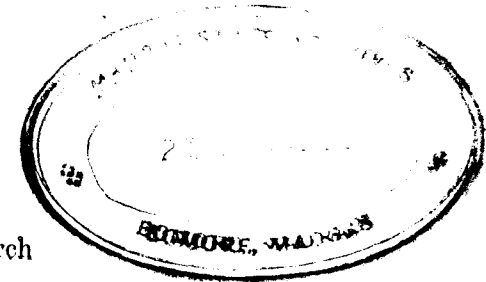


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STATE HEALTH EDUCATION BUREAU
MADRAS

Family-Planning Programme in India.

JACK LIPPES.



JACK LIPPES.

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The urgency of over population both in individual families and the nation requires urgent and speedy solutions. With regard to this problem, India's greatest shortage is not transport, medical personnel, or foreign exchange but time. The birth control revolution must be instituted in less than 10 years. If in 10 years, India adds another million people to

its population neither India nor her friends would be able to feed these new numbers.

This is written as a series of suggestions, some of which already are being implemented.

The first pre-requisite in providing a service is to make it readily available within one year. The Intra-uterine Contraceptive Device (IUCD) should be a routine procedure in all hospitals and in all dispensaries and health centres throughout India. The second requirement is that more persons should

know about this service and of what value it is to them. For this the Central Government should establish a separate Information Service devoted entirely to family-planning. Immediate appointment of an imaginative person knowledgeable in the field of education and communication is urged. He or she should attract personnel and have the power and money to build up this department. Grants should be made to Motion Picture Companies within two months to make films dealing with the various aspects of family-planning. These can be short films both in documentary and dramatic forms on such subjects as family-planning means healthier and happier children. Contraception is a reasonable alternative to the death dealing effects of induced abortions. The incidence of abortions in India should be studied. How many illegal abortions occur in India each year? What percentage of hospital beds are occupied by abortion cases. What do such beds now cost to State? How many mothers die each year from the effects of induced abortions? How many Indian children are made motherless each year from the effects of induced abortions. What does this cost to the State?

The Central Government's Information Service shall act as advisers to their counterparts in each State Government. Obvious the culture and language differences will require separate State Information Services.

Increase in the numbers of health educators is important. The most effective way to start family-planning programme is with the home visitor. This is well-documented both in Korea and Taiwan. Both male and female educators are needed. It is better to have couples practising effective contraception in one village than they have one couple doing so in each of 10 villages. Concentration of campaigns with currently available personnel in specific areas are recommended. Some southern States have been unusually slow adopting family-planning with ever and more effective methods IUCD. The selection of four to eight areas in the south for intensive family-planning programmes will go a long way in

the Southern conservatives about the usefulness of the new method. This selection should be made in one month and the programme should be started within two to three months.

Establish Family-Planning Training and Research Institution in every State to guide spread of knowledge and motivations of doctors civil servants, politicians, academicians and journalists.

Each institute should be equipped with a small library on family-planning subjects, such as sociology, demography, communications, contraception, etc.

These institutes should have regular Seminars and workshop persons involved in family-planning. The family-planning news should be enlarged. Each State Family-Planning Institute should submit articles reviewing and analysing both their successes and their failures on a regular basis. This could be done first quarterly and next year on a monthly basis.

Establish in each State a completely independent evaluation cell which would review target attainments or failure and reasons for the same. Independent cells will have to contain doctors, sociologists and communication experts. Each State institute should be required to submit monthly reports describing target attainments to the evaluation cell. Such cells should be used to encourage family-planning workers with an imaginative and constructive advice and not act as policemen or supervisors.

Establish training institutions for various medical and non-medical workers to be involved in family-planning. Such institutes are already going strong in Calcutta, New Delhi and Bombay. Additional one or two in the South will help.

Financial incentives.—Financial incentives should be placed on a greater magnitude, e.g., each doctor should be paid Rs. 8 for each loop insertion. This payment should be made both to Government and private doctors. Rupees 5

should be paid to subsidize the patient being away from home for the day Rs. 2 should be paid to the village dai or social worker who brings the patient in for loop insertion. This is a total of Rs. 15 for each loop insertion, with is half of the current subsidy of Rs. 30 now being paid for vasectomy. Nothing will promote the IUCD programme faster than financial incentives. This should be set up immediately. This information should be advertised to all doctors.

Along this line the Government should organise the coupons referral system as is now practised in Taiwan. In this system the health educator and the social worker registers all those women who want to have the IUCD. The patients are issued a coupon. The patient then submits the coupon to the doctor who inserts the IUCD. The doctor then sends his coupons to the Government in return for payment. The Government will then know exactly how many loops have been inserted, where and among what age group because this information will be on the coupon. Sampling at a later date will show how many people are continuing the use of the IUCD. In this respect it is important to note that even in the first year about 10 or 15 per cent will probably discontinue the method. Those people who cannot use the IUCD will have to be offered other methods such as the condoms, foam tablets and birth control pills.

