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SUPPORT TO AND UTILIZATION OF FIELD TRAINING AREAS WITHIN A COUNTRY

(and as an inter-country facility)

by

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Since WHO started its worldwide activities one of its main continuing objectives has been to promote a massive reorientation in medical education emphasizing the transition to preventive and social medicine and to community medicine. This new orientation must be based on community-side teaching which requires as great an internal revolution in medical education as Osler's introduction of bedside teaching. The field training area then should become equivalent to the teaching hospital with its teaching wards and laboratories.

Perhaps the earliest such effort was by one of my personal Gurus, John Grant, who started a field training area, in cooperation with James Yen, for medical students from Peking Union Medical College.[1] In 1934, he wrote the following. "The solution of this latter problem (training centers) indicates an important responsibility of the Peking Union Medical College that places it as the apex of a medical system which reaches down and actually provides an efficient health protection for the village inhabitant within the limitations of his present backward economic conditions. However, such a vertical medical system cannot stand by itself unless it is integrated with other vertical social activities in a joint horizontal attack upon the problem of social reconstruction".[2] Then in 1940 after he moved to Calcutta and established the Singur field training area for the All-India Institute of Hygiene and Public Health, John Grant made the following comment "Social background and its relation to public health

and disease constitutes no part of medical education as yet, although it is now obvious that it should, as much as bacteriology or surgery Perusal of the dicta in the past two decades, emanating from such organizations as the General Medical Council of Great Britain or the association of American Medical Colleges reveals that the major recommendation is the necessity to incorporate in the medical curriculum the preventive and public health aspects of medical knowledge. So far the results of these recommendations are nominal not only because of the vested interests of the older-established subjects but because the recommendations have almost entirely ignored suggestions regarding the specific measures necessary for their implementation. This failure is due to the absence of social experience on the part of the present 'elder statesmen' of medical education who have reached their present senior positions without opportunity for personal experience in undertaking the principle they are recommending, although they can now see its importance. However, this failure seems inexplicable in the light of the prescription by the same body of adequate self-participative facilities for instruction in the pre-clinical and clinical branches of medicine. In fact, today acceptance has virtually been reached in regard to acceptable standards for such facilities. However, educators have not yet recognized that adequate facilities for training in public health to either the undergraduate or graduate student can be assured only on the same principle as that already followed in pre-clinical and clinical instruction through the provision of opportunity for self-participative instruction in community fields under the control of the teaching institutions".[3]

Experience since that time shows the repeated necessity for relearning the same lessons. The major difference that I see is that we have moved from the rare and isolated projects where visionary innovators were like "prophets crying in the wilderness" to a progressive and wide-spread mass movement. When I started the first medical college field training area on the Indian subcontinent in 1952,[4] I thought it would take at least 30 years to get general implementation. It was, however, an idea whose time had come and by 1966 at the First All-India Congress on Medical Education it became national policy that every medical college should have a field training area. The progress has been somewhat erratic but, with strong central government and international agency backing, more than half of the hundred medical colleges in India now have some sort of field training area. Their main purpose is to provide for a rural internship program.

Similarly, when I helped organize the CENTO Conference on The Teaching of Preventive Medicine at Shiraz in 1961,[5] I visited most of the middle eastern medical colleges and found almost no involvement in field training. The developments since that time have been spotty but in general encouraging as is shown by a review of the situation in Turkey which was carried out last year by Rahmi Dirican[6] as a follow-up to our earlier and more detailed studies.[7] In some countries a critical mass of emphasis on rural training has been reached that should provide for self-sustaining growth. A major weakness is still to recruit and train teachers because there seem to be few new faculty coming along to replace the pioneers in this field. Throughout the 6 years a major stimulu

to progress has been provided by WHO meetings, consultations and seminars.

The sections which follow deal with specific aspects of community-side training which need particular attention.

A. Building a Data Base for Field Training Areas

Without data community-side teaching is purely an art and not a science Just as the good clinical educator bases much of his formal teaching on quantitative data about patients, the community teacher needs data in order to communicate an understanding of what is really going on in the community Epidemiological information relating to health status is equivalent to bacteriological and biochemical findings in individuals. Simple measures of temperature, pulse and respirations give a general indication of the health status of the individual patient and similarly vital rates relating to births, deaths and morbidity provide continuing simple indications of the health of the community patient.

