an atmosphere of research, with the result that the students' powers of observation and drawing deductions from such observation are not adequately stimulated. Almost similar views were expressed 15 years later by the Mudaliar Committee about the undue importance given to the collection of the mass of detail in the teaching of anatomy and physiology at the pre-clinical stage.

'The time has come when those who are concerned with medical education should take a close look at what needs to be taught during a limited period of 5 or 6 years after the higher secondary studies and how the students' knowledge is to be evaluated, so that 'the student leaves the university with his curiosity enhanced and not destroyed, with enough general knowledge to ask the right questions, and with a sufficient appreciation of method to know how to set about finding the answer'.

# Medical Education and Socio-Cultural Factors in Indian Society

BY

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## Introduction

Neumann in 1847 asserted that 'medical science is intrinsically and essentially a social science, and as long as this is not recognised in practice we shall not be able to enjoy its benefits and shall have to be satisfied with any empty shell and a sham'[1]. If we analyse this statement we find that it is based on two basic principles. *First*, the health of the people is a matter of direct social concern, and that society has an obligation to protect and assure the health of its members. *Second*, social and economic conditions have an important and in many instances, crucial impact on health and disease. It logically follows as a third principle that the steps taken to promote health and to combat disease must be social as well as medical.

In 1911 Grotjahn published his famous classic *Soziale Pathologie* in which he put forward a number of principles that are fundamental for a systematic study of human disease, which laid great emphasis on the social point of view:[2]

1. The significance of a disease from a social point of view is determined in the first place by the frequency of occurrence.
2. It is necessary to know the *form*, as well as the frequency, of the disease.
3. The etiological relationship between social conditions and disease may be expressed in four ways: social conditions (*a*) may create or favour a predisposition for a disease; (*b*) may themselves cause disease directly; (*c*) may transmit the causes of disease; and (*d*) may influence the course of a disease.
4. Not only are the origin and causes of diseases determined by social factors, but these diseases may in turn exert an influence on social conditions, particularly through their outcome.
5. In the case of a disease which is important from a social viewpoint, it must be established whether medical treatment can exert an appreciable influence on its prevalence, and whether such therapeutic success as may be achieved is important from a social point of view.
6. Preventing diseases or influencing their course by social measures requires attention to the social and economic environment of the patient.

Gortjahn was conscious of the fact that many diseases of social importance were chronic in character, and that a large number of these were preventible, or could at least be controlled. He, therefore, strongly advocated the teaching of social hygiene as an essential part of medical curriculum. He also emphasised that investigations in social hygiene would make use of the methods of statistics, demography, anthropology, economics and sociology. Despite Grotjahn's insistence on the need for sociological analysis of health problems, he could not move beyond the scientific level of the period. In Great Britain, as in the United States, interest in social medicine is a relatively recent phenomenon; while in India it can be said to be only in its embryonic stage.

The British Medical Association in expressing its opinion on the Beveridge Report remarked: 'The health of the people depends primarily upon the social and environmental conditions under which they live and work, upon security against fear and want, upon nutritional standards, upon educational

[1] Quoted, Freemen, Levine and Reeder, *Handbook of Medical Sociology* (Prentice Hall), P. 36.
[2] Grotjahn, *Soziale Pathologie*, Berlin: August Hirschwald Verlag, 1915, pp. 9-18.

facilities, and upon facilities for exercise and leisure'.[1] Unemployment and poverty produce their adverse effect on health through the operation of such factors as inadequate nutrition, unsatisfactory housing and clothing and lack of proper medical care during periods of illness.

Defective nutrition may take two forms resulting either from an ill-balanced diet, which fails to provide the required constituents of food in their proper proportions, or from the energy value of the food being insufficient to provide for all the activities of the individual concerned; the former constitutes mal-nutrition and the latter under-nourishment. Many persons suffering from under-nourishment are also subjects of mal-nutrition. Both these forms of defective nutrition impair the health and working capacity of human beings. In the light of this argument the diet of an average Indian is not only deficient in calorific value but is also ill balanced. The *per capita* net availability of food grains in India in 1961 was 16.2 ozs. per day. The *per capita* consumption in India of all food items in terms of calories compares as follows: Canada: 3,140 calories; U.S.A.: 3,150 calories; U.K.: 3,270 calories; Japan 2,110 calories; and India: 1,880 calories.

The problems arising out of such a low Indian diet are further aggravated by the population explosion in the country. The increase in population, at the present rate of eight million per year, in itself will require a million tons of additional food grains each year. With an increase of the *per capita* intake of 100 calories per day, India would require an additional five million tons food grains per year[2]. Even assuming that it will take another five years for India to achieve the 81-million ton food target of the Second Five Year Plan, consumption in the country in the meanwhile will increase to 87 million tons, leaving a net deficit of six million tons per year.

Thus, the picture that emerges out of the present food crisis is a dismal one and accounts for one of the worst factors in the poor health of the nation, which is clearly indicated by the fact that only the mortality rate is quite high in the country, but what is more deplorable is that most of the deaths are caused by preventible diseases. The following table is fully indicative of this tendency:

*Table showing number of deaths and death rates (per million of the population) from different diseases*[3]

| Disease | 1959 | | 1960 | |
|---|---|---|---|---|
| | Total | Rate | Total | Rate |
| Cholera ... ... ... ... | 7,696 | 20.00 | 18,371 | 47.6 |
| Dysentery and Diarrhoea ... ... | 176,541 | 458.82 | 179,368 | 465.3 |
| Fevers ... ... ... ... | 1,458,024 | 3,789.33 | 1,457,683 | 3,781.3 |
| Respiratory diseases ... ... | 321,632 | 835.90 | 320,785 | 832.1 |
| Small Pox ... ... ... ... | 43,662 | 113.47 | 34,012 | 88.2 |
| Other causes ... ... ... | 1,537,800 | 3,996.66 | 1,529,058 | 3,996.7 |

[1] British Medical Journal, 7th August, 1943.
[2] Times of India Directory and Year Book, 1963-64, p. 24.
[3] Times of India Year Book, 1963-64, p. 1221.



A striking feature of this table is that a large number of diseases, which serve as a cause for deaths are grouped under such headings as 'fevers', 'respiratory diseases' and 'other causes'. This clearly indicates a low state of public health in India. It is considered that at least 50 per cent of the existing mortality in the country is preventible and should, therefore, be prevented[1].

This large amount of preventible suffering and mortality is also due to the low level of environmental sanitation in the country. Apart from widespread malnutrition and under-nourishment in the country, lack of general education and health education add materially to the difficulty of overcoming the indifference with which the people tolerate the insanitary conditions around them and the large amount of sickness that prevails. This accounts for an abnormally high birth rate and equally high mortality rate, accompanied by a very low expectation of life at birth in the country, as is given in the table below:

## Socio-psychological Factors in Illness

The relationships between physical, biological and psycho-social factors in illness are intricate and subtle. As Dr Stanley H. King has remarked: 'Of first importance are those situations in which the interaction of the individual with his interpersonal environment produces emotional reaction and conflict with an accompanying alteration of physiological balance, beyond the range of normal fluctuations. The end result of long continued conflict may be irreversible tissue changes or chronic disease. Here we are in the realm of illness which can be identified broadly as *psycho-somatic*. A second class of events concerns those situations in which psychological and social variables may aggravate or facilitate the action of biological or physical disease agents. These agents combine with the psycho-social situation in some manner, perhaps through an additive or a disruptive process, to bring on illness. The third category covers the results of style of life—where living arrangements, customs, and other social features may bring the individual into a situation where he is rendered vulnerable to disease'.[3]

Socio-environmental factors determine how man lives; thus these factors are intimately related to an individual's exposure and susceptibility to disease. His group membership, his family structure, his work and his recreation all influence where he lives, what he eats, and how he sleeps and exercises, and these in turn determine his physical and mental state of health.