It may be of great value if some leading administrators could visit Taiwan and observe the coupon referral system.

Family-planning as a career should be upgraded and glamourised with the awards and recognitions due the family-planning workers. In this respect a speech by the Prime Minister herself during an award ceremony and on the subject of family-planning will encourage capable people to enter into the programme. As you probably know, in my country, President Johnson has already spoken at least four times on the value of birth control to individual families, nations and the world.

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The Government should provide security to the people doing family-planning work. This will also help to attract competent individuals.

Organizational changes should be instituted to prevent procedural delays, especially right now. Emergency or urgent problems require shortened administrative lines. It is roughly estimated that perhaps 180 thousand Indian mothers die each year from the effects of induced abortions. If today you were to learn that a foreign invader is responsible for the death of 180 thousand Indian mothers you will then be willing to go to war and stake your lives, your fortune and your sacred honour to fight such an invader. The abortion problem should be considered as such a war. The way to fight it is effective family-planning; and *Liberalize the Abortion Law.*

Encourage the Indian Medical Association especially the private practitioners to form Medical Advisory Committees in every State so that their skill and guidance can benefit the Family-Planning-Programme of India. The establishment of such Committees will also ensure the operation of the medical profession. They should be included in a programme of this magnitude. Where important medical doctors remain unconvinced as to the value, safety or effectiveness of the IUCD they should be placed on medical teams which would visit the successful districts such as Ambala District in the Punjab and the Hoogly and Bakara District of West Bengal.

Probably the most difficult part of being successful with this programme is instituting a sociological revolution in less than 10 years. How does one convince a couple in a village who has four daughters not to have another baby? After all sons can support parents in their old-age. The Central Government leaders should establish an old-age pension in order to decrease parental dependency on children. I believe this will go a long way for making the idea of small family more acceptable to the mass of the Indian populace, a whole array of legislative devices should be utilised to promote Family-Planning. No maternity leave after the third child.

The goal of the Family-Planning Programme for the next six or seven years should be 50 million effective contraceptors. All these 50 million would not be able to use the loop. Some of them should be offered the pills.

The Central Government should provide funds to the States for the follow-up therapy of loop patients.—The Central Government Family-Planning Institute should write a guide book on promoting family-planning to suggest the proper approaches for various types of occupations, i.e., village farmer, the city clerk, priest, etc. The Family-Planning Organisation of Pakistan has already written such a guide book. This book might be read in India with considerable benefit.

The Central Family-Planning Institute must create training films for doctors especially about the IUCD device. A list of indications and contra-indications for IUCD insertions in the training programme should be made. They should clearly express the desires of the medical leaders to the rest of the profession. In Buffalo, New York, I do not consider a minor condition such as cervical erosion a contra-indication to inserting an IUCD. I have in my trip across India found many doctors who turn away as many as half of the women coming for an IUCD because of this minor conditions. The attitude could ruin the progress. It must be set straight immediately.

I would advise the Health Services personnel against the use of metal inserters. The metal inserters do not bend. The use of metal inserters could increase the risk of uterine perforations.

All Family-Planning Training Centre should treat infertile cases as well as the over fertile. This would put the Family-Planning Centres on a more positive basis.

In the manufacture of loops, I believe that the programme will benefit by the use of stiffer plastic material such as 'Alathon-20'. Currently all loops being made in the United States, Korea, Taiwan, Pakistan, Turkey and Tunisia are of this material namely, Alathon-20.

I would expect the programme to reach three million insertion in 1966. The target for 1967 should be six million: Thereafter insertions should reach ten million per year. With this type of programme of twenty-five million loop inserts by 1969, real drop in the birth-rate could be anticipated with a resultant improvement in the per capital income of all-Indian families. Along with the increased production of fertilisers this programme will stave off the threat of massive famine.

One will then look forward to a generation of happy and prosperous Indians.

I feel honoured to have been called to serve as consultant on your planning programme. The opportunity to serve a great people and a great Government is granted to only a few. It has been a rare and precious privilege. I thank you for this and for your gracious hospitality.

The Aims and Objects of Social and Preventive Paediatrics

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(H.A.R.V)

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PAEDIATRICS FROM A PUBLIC HEALTH POINT OF VIEW.

Though paediatrics may be considered from the medical point of view, to be that branch of medicine which deals with the "Diseases of Children", it differs from other branches of medicine, as it is concerned with the continued growth and development of the child. Paediatrics therefore should be looked at from a Public Health point of view. The modern paediatrician is expected to supervise and give guidance in the growth and development of the child during the entire period of childhood. The goal of paediatrics is the medical management of the child to help him to grow into an adult at his optimal state of development, physically, mentally and socially, so that he can meet the various situations in life most effectively harmoniously. The physician who cares for children must not only be familiar with, and be able to understand the reaction of the infants and children to disturbances peculiar to infants and children, but also should be able to understand the reaction of the infants and children in their environment to these conditions and their treatment. In addition the Paediatrician must know what constitutes adequate achievement at various age-levels, so that, he is in a position to judge the rate of growth and development physically mentally and socially.