A serious difficulty is the need to be selective in data collection and to separate those items which should be routinely gathered from those which should be limited to special studies. A broad data base will permit easy access for survey purposes by providing a statistical base so that appropriate sampling frames can be readily drawn.

One of the major objectives of a field practice area should be to serve as a place where health services research can be undertaken on innovative approaches to the development and improvement of rural health programs. In our emphasis on the teaching aspects of field training areas we often ignore the equally important potential for research. In order to

get clinical and laboratory oriented educators involved in the field training area, perhaps the most successful motivating force is to provide them with convenient opportunities for research. Everyone agrees that medical colleges should do research relevant to the needs of the populations they serve and it has become evident that there is no way of doing this which is as direct and effective as basing field research in a community study. The data system for the field training area should be organized so as to be conducive to research efforts without being trapped into becoming totally subservient to them. Even more dangerous is the common practice of trying to continue data gathering which has been started as part of research but which is far too sophisticated for routine activities.

A well-known weakness of statistical systems is that they collect so much junk. Tradition and habit, along with borrowed forms, maintain a flow of irrelevant and redundant numbers which make it difficult to sort out truly meaningful data. To start with, the burden of excessive form-filling may cause outright fabrication or, at the best, rushed estimation in the peripheral units where the data start. Excessive flow through the information system means that, not only are the data not trusted, but they are not even looked at. Good planning requires early attention to eliminating from the information system all items not related to defined objectives and functional use

For the field practice area, data needs customarily start with demographic information The basic unit of health care information is obviously the number of people to be served and their distribution.

Because of the rapid rate of population growth in most developing countries, it is particularly essential to have as accurate population projects as possible.

A second category of information is epidemiologic, specifically information on the frequency and distribution of major health problems. In developing countries, this is often very spotty Because of the chronic difficulty of getting accurate continuing reporting of mortality and morbidity information, an immediate need is often times to start by organizing some sort of sample survey. Certainly the selectivity inherent in hospital and other institutional reports of disease makes them only minimally useful for epidemiological information and this enhances the value of data gathered at community level.

In many places the most serious deficiencies of information systems are in economic data. Most health people have little idea of what sort of information might be useful for economic analyses. The simplest type of information is usually accurate cost accounting of specific health activities. Many of the measurements of items which would be useful in economic analysis, especially of the cost-benefit type, have still to be developed so that methodological research is needed.

Another category of information which should be specially developed for educational purposes concerns the utilization of facilities and the functional patterns of work of various types of personnel. A recent international study shows remarkable uniformity in utilization of physician, but not other parameters of health care in twelve localities under dissimilar health care systems[8] The most dramatic short term improvements in health care delivery can be made by increasing efficiency

of utilization This requires careful attention to the process of setting work standards and performance budgeting Without an adequate data system, such rationalization of the services is obviously impossible. A related type of information is basic administrative data on the availability and future projections of both manpower and facility resources. Data requirements for improving services fall into two categories. First are the initial or periodic surveys used to identify gaps, potential program interrelations, or causal linkages relating to motivations, practice, etc Second is the more limited administrative information collected routinely to maintain quality control and evaluation of continuing services, with emphasis on the number and distribution of those serviced, where, by whom, for what, and with beginning information on satisfaction and outcome.

An unfortunate feature of most efforts to improve data systems is that they often just add new items without cutting existing data flows. Information systems need a mechanism for killing forms to compensate for hyperfertile production of new forms Records and forms seems to develop lives of their own, with no one being willing to kill a form. The longer a form has persisted, the greater this protectionism becomes as administrators begin to feel that surely 30 years of files must be useful to someone. Many forms now being used originated from research interests. While it may be reasonable at early stages in program development to use some research oriented data gathering, a continuing danger is that research data should not get built too deeply into routine forms.

B. Coordination of Field Training With Intramural Training

Medical specialties are generally defined either according to the group of people they serve or by the type of activity and skills which occupy the professionals' time. Community medicine can be separately identified on both scales.

