of acquiring the skills necessary. The same principles of education for other public health problems apply equally to leprosy. Mass approach, group approach, individual approach, audio-visual aids, mass communication, staff meetings and training—both pre-service and in-service—are all known to us and need only be used in the right manner.

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INTEGRATING HEALTH EDUCATION IN TRAINING HEALTH PERSONNEL

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CHANGE in people's customs is an even more delicate responsibility than surgery. Whenever one seeks to alter people's way of life, he is dealing not with one individual but with the well-being and happiness of generations of men and women. The gravity of the responsibility need not overawe, but must impress, each candidate in the profession with the necessity for the most careful training.

—Edwerd H. Spice

During the last decade or so, health services have undergone an enormous progress both in the basic pattern of organisation and the method of delivery. Rendering of preventive and curative services through primary health centres has become a national pattern. The community development programme on one side and the democratic decentralisation by Panchayati Raj on the other are greatly shaping the method of services.

Introduction of newer types of services like family planning, malaria surveillance in the National Malaria Eradication Programme and mass vaccination in the National Smallpox Eradication Programme and a large-scale implementation of other services like maternity and child health, leprosy control, tuberculosis control, etc., have exposed the health personnel face to face with human behaviour.

The behaviour of the present-day villager towards the health programmes is the result of long history, beliefs and traditions passed on to him from his forefathers. Man by nature shows resistance to change

for the fear that it may upset his normal way of life. Consequently, the health workers in India are facing a major challenge of formidable task of understanding people and helping them to change. "Health education embraces the sum of all experiences of an individual that change or influence his attitudes or behaviour in respect of health and the processes or efforts of bringing those changes about."

"A principal objective of health education must be to help the nurse, midwives, physicians and other health workers with the educational phases of their work with the people."

Therefore, health education has to be an integral part of every health activity if lasting results are to be sought by the health programmes.

Health Personnel—Expanding 'Team of Technical Men'

"Manpower has usually been referred to as the nation's first resource," observes the Planning Commission. It is particularly true of health personnel. In recent years, there is a tremendous increase in the number and categories of health workers. Each may deal with a particular discipline in public health but the sphere of activity is the same. All work at the community level and direct their efforts to the common villager. To relieve the recipient of the multiple and varied impact, there is need to coordinate their activities and work with a team spirit. The spirit of team work should pervade the entire work from the very initial stages. Each member of the team accepts responsibility for that part of the survey or programme

he can do best and carries out his part in a realistic manner, that supports the work of all the other personnel. Consequently, the health workers need to be prepared for team work among themselves and with the other welfare workers in the locality.

Thus, to prepare the health workers for the responsibility of carrying on health education in the field and work as effective members of a team, teaching of health education should be included in the health training programmes.

When to Integrate

The entire career of a professional is in fact one stretch of training ground. Every act of service is an exposure to a learning situation and a give-and-take transaction. Yet, there are some occasions which serve as training situations like staff meetings, conferences, group discussions, etc. Weaving a thread of health education in the fabric of such training situations should not be overlooked. By doing so, health education would be well-appreciated and the scope for application easily found as the dose will be small and presented in a matrix of a real local situation.

But the more significant and relatively well-defined specific periods in the career of a health worker where health education is to be integrated, are the training periods.

Today in India, health training programmes are far more extensive and of a larger variety than ever before. They can be broadly classified as basic pre-service training programmes; in-service training programmes, and post-graduate courses.

The statement below presents the complicated nature of the health training programmes in India in quality and quantity.

Type of Training	Period of training	Provision for health Education	Remarks
Pre-service training programme			
Physicians	two years		Out of five years preventive & social medicine is for two years.