There is a complex interplay between socio-environmental factors, social problems, health conditions, and public health programmes. Each one may lead to the other in many different ways. For example, poor housing (a physical condition) may lead to the growth of slums (a social problem), which in turn increases exposure to tuberculosis (a health condition), which then requires the development of a preventive and therapeutic measure (a public health programme). On the other hand, certain public health programmes, such as venereal disease, become social problems as they impinge upon the value

*Table showing Vital Health Statistics*[2]

| Year | Per thousand of population | | Infant Mortality Rate | | Expectation of Life at Birth | |
|---|---|---|---|---|---|---|
| | Birth Rate | Death Rate | Male | Female | Male | Female |
| 1940–51 | 39.9 | 27.4 | 190.0 | 175.0 | 32.45 | 31.66 |
| 1951–56 | 41.6 | 29.9 | 161.4 | 146.76 | 37.76 | 37.49 |
| 1956–61 | 40.7 | 21.6 | 142.3 | 127.68 | 41.68 | 42.06 |

[1] Bhore Committee Report, p. 11.
[2] India, 1963, Publications Division, Government of India.
[3] Stanley H. King in Freeman (ed), Handbook of Medical Sociology, p. 101.

structure of the community. In such cases, moralistic attitudes may interfere with scientific analysis, and both the diagnosis and treatment of the health problem often become an area of conflict between medical and lay forces.

In conclusion, it may be pointed out that while modern health care is becoming more technological and highly organised, there is a danger of losing sight of the human aspect of medical care. Health personnel cannot be judged only in terms of training qualifications, proper licensing, and adherence to educational standards. While all these factors are importan erformance of medical personnel is of greater significance from the social point of view. Illness may be of great physiological significance, but it is also a psycho-social phenomenon. Central to the concept of etiology is the demonstration of causes. But in modern complex social systems this is not always possible. In the etiology of illness, the assignment of direct cause is often difficult, if not impossible, due to the impact of social environment. Hence, in the teaching of medicine contributions of sociology have to be gratefully acknowledged.

# The Mission of Physician in our Present Society

BY

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In any developing society the doctor's role is not only decided by the problems of ill-health he will be required to deal with, but also by ethical and social obligations conferred on him by the traditions and the cultural heritage of that social order, and the privileges the society is ready to concede to him.

The preparation for the fulfilment of such a mission will depend upon the training received by him during his medical education. A critical evaluation of the content and pattern of the teaching programme imparted in our institutions is necessary if it is felt that the doctors educated in them are falling short of the expectations of society. Simultaneously, it would also be essential to study if the doctors are being provided with the optimum conditions for the practice of medicine which they would require if they are expected to use their scientific knowledge to the maximum benefit of the population.

There are thus a number of factors which have to be considered in determining the task of a physician in the Society. The first and foremost is the health needs of the population, and the pattern of its social structure. About eighty per cent of the population of this country lives in villages. At present, there is 1 doctor for about 6,000 persons. This ratio varies from state to state. The villages cannot claim more than one doctor for every 30,000 persons while there are rural areas where there is only one qualified doctor for 50,000 to 100,000 persons. There are more than 800 community development blocks without primary health centres, and more than 400 primary health centres are without doctors. This makes a gloomy situation. In the words of our Prime Minister:

> 'There could be no progress in the country unless our villagers are happy. The first obvious task before our doctors is to be prepared to serve in the rural hospital so that they do not suffer for want of trained medical personnel as now'.

Besides, the type of population the doctor is required to serve, and the changing health and disease pattern are also to be considered. Life expectancy has gone up from 32 years in 1946 to 49 in 1965, while the annual mortality rate has dropped from 27.4 to 16.3 per thousand. We are gradually gaining control over the communicable diseases, e.g., small-pox, tuberculosis, malaria, cholera, typhoid etc., and soon the physicians in this country would be ranged against diseases most of which are not fully understood, e.g., cancer, coronary artery discases, high blood pressure, and psychosomatic disorders, etc. Industrialisation with its consequent urbanisation is causing a population shift which has to be reckoned. The data from the highly industrialised western countries also point towards a change in the sex pattern of the society, the mortality rate of females is less than the males leading to a gradually prepondering sex ratio towards females. It is therefore pertinent to assume that the future physician will have to practise medicine in the current social setting which may be different from the present.

The doctor is indispensable to any advancing society. Ellis has rightly stated: 'Slow and vigorous investigation must precede the planned safeguarding of the advances of modern society, and it is clear that doctors must be main contributors of the accurate information which is needed. They must be prepared, as in the past, to press most strongly by every means at their disposal for that legislation without which the prevention of so much disease is impossible. At the same time a doctor must continue to apply preventive medicine at the level of the individual, by advice, by persuasion, and by contribution to health education in general'.

# The Scientific Medical Cultures and Rural Medicine

BY

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AND

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Ten years ago, a dozen leaders of medical education in India were meeting here in Bombay as one of the three committees planning for the historic 1955 All-India Conference on Medical Education. This particular committee under the co-chairmanship of Drs Vengsarker and Yodh was responsible for proposing a new curriculum and new teaching methods specifically adapted to the needs of India. It was my privilege to represent the academic discipline of social and preventive medicine. Two new objectives for medical education in India were accepted. The first obviously was the introduction of a preventive orientation into all medical teaching; the second was particular emphasis on the need for orientation of doctors to rural needs and rural service. Immediate and active discussion centred around the question whether there is, in fact, any such thing as rural medicine. Some basic scientists on the committee pointed out that one can't tell the liver or kidney of a rural person from that of a city person. The differences are in social, psychological, and organizational variables. The simplest statement of the difference is that the whole rural community must be considered the patient of the rural doctor.

As indicated by my title, I will try to relate my observations of rural medicine to total medical educational developments in India and will conclude with some findings from our Rural Health Research Project. The fundamental question I will discuss and the reason for my title is whether there is a basic incompatibility between the scientific medical culture and rural medicine.

First, let me express my continuing amazement at the speed and extent of progress in medical education in India.

None of us who participated in the 1955 Congress on Medical Education would have dared to hope for the tremendous progress which we know now was possible at that time. The achievements of your good friends who are the medical educators of India are a challenge to the rest of the world. The quantitative achievements are impressive. I know of no other country which has so rapidly and massively expanded its medical education.

Even more important, however, to me have been the qualitative changes. Many leaders in India and consultants from abroad have expressed concern about the danger of lowered quality of education during this period of quantitative expansion. The concern is real, and we all know that there have been some necessary sacrifices. On the other hand, I am increasingly impressed with some significant qualitative improvements. The quality of medical education should not be measured primarily in terms of international standards. The best quality of education for India is that which serves Indian needs. In spite of occasional expressions of fear that Indian degrees will not be recognised abroad, it has been my experience that wise educators overseas recognise that India should have educational objectives different from the United Kingdom or the United States and an appropriate shift in content will only increase their respect for India's medical education achievements. I say this with particular reference to the emphases which should be stressed at the World Congress on Medical Education in Delhi next November. Delhi was selected as the appropriate pla o discuss 'Medical Education—a Factor in Social and Economic Development' because you, as the leaders of medical education in India, have shown that this is one of your major concerns.





The great qualitative shift in Indian Medical Education is indicated by the many new departments of social and preventive medicine which have been developed. Although these departments have not yet established themselves as being highly scientific, they are demonstrating their social responsibility by pioneering the establishment of teaching health centres in both rural and urban areas. I realize fully that these teaching health centres have been subjected to much criticism, and the departments of preventive and social medicine too, because it is said that they have not had a noticeable impact.

My plea is for reasonable patience with departments of preventive and social medicine. In teaching the community orientation one is undertaking an essentially new and pioneering effort. It took many centuries to develop the present pattern of laboratory and ward teaching and we still are not really satisfied. It impresses me as being somewhat unreasonable to expect to have the social medicine and community approach efficiently organized and palatable to the undergraduate medical student and intern on the first attempt. To make this speciality scientific there is great need for a great expansion of basic competence in epidemiology.