The patient of community medicine is obviously the community. The community is composed of individuals just as a forest is composed of trees but it has its own special characteristics. A woman is either pregnant or not pregnant but most communities are always about 3 percent pregnant. Similarly the illnesses of communities must be studied within their ecological setting. The gestalt of the whole community brings an understanding that is quite different from seeing separate individuals as patients. Concern for the individual need not be lost in the process but each person is seen in relation to the group. Health care becomes more than mere manipulation of the inner functions of individuals and focusses much more on the conditions which surround him. The fundamental and preventable causes of illness are usually community determinants.

To apply community health care a doctor needs special knowledge, skills and attitudes. Traditional medical education does not provide this understanding and practice. It is unreasonable to expect even a mature physician after many years of practice to pick these up spontaneously. The basic sciences of community medicine continue to be largely ignored. Even more important there are special skills of diagnosis

and health care which need to be developed with as much precision and care as present specialist training in wards and operating theaters. Most critical are a group of ethical standards that can now be defined, which call for basic modifications in the values and attitudes of the doctor who undertakes community responsibilities

The following section gives more detail on the knowledge, skills, and attitudes which are needed. The discussion is not intended to be inclusive. It is selective in the sense that an attempt is made to give priority to particular emphases which seem important today

1. Basic Sciences of Community Medicine

One of the early decisions in curriculum planning for community medicine was that teaching should extend from the beginning of the medical course through the internship. Now with the progressive maturation of the concept of community medicine it is even more important to restate this principle and to clearly define what it means. The basic sciences of community medicine must be built into the preclinical curriculum along with the basic sciences of clinical medicine. The relative emphasis on the following specific disciplines and their timing need to be adjusted to local conditions.

a. The general term covering the basic orientation that needs to be developed is ecology. Although this discipline had its roots in plant and animal studies the present need is to make it truly relevant to understanding of the human condition. As the study of the relationship between man and his environment it provides a good base for the rest of medicine.

b. Equally fundamental are the group of disciplines usually included in the social and behavioral sciences. Selective and relevant contributions to understanding the organization of man in groups and interactions between individuals are fundamental because other people are the dominant component of the environment of most individuals.

c. Statistics provides a quantitative base for community understanding and should make community medicine a more scientific and less intuitive discipline than most kinds of medical practice

d. Epidemiology is the diagnostic discipline of community medine. It is ecology applied to health problems. It can be practiced at the level of the family just as effectively as with larger communities. Epidemiological information provides the basis for much of the intuitive approach of the highly skilled clinical diagnostician. Expectations of when to look for particular combinations of health variables and their outcomes derive largely from awareness of probabilities in particular community groupings. Certain types of people come down with particular conditions and clinical ambiguities are often resolved best on the basis of knowing what to expect according to the epidemiological triad of time, place and person.

e. Demography is an increasingly important basic science in medical education. Rapid population growth appears to be the spontaneous factor most directly controlling change and development in many developing countries today. All health variables are directly influenced by the numbers of people. The medical profession must perceive its own responsibility for birth rates in addition to its traditional concern with death rate

f. Genetics, Nutrition and Child Growth and Development provide understanding of the person. Each is controlled by varying environmental determinants. They are worth studying independently because they mediate the more general environmental forces.

C. Applied Sciences of Community Medicine

On the foundation of understanding the disciplines of community medicine it is necessary in the clinical years to develop appropriate skills through practice. Many of these should be applied routinely in clinical practice. To properly care for people the doctor should incorporate social and preventive measures in individual patient care. He must, however, also learn to deal with the community as a whole because a group approach is often most efficient, economical and humane.

1. Administration of health care has grown rapidly in importance. Partly as a result of demographic change and the increasing complexity of society there is a general insistence on better organization. In fact in some countries health care now ranks as the fourth largest industry in its requirements for manpower and money. As people insist on better organization doctors must either take leadership or find themselves controlled by administrators and politicians. Of particular interest is the great growth of administrative research exploring areas that were previously left to ad hoc and intuitive decisions. Not only must medical colleges begin to provide opportunities for doctors to learn health administration but they must also take leadership in research in health systems.