Health inspectors	one year	*classroom teaching-10 hrs. Field work-30 hrs Total: 40 hrs
Health Visitors	2½ years	*16 hrs.
Auxiliary Nurse-midwivers	two years	*16 hrs
Vaccinators	one month	*three plus three hrs
Laboratory Technicians	one year	**
Public health Nurses	3½ years	**
Dais	six months	**

In-service training programme

Orientation training course in Mysore State for medical officers	eight weeks	*six plus three hrs
for Auxiliary health personnel	four weeks	**
All-India Centres (Poonamallee, Singur, and Najafgarh)	eight weeks	**
Family planning training in Mysore State for doctors, nurses, health inspectors and social workers	four weeks	*four plus two hrs
for Midwives	one week	**
All-India Centres—Bombay	eight weeks	**
Leprosy training in Mysore	15 days	four hours
" Outside	one to two months	
Malaria training	six weeks	**

N.B.— *Based on programme followed in Mysore State.
**Not yet defined.

Scope and Limitations for Integration

PRE-SERVICE TRAINING

A step in the right direction would be to integrate health education in the basic pre-service preparation of each worker. But it is more easily said than done.

The physician is the leader of the team of health personnel. He is to be a "social physician protecting the people and guiding to a healthier and happier life."

Yet, hitherto medical education was designed to make doctors think in technical terms. Most frequently, it is difficult for them to translate information into popular language. This difficulty in communication is a source of much cleavage between the doctor and the patient.

There is already a considerable progress in the improvement of the departments of preventive and social medicine in medical colleges. Health training centres—both urban and rural—are being set up in the various States with the assistance of international agencies.

The re-organised departments of preventive and social medicine with the health training centres are hoped to provide the students with a good background

of social and cultural conditions in our villages and equip him with the principles and techniques of health education.

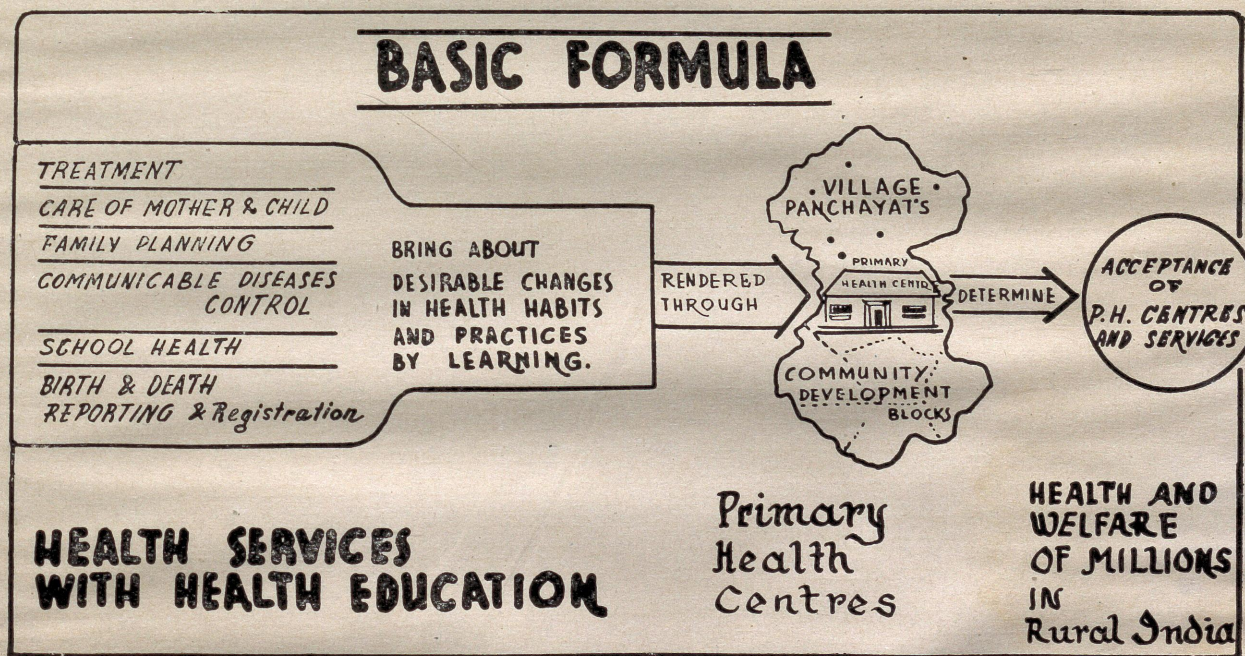
Several training programmes which are of recent origin like those for auxiliary nurse-midwives and health visitors and those which have been recently revised like that for health inspectors, have already provided for teaching of health education in their curricula.