The most encouraging development of recent years has been the tendency for teachers from clinical departments to become so impatient with the efforts of departments of social and preventive medicine that they are now taking over to show how things should be done. More and more, I find clinical teachers participating on a regular weekly basis in the activities of teaching health centres; both clinical and basic science people actually seem to want personally to run the rural health centres. There is an encouraging appreciation of the tremendous potential for research based on adequately studied populations in health centre communities. I am encouraged because it has become increasingly apparent that there is little that a department of social and preventive medicine can do to stimulate interest in rural medicine as long as they are viewed by medical students as competing with the other medical school departments. It does not take research to prove the point that preventive and social medicine is one of the least glamorous departments in medical colleges. Let me show you, however, data from our research project on the rural orientation of physicians, which show the ranking given to the various academic disciplines by 750 interns in seven Indian medical centres. Clinical teachers are the role models for medical students. It is, therefore, particularly incumbent on clinical teachers to typify in their own behaviour the values and attitudes the next generation of students will accept as controlling their own behaviour.

## Rural Health Research Project

In 1959, when I spent three months visiting approximately 20 departments of preventive and social medicine in all parts of India who were developing rural teaching, it was immediately evident that the whole programme was rather seriously backfiring. Especially the rural internship seemed to be creating intense antagonism, so that many interns ended up their experience saying they were convinced of only one thing, that they were never going back to a village again. The Minister for Health was so concerned about the prospects that he asked us to study the problem. He indicated that the government was being forced more and more into a position where they were going to have to apply compulsion to doctors in order to get the health needs of rural areas met. He said that if doctors and medical educators would not themselves find the most appropriate mechanisms for meeting the health needs of villages, then politicians would have to take matters into their own hands.

After two years of the hard preparatory work that it always seems to take to initiate a new research project, we started our five-year rural health project in 1961. On sabbatical leave from Harvard and later Johns Hopkins my family and I spent a year living in Narangwal village where the teaching health centre of Ludhiana Christian Medical College is located. Out of this pilot project year, we developed a whole

battery of tests (which have been handed out). These have since been widely validated after having been worked over in much detail by a number of specialists from the social sciences, psychology and education, as well as the medical disciplines.

You will note that the questionnaire covers the following range of subjects: Attitudes of Interns, Professional Opportunities and living conditions in Villages, and the Rural Teaching Programme. Interns score on a four point scale the way they feel about individual topics. Because of your interest in the whole process of educational research, I would like to look in a little more detail at the test that we developed with the co-operation of the department of social psychology at Harvard. This is an adaptation of the TAT or Thematic Apperception Test. It is really an effort to find out by more refined projective techniques, the attitudes of doctors towards rural service. We have worried some about the name for this test. Most appropriate would be the 'rural attitude test' but we question the change in initials from TAT to RAT! In this test, the interns are asked to look for thirty seconds at a picture, then write a short story describing what they have seen. People see different things and the terms they use in description reveal otherwise camouflaged attitudes. The scoring manual has been extensively tested and validated, and we can derive from the stories mathematical scores for the long list of values on the separate page of the mimeographed material. When we started this project, we were all extremely skeptical about the possible value of such projection tests. I think we have all been convinced that not only do the results make sense, but the test really does seem to probe for a deeper insight into what interns believe that one gets from standard questionnaires.

Before moving on to results, let me add that we tried many other educational research procedures before we settled on this battery of tests. For various reasons we have discarded the others. We would like very much to share our experiences with those of you who are interested in similar educational research because we have learned something about what does not work and how tests are discarded.

Also of methodologic interest is the point that our Division of International Health at Johns Hopkins has developed similar research in Turkey and Iran. We simply translated the battery of tests from India and reproduced another set of pictures showing similar situations in Turkish or Iranian villages so we will soon be able to make international comparisons.

Let me turn now to the brief description of results. For the last four years we have had the excellent co-operation of the faculties of seven co-operating medical schools in India (All-India Institute, Seth G.S., Bombay, Lucknow, Ludhiana, Nagpur, Trivandrum and Vellore). In a wonderful example of a continuingly gracious spirit of co-operation we have together been able to gather massive amounts of data on all of the graduates of these seven medical colleges in the past three years. The battery of tests was administered both at the beginning and the end of the rural internship by our staff of seven hard-working Indian Social Scientists who lived and worked with the interns.

We expect to have a Rural Health Conference just before the World Conference on Medical Education for detailed discussion of the research findings. With the excellent help of the All-India Statistical Institute in Calcutta, we will have a comprehensive computer analysis of this material. Some of you participated in the Project's annual conference last February, at which we presented preliminary results which led to the two sets of recommendations with the supporting data that you have been given. The recommendations to the government concentrate on the general problem of trying to make rural health centres decent places for doctors to work. Priority lists are presented of the doctors' views of the major problems of working in rural health centres and possible ameliorative measures.

More important to you are the recommendations to medical colleges. These include recommendations that students with rural and lower economic backgrounds be given preference in selection, that teachers of community medicine have rural experience, that social and preventive medicine be upgraded and the clinical teachers participate in rural work.

In summary, let me say that the results of this research are extremely encouraging. In spite of all the doubts, rural internships are producing a pronounced and beneficial effect. Even though they don't like to admit it, interns are really better equipped for community and health centre service. Significant changes have occurred in their attitudes, with the most important being the development of a greater sense of realism. Furthermore, we are closing in on fundamental understanding of what it takes to be a good rural doctor and still remain a member of the scientific medical culture.

The mimeographed sets of recommendations referred to above are available with supporting data and selected tables from the Rural Health Research Project, Narangwal Khurd, District Ludhiana, Punjab, India. Given below is a summary of pertinent findings and some recommendations made by the conference participants after discussion of these preliminary findings.

### Lack of Interest in P.H.C. Work

The preliminary findings of this study confirm the general impression that young doctors (in this study interns/housemen) are not interested in primary health centre work. Only 4 per cent showed great interest, 22 per cent moderate interest, 35 per cent slight interest and 40 per cent were not interested at all.

### Inadequate Preparation for Rural Work

Only 11 per cent of interns completing their rural internships felt well prepared for service in PHCs; 36 per cent felt that they were moderately well prepared; 54 per cent felt that they were either not prepared at all or were only poorly prepared for rural work. When asked about the adequacy of their preparation for ten types of medical work, the interns ranked primary health centre work ninth.

In evaluating their own abilities, interns felt least confident to practise comprehensive community care in a rural setting, i.e. mobilize community participation, investigate health problems, work with public health auxiliaries and cope with the general management and supervision of primary health centres.

This lack of adequate preparation reflects on their total medical education, not just on their few months of rural internship.

In order to ensure better teaching staff it is *recommended* that:

1. The minimum qualifications for teachers of preventive and social medicine include one to two years' practical rural experience in 'community medicine';
2. Doctors working in primary health centres, which are used for teaching have training and experience in the clinical and public health functions of health centres;
3. Teaching health centres have additional teaching staff (more than usual service staff) provided by the medical college.

In undergraduate teaching it is *recommended* that:

4. Emphasis on preventive and social aspects of medicine be given from the very first year of medical education;
5. Social and preventive medicine be integrated with clinical departments and clinicians be involved in the rural training of medical students.

To give more importance to social and preventive medicine it is *recommended* that:

6. Separate examinations in Preventive and Social Medicine be made compulsory. This examination should be at a level equal to that of examinations in other clinical subjects.

### Some Positive Effects of Rural Internships

While the rural internships are not now having the total desired impact of orienting and preparing doctors for rural work, it is encouraging to note that there are indications of positive effects on the attitudes of some interns as given below.

The following percentages of interns rated their gain in knowledge from the rural posting as either good or very good:

71 per cent ability to learn from practical experience;

69 per cent ability to establish good relations with villagers;

57 per cent ability to get along with professional colleagues and auxiliaries, etc.;

56 per cent understanding of socio-economic factors in disease;

50 per cent rural life.

Interns showing interest in serving in primary health centres and interns coming from rural backgrounds gained most from the internship and since they are the most likely to go into rural service their preparation is particularly relevant. Those with rural background (1/3 of all interns) felt that they were better prepared after rural internship while those from urban backgrounds indicated no improvement. Those from rural background felt that after internship their ability to apply community measures for improving health was greater as was their skill in management and supervision of primary health centres, ability to work with public health auxiliary workers and ability to mobilize community participation.

In our rural TAT (thematic apperception test) we found that enthusiastic or idealistic outlook (E) decreased during internship probably indicating the development of more realistic attitudes to rural conditions.

Unfavourable reference or association to villagers or village life (V−) sharply decreased while favourable reference or association to villagers or village life (V+) increased slightly. This indicates a less unfavourable, if not a more favourable, attitude towards rural life after internship.