2. The doctor is the leader of the health team No other aspect of medical education has been so much left to chance as preparing the doctor to work with health colleagues. In a health center he may be responsible for 40 co-workers and the number grows every year This change is even more dramatic than the parallel movements in hospitals for more and more responsibilities to be carried by auxiliaries - a change that is forced by the increasing technocracy of medicine. To be a team leader requires a drastic change from outdated concepts of solo-practice. The new role requires a chance to practice in a field setting where the young doctor begins to understand that there are many tasks, including clinical functions of medical care, which auxiliaries can do better than he can on a routine basis. He must learn to delegate down so that the complicated judgmental problems can be referred up. Learning to work together with others requires practice.

3. Community control measures can now be applied on a widespread scale for many diseases. This is most true of many basic preventive procedures that remove the causes of disease. In general these include public health functions such as sanitation, vector control, mass education and social and legal measures. Every doctor should be involved in community activities especially those which are applied at the personal level such as immunization and nutrition.

4 Family planning programs are here mentioned separately because of their vital role in building better health Both community and individual approaches must be blended The pressure is bound to increase because the population problem will not be easily solved ...

family planning experts are saying that one of the greatest obstacles to effective family planning programs is the medical profession. It is the responsibility of the leadership in the medical colleges to disprove this indictment.

D. Basic Changes in Attitudes and Values

No combination of knowledge and skills will by themselves be sufficient preparation for the practice of community medicine Both must be supplemented by a changed attitude, a modified set of values that goes beyond that usually associated with medical ethics.

When a doctor takes on the responsibility of caring for a community as his patient he has to change his understanding of his primary responsibility He can no longer think in terms of doing everything possible for a few selected individuals. He must learn to apply an appropriate scale of priorities to the choice of health problems which most require attention. He must also learn to think in terms of cost/benefit ratios in judging what control measures to apply. This requires a judicious amount of apparently ruthless saying "no" by the doctor to individuals who present themselves for symptomatic care of minor complaints which should normally be treated by auxiliaries. Rather than only treating complaints that spontaneously come to him, he reaches out to the community in continuing appraisal of relevant problems. The community doctor must reserve his facilities and attention for those health problems which he and the community select as having highest priority There will never be enough resources to care for all health demands and rational allocation requires moral courage and much skill in public relations.

The community doctor gets his satisfaction less directly and overtly than the clinician. The results of his efforts are often deferred in time. Patient response is not usually direct and openly warm because prevention does not evoke gratitude as readily as relieving pain from or fear of illness.

Another basic attitude growing out of the ecological view is the recognition that medical care is not always the greatest need of a community. Health benefits may be better achieved by non-health developments. The doctor may therefore promote the greatest health gains by non-medical means.

E. Organization of Learning Opportunities in Field Training Areas

For many years I worked on the principle that a good program in a single village or small cluster of villages was sufficient to provide field experience for medical students. This is adequate for an orientation primarily in clinical preventive medicine and family medicine. For community medicine a larger field practice area is necessary. A fundamental philosophical point is whether this field practice training center should be limited to facilities and arrangements which the young doctor will have to work with in an ordinary service health center or whether arrangements should be more elaborate and beyond for teaching. My experience leads me strongly to the conviction that there should be as much difference between the training center and the ordinary service center as there is between the teaching hospital and the ordinary service hospital.

We must show the right way of practicing community medicine Then a graded experience can be provided so that after having worked in a good training center the young doctor or medical student spends some time in the real life situation of a more typical primary health center

A general problem in using field training areas is to learn how to use the whole health system to create an environment for learning. The doctor especially needs to learn the skills of working with other members of the health team. This can be done only if he can be fitted into field situations where he can experience the doctor's role in relation to the whole range of paramedical and auxiliary workers What we have done in the past has been to toss medical students into a village environment where there are essentially no services and have expected them to learn how to function on their own By analogy, this is really like undertaking hospital teaching in a situation where patients have been lined up in beds in a large room but with no services for nursing, laboratory, x-ray, diet or any of the other services needed in hospital care Until we provide a complete range of services we should be cautious about using field practice areas for anything other than surveys or family studies.