Integration of health education in the rest of the training programmes is yet to be achieved.

IN-SERVICE TRAINING

Health education being a recent discipline in public health in India, most of the personnel already in service did not have any teaching in the subject. Hence, the present and the immediate need is integration of health education in the in-service training programmes. This proposition presents some unique problems in view of the fact that the trainees have had varied length of experiences in the field and their jobs are different.

Some aspects of health education are already integrated in the in-service training programmes, specially the orientation and the family planning training courses. Seminars have become the common mode of providing in-service training.



POST-GRADUATE TRAINING

Health education forms an integral part of the post-graduate course like Diploma in Public Health, Diploma in Maternity and Child Welfare, and Masters in Engineering and Public Health.

The aim of integrating health education into the training programmes is not to convert public health workers of various disciplines into full-time health educators, but to teach, motivate and stimulate the students to the extent that they would use educational approach in their everyday public health work.

The following aspects of health education need to be included:

- Importance of educational approach ;
- Some basic principles and objectives of health education ;
- Recognition and effective use of educational opportunity in the day-to-day work ;
- Educational methods and media—their relative value in rural India, and
- Experience in using common methods and media in the field.

How to Integrate

The usual tendency is to assess the place given to a subject in any training programme by the number of hours allotted for it. Health education is different from other subjects. It is not only the mortar but also the bricks in a building construction. The principles of health education, the processes of learning and providing experiences with the various methods of education and the use of media can be spread over the entire programme inter-mixed with the other subjects. At the same time, it is also a subject for direct teaching like any other subject. Both are essential for an effective integration of health education in the training programmes.

The entire training course must be a series of 'teaching-learning' situations. Even though the main object of training may be 'job orientation', the method of training is to be one of 'problem-solving'. Hence, the extent of integration of health education in any training programme is to be assessed by two yardsticks, one is the number of hours earmarked for direct teaching, and the other, which is far more important than the former, is shaping the entire training to be

one of adult learning. The in-service training programmes like orientation training and family planning, particularly seminars, do satisfy these requisites to a great extent. The basic pre-service training programmes are being re-cast to meet these requisites as and when curricula are being revised.

A good beginning is already made in integrating health education in the training programmes. Non-availability of health education specialists and the tendency to cover too many subjects in a short time are the two limitations to be overcome.

There is need to study the basic curricula and determine the aspects of health education to be integrated depending upon the need of the particular category of personnel.

Health Education Bureaux

The plans to establish training units in the Health Education Bureaux at the National and the State levels would provide a nucleus of staff to study, plan further integration of health education in the health training programmes and evolve a fairly uniform pattern for implementation all over the country.

The staff of the health training centres need to be prepared and guided for the task of training the trainees. Providing an health education specialist at least to the major health training centres would facilitate successful integration of health education in all the health training programmes.

Conclusion

Though in this article integration of health education in the health training programmes is dealt at length, it does not mean that in-service training programmes purely for health education should be overlooked. In view of the paucity of trained health educators and the need to harvest the available opportunities for training health personnel in health education, it is but essential that priority must be given to integration of health education in the already existing health training programmes. As the efforts to integrate health education in the training programmes are only of recent origin, trials over a length of time would probably provide enough experiences to be more specific and precise in the suggestions.

[SEE REFERENCES ON PAGE 139]

NATIONAL SMALLPOX ERADICATION PROGRAMME

THE National Smallpox Eradication Programme was proposed to be launched from February 1962. Necessary instructions in the matter were also issued to the State Governments on January 3, 1962. But a factual survey of the progress made in the various States, however, reveals that only two States namely Madras and Mysore and the Union Territory of Himachal Pradesh have so far started the vaccination programme from February 1962 and the rest of them propose to embark on the programme from September-October, 1962.