PH (reference to a public health problem) showed an encouraging increase.

It is felt, therefore, that there is no reason to think that rural internships are total failures.

It is moreover *recommended* that:

7. Rural internship programmes with major emphasis on community health should require three months of working and living in rural health centres.

8. This programme should involve the active participation of both the



Preventive and Social Medicine and clinical departments with the active interest and support of the Dean or Principal of the medical college. The clinical departments can be effectively involved in co-operative field studies and in running specialty clinics in the rural health teaching centres.

9. Small groups of 2-4 interns should be given responsibility for the comprehensive health care of specific villages.

## Influence of Rural and Economic Backgrounds

Interns coming from a rural background had more interest in primary health centres than those with urban backgrounds. Out of 10 choices, the primary health centre ranked sixth in interest for those with rural backgrounds, tenth for those with urban backgrounds and eighth for those with mixed backgrounds.

Interns whose father/guardian's income was less than Rs 200 per month reported greater interest in primary health centre service than those from high income families as shown by a gradual decrease in interest in primary health centres with increase in father/guardian's income.

Therefore it is *recommended* that:

10. Candidates for medical college who have a rural background and candidates from families with middle and low income levels be given preference as long as they satisfy other criteria for admission to medical college;

11. Stipends be made available in order to make it financially possible for them to attend medical college;

12. A programme of vocational guidance and counselling about rural medical service be set up which should be focused mainly in rural high schools.

## Previous Knowledge of PHCs

Only 55 per cent of the interns had visited a primary health centre before being posted to the rural internship. There was a general tendency among interns who had visited



primary health centres during their medical course to rate the importance of public health activities and administrative responsibilities of primary health centre physicians higher than those who had not visited. Interns who had never visited a primary health centre prior to internship tended to score higher the conditions requiring compulsion than did interns who had made such visits.

It is *recommended* that:

13. During undergraduate training, students should be made familiar with the working of well-run primary health centres and, for this purpose, the medical college should assume responsibility for assisting in the development of such primary health centres in their areas.

## PHS Service Conditions

The rural internship represents a crucial period in career choice during which doctors are particularly concerned about professional considerations. In probing the conditions under which interns would be willing to serve in a primary health centre it was found that the importance attached to maintaining good professional standards without regard for improved living conditions ranked third; as contrasted to the importance attached to provisions for liberal rural allowance and personal comforts without significant improvement in professional opportunities which was ranked seventh out of a list of 11 possibilities.

To interns, the most salient deficiency of primary health centres is the inadequacy of drugs and supplies which was ranked first and equipment which was ranked third in a list of 27 obstacles to rural service. These rate considerably higher in their minds than such items as the inadequacy of PHC buildings which was ranked eighteenth.

Ranking second in the priority listing of deterrents to acceptance of rural service is 'lack of educational facilities for children'.

Ranking next in order of importance are a group of service conditions indicating concern about their professional future. 'Lack of opportunity for professional advancement' ranked fourth and 'lack of opportunity for post-graduate education' ranked fifth. These findings correlate with the question concerning the conditions under which interns would be willing to serve in a primary health centre. The fear of getting stuck in a village ranked second only to improving both professional standards and living conditions.

Lack of financial remuneration has long been recognized to be a dominant concern for young doctors considering rural service. This was ranked eighth out of the list of 27 obstacles to rural service. Even more definite is information where interns ranked financial remuneration third and job security fourth among considerations influencing their career choices.

Therefore in considering incentives for service in PHCs it is *recommended* that:

14. Provision of drugs, supplies and equipment in adequate quantity and quality for all primary health centres be the first administrative priority for State Governments;

15. Some mechanism be provided for subsidizing education of primary health centre doctors' children, such as children's education allowances or special subsidized schools;

16. Transportation facilities be provided to meet the PHC doctors' professional requirements such as referral of patients and consultant visits and that this transport be available for his personal use at minimum cost;

17. To ensure professional advancement of PHC doctors, a common cadre of health and medical service should be established;

18. Primary health centre physicians should be given a guarantee that after completing satisfactorily a period of rural service they will be given preference for:

(*a*) Professional advancement in hospital positions;

(*b*) Post-graduate education in India;

(*c*) Fellowships for study abroad;

If they remain in PHC service, the doctors should be given accelerated increments;

19. Those medical students who volunteer for work in rural health centres should be taken into government service and their salary started after passing the final M.B.B.S. examination. They would then be expected to start work in primary health centres after completing their regular internship and the year of apprenticeship as recommended later on;
20. Journals and medical publications should be routinely provided by the government to all PHC doctors;
21. A special rural allowance of not less than Rs 150 per month be added to all other allowances now available for primary health centre doctors;
22. Continuous professional stimulation and guidance be provided through a regular programme of medical meetings and the visits of specialists from district hospitals and medical colleges. In fact, it would be most desirable for each medical college to take responsibility for maintaining an effective two-way flow of communication, consultation and referral with the doctors of all primary health centres in adjacent regions;
23. Professional growth should be promoted by means of periodic in-service training including seminars, refresher courses and visits to taluk and district hospitals and medical colleges;
24. Housing should be provided on a high-priority basis and should be a model for rural development in sanitation, living space and in being adapted to local and climatic conditions;
25. All these incentives should be widely publicized in medical colleges.

### Staffing Patterns of Primary Health Centres

The interns' image of the primary health centre physicians' responsibilities and working conditions is an important determinant of whether they will choose this form of service. Interns were not bothered about the prospect of heavy out-patient loads and they indicated great reluctance to surrender clinical responsibility to auxiliaries. However, excessive clinical loads were recognized by the participants as obstacles to the practice of overall community medicine. Therefore it was *recommended* that:

26. Specially trained para-medical workers be provided to look after repeat visits of cases referred to them by the doctor;
27. Research should be done on appropriate mechanisms for determining the role of the para-medical worker in the initial screening and simple care of the large numbers of minor illnesses now overwhelming the resources of many primary health centres;
28. Senior clerical assistants be provided to look after routine reports, vital statistics, indents, stores, accounts, etc.;
29. Clear lines of authority at all levels (PHC, Block, District and Directorate) be laid down.

It was also *recommended* that:

30. Prior to posting to primary health centres, doctors should undergo one year of work experience under a senior physician in a government hospital so that he will gain administrative skills and clinical maturity. This year should include a period of two to three months of orientation to rural health service as an additional programme to the rural internship.



TABLE I

Percentage distribution of interns by the degree of agreement with various conditions for serving in primary health centre, before and after the rural internship and also by the direction of change after the internship (reference period 1964).