A new appraisal of health team roles is necessary In trying to look at these problems scientifically we have found ourselves being constantly trapped by professional stereotypes. For instance, when someone says "nurse" we have an immediate image spring to mind and assume that a nurse is a nurse. However, in manpower studies in Turkey[9] and Nigeria[10] we found that in Turkey there are about six doctors to every nurse,

whereas in Nigeria there are about six nurses to every doctor and another six equivalently trained midwives giving a ratio of twelve to one. Obviously, for either system to function, the doctors in Turkey perform many nurses's functions by supervising untrained hastabakici (ward helpers) In Nigeria, by contrast, nurses perform many traditional doctor functions by conducting solo practice in peripheral clinics. Depending on the local conditions of the country, it is absolutely essential, therefore, to work out an appropriate balance of roles but in doing this it has been almost impossible to shed our intellectual stereotypes and reassign roles as long as we have continued to think primarily in terms of titles and personnel categories. We found in doing our own analyses that we kept falling into the same ruts of professional stereotypes in that as soon as someone said "doctor" our thinking immediately fell into traditional concepts. To get out of this dilemma we developed a new methodology of functional analysis[11] By thinking primarily in terms of functions we cut across the job distribution question from another dimension and can really look at what needs to be done first and then begin to worry about who should perform those tasks

In our research at the Narangwal Rural Health Research Center we not only developed the functional analysis methodology but actually went into the field with an action research program to evolve new job distributions based on redefining functional roles Over a period of about four years we tried out various combinations and permutations of reallocation We now have a Narangwal pattern that seems to work[12] and are trying to move from the field experience to defining with more precision the routines which can be carried out in practice by health team members and incorporating

these routines into standing orders and training manuals. As these are defined, they will form a while new rationalized basis for setting up educational systems based on a clear picture of what the various members of the health center team should do. We have concentrated mainly on developing a package of rural services to meet the needs of mothers and children combining family planning, mother care, child care and nutrition provided by family health workers. This package of services is ready to be applied selectively in demonstration projects at the level of cost and personnel input that can then be generally introduced in the health services. We are developing detailed write-ups on the recategorization of responsibilities that is emerging, but let me give you a few illustrative changes that we have introduced into the work patterns of these personnel.

The basic principle that we have used in defining the family health worker's tasks has been to say that any function that can be routinized is an appropriate job for these auxiliaries, while any activity that requires judgment in more complex decision-making and specialized technical skills should be referred to professionals. Doctors have traditionally assumed that curative work was a specific responsibility that could be performed only by themselves, while preventive work could be delegated or relegated to auxiliaries. Our experience in working out routines shows, however, that this relationship has to be turned upside down.

Over 90% of illnesses can be cared for by what Osler called "penny in the slot" routines. Auxiliaries can learn the sequence that when they find one, two and three, then they do four. With modern treatments, less than 10% of illnesses at family level require careful analysis,

weighing of alternatives, and sophisticated diagnostic and therapeutic skills This is what makes general practice boring, even though it may be lucrative. On the other hard, preventive work may require some highly sophisticated decision making A home visit to change a mother's practices in feeding her children requires a flexible educational approach adjusted to the realities of the home situation. A rational health care system is impossible if doctors feel thay must continue to hold rigidly to the distorted ethical principle that they must see every patient because of some mystical doctor-patient relationship Treatments given by auxiliaries must be kept simple and safe, but they should also be effective rather than just palliative

A major reason for organizing a field training area to cover a reasonably large population unit is that it reduces the problems of "population fatigue" when a field center becomes overused. If work is done only in a small cluster of villages the families get tired of too many surveys and learning visits They do not get services which properly compensate them for the bother of participating in teaching exercises. If the population covered is a whole health administration area then the study populations can be rotated This also applies to research projects where great benefits can be achieved from comparing adjacent areas The additional effort in logistics and organization is more than compensated for by the benefits of having a natural administrative unit affiliated to the educational institution This is especially true because of complications introduced for both health administrators and educators when services are fragmented or shared.

F. Arranging Team Supervision

The team concept needs to be emphasized in two ways. First, there is the notion of a need for a faculty team who jointly supervise the work within the field training area Secondly, there is the even more important concept of the need for built-in team relationships in the field service programs so that the young doctor can learn from practical experience how he himself should function in a community team.