This observation was made by Dr Sushila Nayyar, Minister of Health, in a written statement laid on the table of the Rajya Sabha on 19th April, 1962 in reply to a question by Shri M.P. Bhargava.

The reason for delay in launching the programme is stated to be budgetary and personnel difficulties as well as delays in procuring essential supplies and equipment by the State Governments.

The statement added : The salient features of the National Smallpox Eradication Programme are as under : (i) Setting up of a Central Organisation in the Directorate General of Health Services for coordination etc., of the programme ; (ii) Setting up of a Headquarters organisation in each State under an Assistant Director of Health Services in full charge of operations at State level ; (iii) Setting up of district organisations in each State for the execution of mass vaccination campaign, *e.g.*, appointment of supervising medical officers, health educators, vaccinators, inspectors and ancillary staff ; (iv) procurement of equipment, such as vehicles, lancets, sterilising sets, refrigerators, etc. ; and (v) provision of adequate supplies of smallpox vaccine.

The mass vaccination campaign, if properly organised by the State Governments, could be completed in the entire State in two phases, *viz.*, to cover one-half of the districts/areas in each State by mass vaccination ; and to cover the remaining districts/areas of each State by mass vaccination campaign. Thus, the same staff and equipment could be utilised for the campaign in its two phases.

For the implementation of the National Smallpox Eradication Programme, suitable organisations will have to be set up at the State Headquarters for proper planning, supervision, coordination and evaluation of results. These organisations will have to be set up by the State Governments immediately and continued for a period of about three years.

It is also considered that each unit should be able to cover at least three districts/areas each with a population of not less than 10 lakhs during the two years of the mass vaccination campaign.

Necessary steps have been taken by the Central Government for the setting up of a Central Organisation in the Directorate General of Health Services for necessary coordination etc., of the programme. The Government of India have accepted the supply of 250 million doses of freeze-dried Smallpox Vaccine as a gift from the Government of the U.S.S.R. The Directorate General of Health Services have made arrangements for its reception, storage and distribution. This gift vaccine is to be received in eight quarterly instalments of approximately 31.25 million doses. The first quarterly instalment has already been received.

The financial implications of the programme at the State level are given below : (i) Setting up of headquarters organisation in a State for three years at an expenditure Rs 35,000 per annum ; (ii) Setting

[SEE FACING PAGE]

International Conference on Health and Health Education

THE International Conference on Health and Health Education will be held at Philadelphia, Pennsylvania, United States of America, from 30 June to 7 July, 1962. The Conference is the fifth to be sponsored by the International Union for Health Education. It will provide, in the words of Prof. Giovanni Canaperia, President of the International Union for Health Education, a significant opportunity for a constructive dialogue leading to a higher level of understanding—and furthering productive action—among those concerned with the planning and direction of health programmes, and those who look upon the health behaviour of man from the perspectives of education and social services.

The International Conference on Health and Health Education will examine the major health problems which confront man in his biological environment, his physical environment, and his social environment. The discussions of the Conference will seek to illuminate the contribution that health education can make, and is making to the control of important causes of death and disability and to the promotion of health in the world today.

The Conference will bring together a broad representation of professional fields whose research, planning, and action influence the health status of mankind. Participants will include health officials and workers such as physicians, health education specialists, experts in environmental sanitation, nursing, etc., as well as social scientists, leaders in education, social work, and other professions.

[CONTD. FROM FACING PAGE]

up of a District Organisation in a State at an expenditure of Rs 72,000—non-recurring and Rs 2,08,000—recurring per annum.

The pattern of Central assistance to State Governments for the National Smallpox Eradication Programme will be as follows :

(i) Non-recurring—100 per cent and (ii) Recurring—75 per cent.