| | Conditions | | Agreement Scale 1 | 2 | 3 | 4 | Mean | N | Direction of change Low | Equal | High | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.1 | I would leave medical practice rather than go to rural areas ... | B | 66 | 18 | 10 | 5 | 1.55 | 483 | 17 | 58 | 26 | 432 |
| | | A | 60 | 20 | 13 | 7 | 1.68 | 447 | | | | |
| 7.2 | I would accept a primary health centre job only if my family were in urgent need of financial help | B | 43 | 17 | 25 | 15 | 2.13 | 484 | 19 | 50 | 31 | 432 |
| | | A | 33 | 19 | 28 | 20 | 2.35 | 447 | | | | |
| 7.3 | I would go only if legally required for one or two years before registration | B | 39 | 13 | 22 | 25 | 2.34 | 482 | 22 | 48 | 31 | 432 |
| | | A | 31 | 15 | 26 | 28 | 2.52 | 447 | | | | |
| 7.4 | I would work in a primary health centre only if I cannot find work elsewhere | B | 45 | 13 | 21 | 20 | 2.17 | 483 | 21 | 50 | 29 | 431 |
| | | A | 38 | 17 | 23 | 22 | 2.28 | 447 | | | | |
| 7.5 | I would work in a primary health centre if this was the only way of advancement in government service | B | 47 | 16 | 20 | 17 | 2.07 | 484 | 24 | 48 | 28 | 432 |
| | | A | 42 | 17 | 27 | 15 | 2.15 | 447 | | | | |
| 7.6 | I would work under present conditions if I knew I would not be stuck in village for life ... | B | 27 | 11 | 29 | 33 | 2.67 | 484 | 24 | 49 | 27 | 431 |
| | | A | 22 | 17 | 29 | 32 | 2.72 | 446 | | | | |
| 7.7 | I would go only if permitted to live in a nearby city | B | 35 | 13 | 31 | 21 | 2.38 | 484 | 24 | 50 | 26 | 432 |
| | | A | 30 | 18 | 33 | 20 | 2.43 | 447 | | | | |
| 7.8 | I would go if there was some improvement in both professional standards and living conditions | B | 7 | 7 | 31 | 55 | 3.33 | 484 | 27 | 53 | 20 | 431 |
| | | A | 11 | 8 | 32 | 50 | 3.21 | 446 | | | | |
| 7.9 | I would go if a liberal allowance and provision for personal comforts were provided but without significant improvement in present professional opportunities | B | 35 | 16 | 36 | 13 | 2.27 | 484 | 31 | 42 | 27 | 431 |
| | | A | 28 | 25 | 34 | 13 | 2.31 | 446 | | | | |
| 7.10 | I would go if facilities for maintaining good quality professional standards were provided and without particular regard for improved living conditions | B | 19 | 18 | 37 | 26 | 2.71 | 484 | 33 | 37 | 30 | 432 |
| | | A | 16 | 23 | 39 | 23 | 2.69 | 447 | | | | |
| 7.11 | I am willing to sacrifice both personal and professional considerations indefinitely | B | 67 | 13 | 13 | 7 | 1.60 | 484 | 19 | 67 | 13 | 431 |
| | | A | 71 | 15 | 10 | 4 | 1.47 | 446 | | | | |
| 7.12 | Do you think you might change your opinion if you knew more about primary health centre work? | B | 57 | 43 | | | | 478 | | | | |
| | | A | 37 | 63 | | | | 446 | | | | |

1—Disagree, 2—Partially disagree, 3—Partially agree, 4—Agree, B = Before, A = After.

TABLE II

Percentage distribution of interns by the degree of importance of various factors influencing unfavourably in serving in a primary health centre, before and after the rural internship and also by the direction of change after the internship.

(Reference Period 1964)

| | Factors | | Importance Scale 1 | 2 | 3 | 4 | Mean | N | Direction of change Low | Equal | High | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.1 | Lack of opportunity for post-graduate education. | B | 10 | 9 | 28 | 53 | 3.23 | 483 | 21 | 57 | 22 | 437 |
| | | A | 6 | 11 | 31 | 53 | 3.30 | 451 | | | | |
| 9.2 | Problems with personal grooming and appearance. | B | 30 | 34 | 27 | 9 | 2.15 | 481 | 24 | 46 | 30 | 436 |
| | | A | 24 | 38 | 31 | 8 | 2.23 | 450 | | | | |
| 9.3 | Unsuitable Housing. | B | 6 | 20 | 40 | 33 | 3.00 | 483 | 23 | 53 | 25 | 437 |
| | | A | 6 | 19 | 45 | 30 | 2.99 | 451 | | | | |
| 9.4 | Lack of opportunities for professional advancement. | B | 2 | 10 | 32 | 55 | 3.40 | 482 | 21 | 63 | 17 | 435 |
| | | A | 2 | 10 | 37 | 51 | 3.37 | 449 | | | | |
| 9.5 | Inadequate equipment. | B | 2 | 9 | 33 | 56 | 3.43 | 483 | 23 | 55 | 22 | 437 |
| | | A | 2 | 9 | 39 | 50 | 3.38 | 451 | | | | |
| 9.6 | Objections of wife/husband (even if unmarried). | B | 25 | 23 | 32 | 20 | 2.46 | 480 | 27 | 45 | 29 | 437 |
| | | A | 25 | 26 | 28 | 21 | 2.44 | 450 | | | | |
| 9.7 | Objections of other family members. | B | 25 | 28 | 27 | 10 | 2.13 | 481 | 22 | 47 | 31 | 436 |
| | | A | 27 | 35 | 26 | 12 | 2.23 | 450 | | | | |
| 9.8 | Inadequate primary health centre buildings. | B | 12 | 32 | 35 | 21 | 2.64 | 482 | 31 | 40 | 30 | 437 |
| | | A | 12 | 30 | 43 | 16 | 2.63 | 451 | | | | |
| 9.9 | Lack of medical meetings and stimulating professional contacts. | B | 4 | 15 | 36 | 45 | 3.22 | 482 | 31 | 48 | 21 | 437 |
| | | A | 4 | 20 | 41 | 35 | 3.06 | 451 | | | | |
| 9.10 | Lack of transportation facilities and communication with urban areas. | B | 2 | 15 | 36 | 46 | 3.26 | 481 | 24 | 51 | 24 | 437 |
| | | A | 3 | 14 | 39 | 44 | 3.24 | 451 | | | | |
| 9.11 | Inadequate drugs and supplies. | B | | 5 | 29 | 66 | 3.60 | 483 | 14 | 68 | 18 | 437 |
| | | A | 1 | 5 | 27 | 68 | 3.61 | 451 | | | | |
| 9.12 | Difficulty of access to libraries reference materials, and research facilities. | B | 4 | 14 | 38 | 44 | 3.22 | 483 | 29 | 48 | 23 | 435 |
| | | A | 4 | 15 | 42 | 39 | 3.16 | 449 | | | | |
| 9.13 | Lack of social activities and recreational facilities. | B | 9 | 25 | 43 | 23 | 2.80 | 483 | 31 | 47 | 22 | 435 |
| | | A | 9 | 31 | 39 | 21 | 2.71 | 449 | | | | |
| 9.14 | Not enough pay. | B | 12 | 13 | 34 | 41 | 3.04 | 483 | 20 | 56 | 23 | 435 |
| | | A | 8 | 17 | 35 | 40 | 3.08 | 449 | | | | |
| 9.15 | Poor quality professional assistants. | B | 6 | 22 | 42 | 30 | 2.95 | 483 | 26 | 47 | 27 | 435 |
| | | A | 4 | 23 | 45 | 27 | 2.97 | 449 | | | | |
| 9.16 | Lack of variety in clinical work. | B | 13 | 27 | 37 | 23 | 2.70 | 482 | 25 | 41 | 35 | 437 |
| | | A | 9 | 22 | 48 | 20 | 2.80 | 450 | | | | |
| 9.17 | Lack of educational facilities for children. | B | 1 | 8 | 28 | 63 | 3.53 | 482 | 22 | 63 | 15 | 437 |
| | | A | 2 | 10 | 31 | 57 | 3.44 | 450 | | | | |
| 9.18 | Lack of consultants. | B | 9 | 20 | 47 | 23 | 2.85 | 482 | 24 | 52 | 24 | 437 |
| | | A | 6 | 23 | 46 | 24 | 2.89 | 450 | | | | |



| | Factors | | Importance Scale 1 | 2 | 3 | 4 | Mean | N | Direction of change Low | Equal | High | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.19 | Health hazards for family. | B | 12 | 27 | 37 | 23 | 2.72 | 482 | 28 | 44 | 28 | 436 |
| | | A | 10 | 30 | 39 | 21 | 2.70 | 450 | | | | |
| 9.20 | Being supervised by non-medical persons such as Block Development Officers. | B | 18 | 20 | 19 | 43 | 2.87 | 482 | 19 | 52 | 29 | 433 |
| | | A | 16 | 17 | 20 | 47 | 2.98 | 446 | | | | |
| 9.21 | Too many patients. | B | 56 | 23 | 17 | 4 | 1.70 | 482 | 19 | 55 | 26 | 437 |
| | | A | 52 | 21 | 22 | 5 | 1.80 | 451 | | | | |
| 9.22 | Fear of losing clinical skill. | B | 22 | 25 | 30 | 24 | 2.56 | 481 | 28 | 43 | 29 | 437 |
| | | A | 20 | 26 | 32 | 22 | 2.57 | 451 | | | | |
| 9.23 | Too few patients. | B | 40 | 23 | 22 | 15 | 2.13 | 481 | 30 | 47 | 23 | 436 |
| | | A | 44 | 22 | 22 | 11 | 2.01 | 450 | | | | |
| 9.24 | Fear for personal safety. | B | 39 | 24 | 20 | 16 | 2.14 | 482 | 25 | 48 | 27 | 436 |
| | | A | 35 | 25 | 26 | 14 | 2.20 | 450 | | | | |
| 9.25 | Political interference. | B | 30 | 18 | 19 | 33 | 2.55 | 481 | 19 | 51 | 30 | 437 |
| | | A | 24 | 20 | 19 | 37 | 2.68 | 451 | | | | |
| 9.26 | Involvement in medicolegal work. | B | 28 | 29 | 25 | 18 | 2.31 | 483 | 23 | 48 | 30 | 437 |
| | | A | 25 | 25 | 32 | 17 | 2.42 | 451 | | | | |
| 9.27 | Living in a village. | B | 40 | 29 | 18 | 13 | 2.05 | 328 | 19 | 50 | 31 | 293 |
| | | A | 34 | 22 | 31 | 12 | 2.22 | 305 | | | | |

B = Before; A = After; 1 = Not important; 2 = Slightly important; 3 = Moderately important; 4 = Very important.