Perhaps the most important lesson that I learned from my experience in India is that we made a mistake in turning over all responsibility for health center teaching to departments of social and preventive medicine. Other departments then assumed little or no responsibility With a certain amount of glee, clinicians ridiculed the efforts of social and preventive medicine teachers to change the orientation of students and made fun of the whole rural experience. After hearing derogatory comments about village service from clinical teachers who were their primary role models, most students naturally treated the whole rural experience in a casual and deprecatory way. The powerful socialization process of medical education imposes a professional value system that crystallizes a hierarchy of career goals in which a doctor is considered a success only if he works in sophisticated hospital practice or in lucrative private practice. He is considered a failure if he works in a health center or in community medicine.

The most encouraging emerging pattern in health care in many countries is that the best clinicians, and I really mean the best clinicians, are showing awareness and dissatisfaction with the present

state of affairs and are increasingly becoming involved in community work When a professor of medicine or of pediatrics is willing to go out once a month to conduct a clinic in a village community then community work automatically becomes respectable. It then seems appropriate for a young doctor to undertake such work especially if it is only for a few years in his total career development In addition, it is invariably true that a clinician who goes into this sort of activity with the proper attitude will quickly find that he himself has much to learn about the realities of his country's health problems If enough patients do not come for his fortnightly or monthly clinic he can profitably undertake walking tours in a neighboring village with his students to follow up cases or just to visit homes

This emphasis on clinical participation in health center teaching does not, however, reduce the need for the participation of a department of community medicine. The most important learning experience in the health center is in working with the health team. The health center must therefore be well organized with the whole range of personnel working in a good functional relationship. This requires the expertise of community medicine specialists The medical student and intern can participate to learn how to work with all categories of staff

As the leader of the health team, the doctor has to learn a new orientation and approach which is quite difference from the traditional roles of the solo private practitioner or hospital physician.[13] The only way that he can provide medical care for a community will be by efficient use of all members of the health team.

The physician's attitudes must also change The new attitude can be most clearly expressed by recognizing that the whole community is the patient and not any one individual. The community physician has to undertake the difficult process of setting priorities among health problems to determine the distribution of resources. He cannot just respond in a passive way to whatever health problems are brought to him He must make community diagnoses, using the simple statistical rates that give him an idea of the births, deaths and causes of morbidity in his community patient. In looking for solutions he must balance approaches directed to the individual, the family and the community.

A two-way relationship needs to be developed between the community physician and his health team. He also must care for problems that are referred back to him from peripheral members of the team. Complicated clinical cases are referred as a result of screening by standardized routines. Another pattern of referrals might be needed for sociological problems or lack of cooperation in particular families. The additional prestige, authority and scientific arguments of the doctor might prove convincing in getting cooperation Or he might have to handle a community outbreak of a particular disease that requires an epidemiological study. Doctors must learn to think beyond the immediate gratifications of clinical care to a whole new value system in which his reward can be in the recognition that long term health improvements are slowly permeating the whole community.

The primary consideration in good supervision is that it should be educational and supportive rather than punitive The hardest lesson for professionals to learn is how to handle any evidence that family health workers are trying to do more than they are trained to do Regular visits make a great difference Family health workers are more likely to keep to established routines if they are not going through an ego struggle in trying to prove that they are better than their supervisors seem to think. The most important source of support is to be careful that nothing is said in front of village people that will shake the villager's confidence in the health worker. Corrections should not be made in front of villagers. Instead, all professionals must show respect for the family health worker's judgment. Village personnel come to appreciate the periodic visits of supervisors so that a real bond can be established to keep the village worker from feeling isolated

An extremely important educational activity is the practice of bringing all village workers together for one day every week,or every month,of continuing education The subcenters are closed for this day and they come together for formal seminar work, to share experiences and talk about their difficulties and to collect supplies These service seminars are in addition to regular teaching exercises for students

G. Assessment of Trainees' Field Experience

A book* [illegible] in press describing a five year study to assess the impact of rural internship programs in seven medical colleges distributed all over India [14] This was a research project that devoted considerable attention to developing methods of assessment

* Three selected chapters (7, 8 and 9) of this book are reproduced for distribution among the participants of the WHO Seminar on Development of Field Training Areas, Their Needs and Advantages for Teaching MCH and Family Planning to Health Personnel, Isfahan, Iran, 25-30 May 1975

For the practical day-to-day assessment of trainees in their routine activities, we tried a variety of approaches. Early in the program an effort was made to get the trainees to write a daily diary describing their experiences This diary was then turned in at the end of the training program and efforts were made to evaluate its contents. The diaries made fascinating reading for instructors and often times insights were provided that helped to improve the services and teaching. It did not, however, seem to be a valid means of evaluation of work because it mainly measured literary style and journalistic skill.