The Central assistance to State Governments will be paid by the Central Government in accordance with the procedure prescribed by the Planning Com-

mission for Centrally-aided schemes. The Central and State shares of expenditure will be accommodated within the State Plan ceiling.

A provision of Rs 688.98 lakhs has been made in the Third Five Year Plan for the National Smallpox Eradication Programme. The Government of India have constituted an Advisory Committee for the purpose. The Committee shall advise the Government on all technical and administrative matters pertaining to the implementation of the National Smallpox Eradication Programme.

THE NINTH INTERNATIONAL CONGRESS FOR PROPHYLACTIC MEDICINE AND SOCIAL HYGIENE

THE Ninth International Congress for Prophylactic Medicine and Social Hygiene will be held at Bad Godesberg, Germany, from 2nd to 5th October, 1962.

Subjects of the Congress are listed as follows :

(I) Social Hygienic Problems of a Vocational Nature (Sanitary regulations in factories, etc. ; Regulations concerning employment of juveniles ; Prevention of accidents in factories, etc. ; Noise in relation to hearing-defects and neuroses ; Dust-diseases and silicosis ; Rational nourishment in places of employment ; Sport and work ; Toxic influence of stimulants and pharmaceuticals ; and Rehabilitation). (II) Medical and Legal Sociology (Social psychological anxiety of the present day ; psycho-hygienic problems ; Legal sociology from a national and international point of view ; and Natural ethics and social sense of duty. (III) Health and Economic Development (Urbanization, limitation of country districts ; want of arable land and building-ground, displacement of industries to the country, industrial and agricultural workers ; Prophylaxis of actual infectious diseases ; Preventive inoculations ; Prophylaxis of poliomyelitis ; Actual

questions concerning tuberculosis ; Prophylaxis of rheumatism ; Prophylaxis of cardiac and circulatory diseases from an individual and a social hygienic point of view ; Prophylactic measures for combating venereal diseases ; Prophylaxis of tumours ; and Biology and welfare of old age.

Scientific Programme : Working languages are German, English and French. Equipment for showing slides and films in standard sizes will be provided.

Speaking Time : For main papers : 30 minutes ; for other papers : 15 minutes ; Scientific communications : 10 minutes ; discussion remarks : three minutes.

Registration fees : For Participants : DM 30. For Accompanying persons : DM 10. Fees should be paid when the definite registration is made (by June 30, 1962) to the Dresdner Bank, Aktiengesellschaft, Bad Godesberg, account No. 659534, at latest. For full particulars, write to General Sekretar, Internationale Gesellschaft. For Prophylaktische Medizin Und Sozial Hygiene, Bad Godesberg, Germany.



WORKING OF THE PREVENTION OF FOOD ADULTERATION ACT

The two statements below indicate the working of the Prevention of Food Adulteration Act 1954 in the States/Administrations during the period 1st June, 1955 to 31st December, 1959 and for the year 1960.

PREVENTION OF FOOD ADULTERATION

(1st June, 1955 to 31st December, 1959)

States/ Administration	No. of food samples sent to the Public Analyst	No. found adulterated	No. of prosecu- tions launched	No. of convictions	No. of acquittals including cases discharged	No. pending in courts	No. imprisoned as well as fined	Amount of fine realised (Rs.)	Remarks
Bombay	64,251	23,902	23,858	17,813	805	6,147	247	5,66,604	
Punjab	29,973	6,707	7,149	5,451	716	5,349	456	5,05,481	For 1958 & 1959 only
Rajasthan	3,416	5,564	3,319	884	30	509	7	57,600	-do-
				(for 1959 only)					
Mysore	2,885	1,146	1,117	707	31	627	33	38,995	-do-
Andhra Pradesh	28,828	8,674	9,293	8,549	432	255	32	69,248	
Manipur Administration	—	—	—	—	—	—	—	—	
Assam	2,951	1,488	57	45	1	13	—	3,575	For 1959 only
Madhya Pradesh	1,995	1,207	820	221	26	53	—	15,430	For 1958 & 1959 only
	(only 1958 and 1959)		(1130 for 1955-59)						
Uttar Pradesh	1,03,593	21,977	27,573	17,263	659	2,778	91	13,80,612	For 1955-58 only
	1,36,439	28,928							
Madras	80,647	23,021	23,021	19,370	469	3,060	171	14,15,534	For 1955-59
Kerala	16,164	4,569	4,728	3,452	321	9,930	13	1,55,003	
Delhi Municipal Corporation	25,833	7,121	4,703	1,701	610	3,882	161	2,36,867	
Himachal Pradesh	232	117	110	45	11	58	—	4,045	or 1958 & 1959 only
	884	661							
Central Food Laboratory	(Analysed under Sec. 13(2) of the Act.)								