# Folk-Medicine and Modern Medicine in Peasant Society—Its Relevance to Medical Education

BY

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## Medicine and Society

Osler begins his lectures on 'Evolution of Medicine' with the following philosophical observations. 'Medicine arose out of the primeval sympathy with men, out of desire to help those in sorrow, need and sickness'. Dr Osler quotes Payne's remarks that 'the basis of medicine is sympathy and the desire to help others and whatever is done with this end, must be called medicine'. 'The first lessons came to primitive man by little experiences crystallised into useful knowledge'. 'No society, so primitive is without some evidence of the existence of healing art, which grew with its growth and became part of the fabric of its organisation'.

Hughes mentions the set of minimum conditions necessary for 'coherence of a society' which he calls 'functional requisites'. Such are adequate economic base, education of the members, pattern of communication and division of roles, shared goals, etc. One of the primary requisites of society is 'the active pursuit and maintenance of health'.

The attitudes of Society, towards health, medicine and the sick man and its valuation of health and disease, have changed a great deal in the course of history. Today, developed societies care for the indigent sick, for practical reasons also, realising that society is seriously handicapped by having sick members and that the diseased group is a menace to the whole population. This is the modern concept of welfare state and the socialistic pattern of society.

Rene Sand comments that 'in spite of the efforts that have been made to put medical care within the reach of all, its quantity and quality are still far from evenly distributed between different classes of societies. There is a striking contrast between the medical services available to different income groups. There is also a great inequality in this respect between the town and country, between the wealthy and the impoverished districts and between the different social classes'.

## Contemporary Society

Contemporary society is not of the same uniform or universal pattern even in the West or in the East or in any country, city or countryside. Today, in certain parts of the world, there are not only aboriginal tribes with a culture resembling that of the very primitive societies but also peasant societies, which resemble the pastoral and agricultural societies, of two thousand years ago. In advanced countries and in urban areas, there are industrialised or capitalist societies. Another classification uses the terms developed society and developing society and under-developed society. In common parlance we hear of upper classes, the middle classes and the lower classes. The problems of health and medical care in these different strata of society or sections of population naturally differ from one section to another and may require various types of training and orientation of medical students and to provide the maximum benefits to these different sectors of society.

## Folk-Medicine

*Folk-Lore:* Is defined as traditional customs and superstitions of the uncultured class of civilised nations. By usage, folk-lore includes the material as well as the intellectual culture of the backward elements in the civilised society. These are kept alive by traditions and a desire to carry on without change, what one's parents and predecessors performed or professed. These owe their preservation, partly to the fact that the masses of the people do not belong to





civilisation, which tow over them, and which is never of their /n creation.

*Folk-Medicine:* is a specialised part of folk-lore.

McKenzie points out, 'The thoughts of infancy (of mankind) not infrequently linger on, into manhood (of the race)'. These beliefs, ideas and practices form a core of popular medical folk-lore. This folk-medicine is to be distinguished and differentiated from what is called 'official ("historical" or "academic") medicine', that is to say, medicine of the educated people and of the recognised schools and authors from the earliest times to the present day and represented by various literary records.

'Folk-Medicine' writes Sigerist 'is a big hodge-podge in which primitive lore is blended with reminiscences of uses and practices of academic medicine of the past'.

The essence of folk-medicine where it has a mystical element or empirical element or a combination of both, is a recognition of the curative action of the drug, animal, vegetable or mineral. Most of these are based on experience of groups of individuals suffering from certain ailments.

Folk Medicine may take many forms:

Amulets, charms, incantations, fumigations, King's touch or the healing by Royal touch, snake worship, treatment of snake-bite, taboos, temple worship, healing wells, herbs, drugs, are some.

Hodgdon appears to consider Indigenous systems of Medicine as folk-medicine. Many scholars including Prof. Sigerist do not include Ayurveda and Unani in folk-medicine. Hodgdon quotes Dr Saunders of Colorado:

'Folk-medicine is neither precise nor logical. It is rooted in people not knowing and requires only occasional success to maintain its vigour'.... 'Folk -Medicine constitute a fairly well-organised and fairly consistent theory of medicine'. ... 'Folk medicine flourishes because it is a functional and integral part of the whole culture and because it enables members of a cultural group to meet their health needs as they see them.'

Many explanations have been given of its persistence through ages, in spite of the progress of civilization, great changes in society, political revolutions and educational reforms. There is, however, one interesting undisputed fact that folk-medicine is a prominent reservoir of empirical knowledge based on experience and traditions. Some original minds have drawn upon this folk-medicine, borrowed ideas and developed new discoveries for the benefit of mankind and these have now been included in the armamentarium of modern medicine. 'There is a constant two-way inter-change between scientific medicine and folk-medicine'.

Folk-medicine or anthropological medicine, as Prof. Entralgo calls it, exists even today in every part of the world including the most highly developed nations. Professor Sudhoff mentions that the healing customs of Teutons include even to this day some folk-medicine. Professor Sigerist states that some of the old beliefs and practices still persist, even today, not only in Africa but in Europe and America, particularly among the peasant population where the patient is treated by his relatives or treats himself according to folk-medicine, pure and simple. The relative proportion of folk-medicine and modern medicine vary today from country to country and from society to society, according to the medico-historical, socio-economic and cultural patterns and the changing values of the people, and the spread of modern science among the common people.

Newman states that 'folk-lore is ultimately rational' and cites the opinion of Allbutt, 'it is the beginning of the science and art of medicine'. Newman also quotes Malinowski that 'the study of folk-lore and folk-medicine' can instruct us in how to graft a new idea on the old one without destroying what is good and sound in it and can be used fully in the understanding of both preventive medicine and the various kinds of medical treatments and methods for prevention of disease'.

## Modern Medicine

Osler in his 'Evolution of Modern Medicine' takes the readers on an aeroplane flight over the progress of medicine through the ages. He traces the slow painful character of the evolution of medicine from the fearsome superstitious mental complex of

primitive man with his amulets, healing gods and disease demons to the ideal of a clear-eyed rationalism. The chapter on rise and development of modern medicine begins with the middle of the 17th century by which time certain objective features of disease were known. The art of careful observation was cultivated, many empirical remedies had been discovered, the coarse structure of man's body has been well worked out and a good beginning made to know how the body machinery worked. Then, in 18th century, came the advances relating to the nature of disease, its seat and its cause. The early decades of the 19th century saw the rise of anatomico-pathological schools of medicine which is turn gave birth to modern clinical medicine. The progress of scientific medicine became impressive by the end of the 19th century.

Shryock, who is a general historian, interested in medicine and who realises that history of medicine is an essential part of history as a whole, describes in his book 'Development of Modern Medicine', the major aspects of medical development against the background of intellectual and social history in general. He also describes the emergence of modern medicine between 1800 and 1850 and the triumphs of modern medicine, between 1870 and 1900 and sketches its further progress in the 20th century, including some of the consequences of the new discoveries and closes with the practice of medicine in a changing society between 1880 and 1930.