Many efforts have been made to standardize various reporting devices. Perhaps the most common has been to assign one or two families to a trainee for detailed study. An outline is provided of the information to be gathered under headings that are worked out in an orientation similar to the history and physical of clinical studies. Some of the headings that are usually included are: demographic data including a pregnancy history; socio-economic information, environmental information, some attention to health status of individuals; sources of health care and costs of care, etc One approach that I have used is to require medical students to make verbal presentations to a class in which they have had to end up the presentation with two lists on the board. One was a list of health and related problems in a priority rank as developed by family members and the parallel list was of the family's health problems as ranked by the medical student. This provided an excellent base for active discussion in term of potential action programs for doing something about the two lists and this led naturally into educational implications for the family

Similar reports can be developed from community studies. Some of these projects as carried out in some U.S. medical schools have been

extremely comprehensive and ambitious. They include analysis of statistical information derived either from available data or actual surveys plus attention to specific areas such as the provision and utilization of curative and preventive services. Perhaps the most productive community surveys are ones that focus on specific epidemiological problems. I have found that medical students can accomplish a great deal as part of an epidemiological team because of their tremendous energy and enthusiasm in projects as diverse as tracking down the location of fly breeding in a village (in this instance, cow dung cakes while drying), tuberculin and associated mycobacterial sensitivity prevalence, delivery practices among indigenous midwives (including potential opportunities for infection in neonatal tetanus), and a fascinating study of the history of factions in the social structure of a village and how this influenced utilization of health services.

Perhaps the most useful overall means of evaluating student performance in a field training activity is through what we have called a "supervisor's check list". This provides a framework for subjective but direct opinion based on observation and if it gives fairly reliable results. Perhaps most important is the fact that in order to fill out such check lists the supervisors really have to get to know the trainees as individuals. This discipline has a most salutory effect on their involvement in field work and removes some of the anonymity which is both degrading to students and a primary barrier to learning. **Annex** 1 gives an example of such a supervisor's check list that was developed for rural internship evaluation

H Assessment of Field Training Areas

The five year research project on rural internships in India referred to above was a total assessment of field training areas.[15] It was started because there was a general disillusionment with the practicality of such rural teaching and some feeling that they were doing more harm than good. This was because students came back from their internships saying that the one thing that they had learned was that they were never going back to the villages again. Clinical teachers especially felt that such experience was not only a waste of time but that it led to the learning of bad habits.

Perhaps the most important result of this five year research was to show that even a bad rural internship does a lot of good. It was apparent that just exposing the young doctor to rural situations provided a tremendous learning experience even though they did not spontaneously appreciate its value.

Some of the specific findings that came out of the statistical analyses were.

1. Doctors coming from a rural background expressed more preference for service in rural areas than those from an urban background. These young doctors from a rural background also considered themselves better prepared for rural work and profited more from the rural training A similar generalization could be made about doctors coming from the lower socio-economic groups

2 Among the favorable factors influencing attraction to rural service the most important were the challenge of comprehensive professional work and taking independent responsibility in situations of obvious need.

3. The most important unfavorable factors which detered young doctors from choosing rural services were deficiencies in professional working conditions with the highest priority being given to lack of drugs, supplies and equipment Also ranked high were the lack of opportunities for augmenting professional preparation and difficulties in obtaining continuing education or maintaining professional contacts and associations.

4. Among the unfavorable factors affecting personal living in rural areas the most important was lack of educational opportunities for children and isolation from urban facilities These proved to be more important than pay or housing but those considerations were also important

5. Interns in rural services do not recognize that a serious deterent to effective health care was the problem of too heavy a curative load.