FOR THE YEAR 1960

May 1962

States/Administration	No. of food samples examined	No. found adulterated	No. of prosecution launched	No. of convictions	No. of acquittals	No. pending in courts	No. imprisoned	Total amount of fines realised (Rs.)
Andhra Pradesh	3,562	1,768	1,768	367	5	1,384	12	28,853
Assam	846	451	—	—	—	—	—	—
Bihar	4,431	837	661	274	20	347	11	8,033
Gujarat	9,492	1,423	1,076	963	82	403	84	77,175
Kerala	6,496	1,787	1,252	890	233	—	—	68,412
Madhya Pradesh	2,645	1,254	626	396	27	232	3	54,907
Madras	14,693	4,231	4,099	1,310	11	2,755	23	1,04,801
Maharashtra	16,703	7,989	8,036	6,386	44	2,416	44	2,20,476.50
Mysore	3,230	1,140	817	582	75	499	2	28,080
Orissa	994	241	173	64	6	93	Nil	2,380
Punjab	16,008	4,099	4,353	3,173	402	3,782	59	2,96,468
Rajasthan	3,082	1,492	1,309	711	197	1,525	8	28,234
Uttar Pradesh	26,666	6,328	9,722	4,479	573	4,556	271	3,35,602
West Bengal	8,673	2,565	2,922	1,835	31	2,054	44	1,80,115
Delhi	4,381	2,103	2,818	1,325	151	2,764	38	2,22,403
Himachal Pradesh	165	90	66	62	2	28	—	3,055
Tripura	90	39	88	69	Nil	19	2	3,516
Manipur								No Report

SMALLPOX AND CHOLERA

MORBIDITY & MORTALITY

ONE thousand and sixty cases of cholera with 410 deaths were reported during March 1962. The number of cases and deaths due to smallpox was respectively, 3790 and 936. Eighty-nine cases of plague with nine deaths were also reported.

STATE	CHOLERA		SMALLPOX		PLAGUE	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Andhra Pradesh	—	—	470	101	3	1
Assam	—	—	33*	5*	—	—
Bihar	16	4	—	—	—	—
Gujarat	—	—	232	96	—	—
Jammu & Kashmir	†	†	†	†	†	†
Kerala	—	—	93*	45*	—	—
Madhya Pradesh	—	—	406*	80*	—	—
Madras	—	—	935	251	7	2
Maharashtra	454	101	617	102	—	—
Mysore	456	250	163	48	79	6
Orissa	29	13	42	1	—	—
Punjab	—	—	128	31	—	—
Rajasthan	—	—	203*	38*	—	—
Uttar Pradesh	—	—	251	60	—	—
West Bengal	105	42	196*	76*	—	—
Andaman & Nicobar Islands	—	—	—	—	—	—
Himachal Pradesh	—	—	5	1	—	—
Delhi	—	—	16	1	—	—
Manipur	—	—	—	—	—	—
Pondicherry	†	†	†	†	†	†
Tripura	†	†	†	†	†	†
TOTAL :	1,060	410	3,790	936	89	9

* Figures incomplete.

† Figures not available.

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E=English, H=Hindi

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बच्चों के लिये
सब से अच्छा है

BREAST
MILK
BEST FOR
INFANTS



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