Galdston has graphically stated the present approach to medicine. 'The disorders and diseases now dominant are not due to specific pathogens. but rather to economic, social, political, and cultural factors. To meet the challenge of this patho-demography, there is need for all accumulated knowledge that modern science provides us. But in addition, there is need for some of the Hippocratic orientation. In other words, we need to know man not only anatomically, physiologically, and psychologically, but also anthropologically, for medicine will be increasingly confronted by pathogenic forces that are ecological, social and cultural in nature'.

Professor Sigerist has repeatedly stressed that medicine is basically a social science and that the go f medicine is not mer to cure disease. He adds that medicine not a natural but a social science and its go is to keep men adjusted to their social physical environment as useful members the society and to readjust them wh prevention has broken down. The doct will have to be more than mere therapeuti and will have to be teachers and soci workers, leaders and friends of the peop leading them to healthier and happier li

## Peasant Society

*Peasants:* According to the New Engli Dictionary, the word 'peasant' is deriv from an old French word meaning a divisi of a country and has come to mean one w lives in a country and works on a l either as a small farmer or labourer. Th name is also applied to any rustic of t working class. Webster's New English Di tionary describes the peasant as the t of the soil, either as a small proprietor o labourer. Sometimes it is also used to r to a basefellow or a boor. The s position, behaviour and manners of pea are considered to be distinctive.

*Peasant Society:* Gordon Childe sket the origin and characters of the Pe Society. 'With the invention of the plo 5000 years ago and the harnessing of t to the plough, farming changed from cultivation to agriculture. Man began till the fields. The hunters gradually up hunting and devoted themselves to ing and fishing'. 'The great masses of people, peasants, farmers and fishers supplied the foodstuff to maintain selves and the whole economy multi exceedingly. The producers had little for the purchase of other things. The ploration of land reclaimed from swamp deserts was yielding unprecedented supp wheat, and other foodstuff. Food collected from all the store-houses in the could be distributed all over the valley even the masses secured a more varie and more salubrious housing'.

## MEDICINE IN PEASANT SOCI

### Medicine in the 18th Century

*U.S.A.* Shryock describes the p medicine in the 18th century in a d ing society, almost a peasant society



cine. Medical men rural areas lacked degrees but were prac l men who learned by experience. Licensing regulations were not enforced to exclude folk-healers, quacks and charlatans. Most eighteenth century folk apparently dosed themselves and consulted practitioners only when alarmed. The lower the income, the more likely was this to be the case.

*U.S.S.R.* Upto the time of the Revolution, fifty years ago, the common people had never seen a physician, but were treated by medicine-men, witch-doctors, or clerks, priests and monks using a type of primitive or folk medicine, a combination of empirical knowledge of magical rites and religious beliefs.

*China.* Before the revolution in 1949, the peasants depended only on folk-medicine and traditional practitioners. Medical care in rural areas was virtually non-existent. The farm population could get only water supply and vegetables, polluted by excreta. The peasants suffered from transmission of disease through fecal anal route and intestinal parasites like hook-worm were common. Malaria, Filaria, Kala-azar were epidemics in some areas.

### Does Peasant Society resist Modern Medicine?

There has been some discussion whether oriental non-literate societies show any resistance to innovation on account of their traditional beliefs. Hughes contradicts this view: 'Despite cases of resistance to innovation, in many places in the world today, the exceedingly high prevalence of sickness, in conjunction with the demonstrated effectiveness of modern medicine, serve to create some of the strongest pressures for change in the direction of new reference cultures. Once people refuse to accept the inevitability of disease and early death, and along with this, have some image of the assumed or demonstrated effectiveness of modern medicine, forces for basic changes in social life are set in motion.

*The Peasant in India:* Some of the important questions relating to health and medical care in rural areas in India have been ably dealt with in the learned addresses at the meeting of World Medical Association in Delhi. The thought-provoking paper of the late Raj Kumari Amrit Kaur on 'Education and its Impact on Rural Health', the valuable suggestions of Dr Amir Chand on 'Health Care in Rural Areas' and the comprehensive presentation of Dr K. N. Rao on 'Public Health in Rural Communities' and the editorial in J.I.M.A. commenting on these papers, are a mine of information for the administrator and teacher. Some of these are pertinent and applicable to the health care and medical aid in a peasant society.

But so far, no special reports have appeared in India and no special studies have been conducted to collect data on the socio-economic conditions of the peasants and farmers with particular reference to the level of health, cost of medical care, patterns of disease, availability or non-availability of any kind of medical aid with a view to identify their problems, conduct intensive investigations and to make necessary modifications or provisions in the care or in the medical curriculum to meet the needs of the peasant society.

Lt. Col. Amir Chand recently published an article on 'The Role of Health in Our Agronomy' and urged that education in medicine and agriculture need to be co-ordinated. He mentions the hazards, dangers and diseases likely to be contracted from animals, from insecticides and urges better farming by ensuring better health of the peasants. He suggests the training of multi-purpose scientists in vocational aspects of agriculture, health and sociology to give guidance to the farmers.

Ignorant, illiterate and indigent peasant cannot approach the practitioner of modern medicine or even those of Indian Systems of Medicine. He consults the compounders, ward-boys, and quacks.

## KALEIDOSCOPIC PATTERNS OF MEDICINE IN INDIAN SOCIETY

Medical folk-lore in India is the vast background against which stand out a few bright patches here and there consisting of the official systems of medicine like Ayurveda, Unani, Modern Medicine including Homeopathy, etc. Traditions persist tenaciously through centuries in India and many

are still alive in many ways. The folk-lore is a hodge-podge in which ancient, medieval and modern views are inextricably mixed.

Public Health and Preventive Medicine in India were essentially social practices enshrined in the laws of the land from the time of Manu and Kautilya. The society functioned on the strength of traditions and customs, backed by moral compulsion and religious motives or sanctions rather than by any set of rules and regulations. It has been suggested that modern principles of health can best be assimilated only if they are in some measure attuned to the age-old beliefs and practices of the society.

In ancient and medieval India, there was a system of medicine, known as Ayurveda. Professor Sigerist has described how it is rooted in religious and philosophical traditions of the country and how nationalism has backed this system of medicine.

He has also drawn a graph picture of the practitioners of modern medicine trained, through the English medium, as a highly trained technician ignorant of the real goal of medicine, practising a primitive type of modern medicine that is hardly likely to demonstrate the superiority of Western medicine and, due to his poor salary, forced to make a little money through modern doctor's private practice. The villager, too poor to pay for his services or imported drugs, seeks the help of the indigenous practitioner, who is a villager, whose native herbs are cheap and whose ideas conform to those of the patient.

Besides Ayurveda, there is in India the Unani system of medicine, which attained popularity in some kingdoms during the later medieval period in India, and continues to be popular in certain regions and certain sections of the population.

The third phase of medicine in India is the advent of European Medicine from the 16th century through Portugese, Dutch, French and English medical officers. It is, therefore, only from the beginning of the 19th century with the extension of British power and territories in India, that the British medicine began to spread its influence beyond the circle of British soldiers and civilians to the aristocratic and educated upper class in cities and big towns and gradually became more widespread and popular through civil dispensaries and hospitals in the district and taluq headquarters and to the increasing number of private medical practitioners of modern medicine.

### Factors which Deter Utilisation of Modern Medicine

Hodgdon describes the various psychological and major problems facing the medical profession in developing countries like India. The first is the lack of facilities for transport and communication, producing physical and sociological isolation which retard social change along with a lack of awareness among the rural folk of the advantage of modern medicine and therefore, not demanding it. People depending on indigenous systems of medicine feel European medicine is alien to their beliefs, customs and experience. The second major problem is integrating the indigenous systems of medicine with the great body of scientific medical knowledge. Hodgdon points out the difficulties in integrating the Indigenous Systems of Medicine with Modern Medicine. These systems have a profound hold on villagers, and these systems lie also embedded in a social and psychological matrix as well as a medical one. These systems are interested in survival, and constitute a pressure group within society. The third major problem facing the profession and, in many ways, the most difficult one, is the problem of health education.

Max Weber, an eminent sociologist has stated that 'other-worldly' orientation of Hindu-Buddhist religious tradition of India and its consequent development of the caste system offer fundamental constraints on the development of modern sciences. There are other equally eminent sociologists who think that a number of trends in Indian tradition are favourable to the growth of sciences including medicine. Some recognise the fact of the existence of multiple values in the religious traditions of India.