6. Field experience in rural programs had a favorable influence on interns' general attitude towards village people and work. Apparent negative attitudes might actually be better interpreted as being in the direction of developing a realistic understanding

7. A marked ambivalence was found among interns ranging from a lack of confidence in their professional ability to a desire for the challenge of independent responsibility

8. The educational objectives of the rural internship were poorly defined and inadequately communicated to interns who reported that their activities during internship were, in general, le , worthwhile than they had anticipated.

9. Activities in the rural field experience which seemed most worthwhile to interns were learning to deal with

a. practical health problems

b. villagers

c. colleagues

d. socio-economic factors in disease

10. Interns' suggestions for improving the teaching health centre activities were ranked in the following order

a. improvement of their own living conditions

b. improved equipment and supplies

c. better planning and organization of the educational program

d. more emphasis on preventive work was a need especially recognized by those interns most interested in rural service

I am convinced that it is wrong to train young doctors for sophisticated hospital practice and then throw them into a primary health center in the traditional manner of teaching a puppy how to swim. The excuse has been given that if students learn the best way of doing things they will later be able to make appropriate adaptations This principle may be true when the gap between the teaching situation and eventual reality is not large. It breaks down completely when the gap is as wide as that between a teaching hospital and a rural or urban slum health center. It is wrong morally and educationally to subject the young doctor to the trauma of trying to make this adjustment on his own. The problems of learning

how to live and work in villages or urban slums are so difficult and important that we need our best minds to work them out and it is the professors who should be in the vanguard of efforts to improve the health of the poor.

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ANNEX 1

SUPLRVISOR'S CHECK LIST DLVELOPLD FOR RURAL INTLRNSHIP LVALUATION

CONFIDENTIAL CODE NO _____

RURAL HEALTH RESEARCH PROJECT

SUPLRVISOR'S CHECK LIST Dated .. ..

Name of Intern/Houseman . .. .

Name of Supervisor filling out form . . . . Medical College .. ..

INSTRUCTIONS Grade according to your best estimate and with maximum objectivity, each intern's/houseman's performance during his/her time with you We are interested in trying to appraise some of the basic attitudes and skills not usually included in customary evaluations in addition to the more traditionally recognized professional skills Check (√) one block opposite each item

Kindly evaluate on the basis of abilities/skills printed in bold face Various aspects of these skills/abilities are given within brackets for ready reference

Status at the end of rural placement

Abilities/Skills	Poor (1)	Fair (2)	Good (3)	Very Good (4)	No Information (0)	Code.
1 **Clinical ability** (General diagnostic ability , Knowledge of appropriate drugs specially those economically and actually available to patients , Readiness to undertake new therapeutic procedures)						
2 **Understanding causation and natural history epidemiology of disease** (Ability to use epidemiological information to aid clinical diagnosis . Understanding the multiple causative factors in any disease rather than focussing on single etiological agent and ability to identify the specific causative factors most amenable to attack , Ability to apply epidemiological methods in solving community health problems)						
3. **Application of principles of prevention in clinical practice** (Knowledge and use of immunization , Personal hygiene advice to patients , Ante natal and post-natal care to patients , Emotional development of children , nutrition , ability to foresee and prevent complications)						

SUPERVISOR'S CHECK LIST - continued

Abilities/skills	Poor (1)	Fair (2)	Good (3)	Very Good (4)	No Information (0)	Code
4 **Ability to create rapport with patients and families** (Willingness to listen, ability to communicate with patients ability to get patients to follow direction about treatment sensitivity to emotional problems and attention to relatives and families' problems)						
5 **Understanding of socio economic factors in the management of disease** (Awareness of economic implications to the family of financial loss from disease and ability to gain patients and families cooperation in manipulating social and economic factors)						
6 **Community Health measures** (Interest and ability in health education, environmental sanitation, mental health, MCH and communicable disease control ability to see the community as a whole to recognize the relative importance of its health problems and assign priorities in solving them)						
7 **Professional relationships** (Willingness to refer problems for expert consultation, leadership qualities, ability to work with auxiliaries and subordinates, relationships with other members of intern group and willingness to share responsibility)						
8 **General Interest and enthusiasm**						
9 **Regularity in attendance and punctuality**						
10 **Personal Integrity and Intellectual honesty**						
11 **Attitude to Rural Service**						
12. **Ability to learn from practical experience**						
13 **Humanitarian Motivation for service**						
14 **For Office Use Only**						