From preliminary enquiries made and questionnaires sent out, one is inclined to conclude that wherever modern knowledge and up-to-date methods of medical care, public health and other social welfare activities were provided, the peasant in India has not been slow in accepting them, appreciating them and asking for more. Therefore, there is no evidence of



real obstacles or reluctance due to traditional conservatism or psychological fears. The only factors that matter are ignorance, responsible for the lack of awareness of the benefits of modern medicine, and the economic disability to meet the cost of modern medical care in a far off city or in a private clinic.

## RELEVANCE TO MEDICAL EDUCATION

### (i) Recent World Trends in Medical Education

(*a*) There should be provision for teaching the psychology of the lay mind to enable the doctor to appreciate the patient's point of view and to obtain an insight into the working of the mind of the patient.

(*b*) Social sciences should be taught to make him realise that medical education is for the service of the society. Medicine is not a means of becoming rich but an opportunity for service to the needy. The student should be given a broad view of illness and its control based on a socio-economic and environmental influences and he must be able to correlate clinical conditions with environmental and socio-economic conditions. The teaching and training in the school should orient him towards 'multiple factors' (such as physical, social, domestic, mental, environmental) which result in disease. The student should be introduced to the patients in their natural surroundings so that the doctor may obtain an idea of natural history and proximate cause of their illness in that environment.

(*c*) The medical student should be taught health economics and medical economics. There should be a course of instruction in medical ethics and doctor-patient relationship, etc.

### (ii) Relevance to Medical Education in India

(*a*) Medical education in India today is the result of many historical developments—political, social and economic. In addition to folk-medicine the Indigenous Systems of Medicine and the Modern Scientific Medicine are available to the common man in all parts of the country except in the remote villages and the hill tracts and forest areas. Medical education in India should take into consideration the complexities of the Indian situation, geographical, social, economic and cultural as well as the needs of the various segments of society and should be oriented to the conditions of life and work which vary from place to place.

(*b*) The Bhore Committee and the Health Survey and Planning Committee have recommended that adequate public health orientation should be given in the training of the basic doctor. They also recommended some arrangements for the training of the student in rural centres situated near the medical colleges or that the students should be taken by the teachers of Preventive and Social Medicine to the neighbouring villages on certain days of the week to acquaint them with rural conditions. It is also suggested that during the period of housemanship, the professors of clinical subjects and of Preventive and Social Medicine should take the housemen to rural medical centres.

### (iii) Modifications of the curriculum required for the training of the Basic Doctor for India

(*a*) The student should be taught to look at modern medicine from the perspective of history, as a result of a long development and as a dynamic process. Professor Sigerist recommended that the medical student in India should have instruction in history of medicine including history of Ayurveda, Unani and Modern Medicine.

(*b*) Health Survey and Planning Committee have recommended that experts on Ayurveda and Unani should be associated with the

Departments of Pharmacology and Therapeutics and participate in teaching and research programmes for the investigation of indigenous drugs.

### (iv) Changes in the organisation, selection and training of the doctor for Rural Areas in India

(*a*) The medical centre where instruction is given for the training of the future doctors of the peasants should be located in a purely rural atmosphere or at least in a semi-rural atmosphere where the environment will approximate to the conditions into which he enters after his training so that the student will be familiar with and accustomed to the languages of the people and their expressions and reactions, have a foretaste of the kind of problems that may suddenly arise, and develop the resourcefulness to meet the exigencies of the situation, travelling to isolated hamlets or farms by primitive modes of transport to attend to emergencies or tackle community health problems. If such ideal rural location of the medical college is not possible and the student has to learn in hospitals situated in towns not only his vacations but also a part of his term of instruction should be in the rural dispensaries and hospitals among the agricultural population so that he may understand and analyse the health problems of the peasant society and evolve methods, for treatment of the diseases or attempt preventive measures. In short he must be 'problem oriented' and apply the knowledge and experience acquired by him in towns and bigger hospitals to meet the needs of the rural areas and peasant society. Since the training of the teacher, the specialist, etc., should be different from the training of the basic doctor, medical education of the basic doctor in the clinical years may be conducted in rural settings and amongst peasants.



(*b*) Students who are to be the future doctors of the peasant society, should be recruited from among the natives of the rural areas as being done at present in Russia. The student may be selected and nominated by the Panchayats of Zilla Parishads and supported during his education on condition that after training he serves the people of the area for a specified term. The student must be not less than 20 years of age and must have lived and worked for some years in the peasant society and must be physically robust and mentally mature before admission. He should have studied not only physical and biological sciences but must have practical knowledge of humanities, social and behavioural sciences (Sociology, History, Economics and Psychology, etc.) In selection, greater attention should be paid to the background of the student's aptitude, motivation and other moral traits of character which Charaka and Susruta recommended for medical students and which are demanded by the Hippocratic oath.

(*c*) *Training in Community Development*

The future doctor should also learn to make use of community self-help and to stimulate such self-help. He must also know how to approach villagers, find the basis of common interest, keep company with them, win their confidence, deal with them as equals and motivate the villager towards progress and community development. Medical relief work among the peasants will facilitate such understanding and secure the willing co-operation and active participation of the villagers. While with the student the future doctor must develop training-cum-supervisory ability by means of practical exercises in training programmes of local auxiliary health workers. The student should receive training in the aim and purpose of mass health education measures and techniques.

With the help of health education he must be trained to carry on mass campaigns like vaccination against Small-Pox, immunisation against Tuberculosis or campaigns against vectors of disease and environmental insanitation. All these can be incorporated in the teaching of Public Health and Preventive and Social Medicine.

### (v) Special courses and training in Agricultural Medicine

(*a*) A recent W.H.O. report says 'Occupational Health in Agriculture' is a relatively new concept. A decade or two ago, occupational health was generally referred to as 'industrial hygiene' or 'industrial health'. Farming is definitely an industry, and from the standpoint of capital investment and number of persons employed may be termed 'big business'. The environment of the agricultural worker involves greater exposure to infections and parasitic diseases than urban surroundings, the close contact of the agricultural workers with animals and of their products with contaminated soil, water and air plus the hazards of numerous insects and arthropods increase the likelihood of his contracting diseases caused by viruses, rickettsia, bacteria, fungi and parasitic agents.

(*b*) In the report on 'Occupational Health Problems in Agriculture', the W.H.O. Committee recommended appropriate instructions in the subject at the under-graduate level. 'The teaching should include general knowledge of the agricultural environment and its impact on the health of the population with special emphasis on the type of work involved in agriculture and how it affects the worker. He must be made aware of possible accidents on the farm and of the diseases arising from poisoning and zoonoses'. The Committee also recommended intensive training programme at a postgraduate level for those who take up position of responsibility for health affecting the agricultural communities. Such training may be given in Universities or Schools of Public Health or Institutes of Occupational Health. The Committee also felt that there was need for periodic refresher courses, for all personnel interested with the health of the peasants either as long courses of several weeks, week-end courses and seminars at demonstration farms or even correspondence courses. It also recommended that research in the subject of Occupational Health of Agricultural Workers should be promoted and gave a list of important fields for intensive research in specialised institutes of Agricultural Medicine.

### Conclusion

From 1870, the British rulers had laid great emphasis on 'Rural Education', i.e., elementary education for the masses of the people and at the beginning of this century, Lord Curzon shifted the emphasis to the education of the masses through the medium of vernacular, as an antidote to ignorance and to make the common people happier and more useful members of the 'body politic'. As early as 1881, Sir Richard Temple pleaded before the Indian Planning Commission that the agricultural classes should be started in all grades of schools. During the last three or four decades, attempts have been made to impart health education not only in schools but also to the neo-literates and to the peasants. Brayne recommended compulsory teaching of sanitation and hygiene, personal and domestic, to the peasants and also urged the training of Village Officers in Health Education and the use of 'carriages' in trains for health propaganda.

Only a basic doctor, recruited and trained on the lines indicated above, can succeed in imparting health education, protect health or alleviate suffering and rehabilitate the peasants of India.