AIMS AND OBJECTS.

The aims and objects of good paediatrics as a public health measure—which means Child Health—as it is called, in its main emphasis, lies in the ways and means of making available to all children irrespective of race, creed or economic status, the best, that modern "paediatric care" can provide.

SERVICE TO ALL CHILDREN.

Therefore, child health concerns itself with the community standard of paediatric care received by the majority, if not by all children who are in need of it, not merely the fortunate few on whom it is bestowed in large amounts because they can afford it, it is concerned with the establishment of a health service to all children in the Communities living in different parts of the country both urban and rural. Therefore, it is interested in—

(1) The definition of paediatrician which should primarily be enlarged to include those aspects which embrace the coverage of the child in his varied socio-economic environment;

(2) The paediatric training of the physicians, their distribution in the population, and the method and range of their practice;

(3) The training, employment and distribution of Public Nurses, Health Visitors, and other para child health workers and the nature of coverage of the child population.

HEALTH EDUCATION.

Parents of children have to be educated to make use of the facilities available for health care of their children. Therefore, Child Health, includes education of the parents, as well. It is of little consolation to state, that the large number of children dying of under-nutrition, dysentery and diarrhoea could have been saved by timely and adequate paediatric care. Child health seeks for an answer to the question "why were these children not brought under adequate paediatric care?"

INFANT MORTALITY RATES

It is well-known that the infant mortality rates prevalent in different parts of our country is still very high, when compared with the rates in countries. In Madras, it is round about 100 now. About 300 years ago when there were many Europeans in Madras, the infant mortality in the European community was only 25; whereas the rate in the Indian community was about 250, i.e., ten times the rate in the European population.

This clearly shows that climate and geographical situations were not the chief causes of the high mortality amongst children in Madras, but the unsatisfactory nature of care given to the children during the vulnerable stage of development. We have to note that the neo-natal mortality in this country is higher than in other countries and the mortality rate of older infants belonging to the age group 6 months to 12 months is much higher still. In other countries the mortality rate amongst infants belonging to this age group has been greatly reduced, but in India, it shows a reluctance to come down.

Amongst pre-school children the mortality rate is also alarmingly high in India. The Indian infant mortality rate is about five times higher than the rates in advanced countries but the Indian pre-school child mortality rate is about 50 times higher than the rates in other countries. In India, it is about 25 per thousand, whereas in other countries, it is less than one per thousand.

Children below 5 years contribute to nearly 40 to 50 per cent of the total deaths in India, though they form only 15 per cent of the population. Many children are born just to die before they are five years old and a good many of these deaths are preventable. Even demographers interested in population control, mean at this huge loss of early human life.

TOTAL CHILD HEALTH

The infant mortality rate, the pre-school mortality rate and the mortality rates of children belonging to the older age groups are certainly showing a downward trend and they are gradually coming down. As the socio-economic condition of the people improves, the child can be expected to get a better environment and may have a better chance of survival. Mere survival is not sufficient, as high morbidity among our children is well seen to be known. Children have to grow into adults with good physical and mental health cannot be developed in the absence of satisfactory food; adequate housing; proper clothing; happy and harmonious family life; and facilities for education and recreation. Scientific knowledge that is available has to be used for bringing about improvement in all these fields if total child health is the aim.

COMPREHENSIVE PAEDIATRIC CARE FOR ALL CHILDREN

Wherever children are, they require not only sound but a continuous and comprehensive paediatric care. Often many of them do not require the care given by a paediatric specialist, as the Specialist tends to look at the child with a microscopic eye for disease alone and in a very restricted field; but all children without exception, require the attention and advice concerning diet; immunisations; and personality development.

There are many children in the remote villages who require health care, and there are children in the slums in cities and towns who also require special attention. The community resources have to be organised to see that all children get at least adequate child health care. This can certainly be done by organising a child health service extending all over the country.

DOMICILIARY CARE

Child Health Care takes care of infant, pre-school child and the school child. It forms a part of a comprehensive health care which should be given to an individual from the womb to the tomb. Maternal Health Services is not just midwifery, but takes care of the expectant mother, along with the developing foetus, and takes care of both the mother and child at birth and immediately after birth in her environment. Hence domiciliary care has been offered to the mother in the community as a social service and as measure of preventive obstetrics. Like-wise the child that comes into the field of Child Health Services should later on benefit by the School Health Services, the Student Health Services, and later on Occupational Health Services, and finally the services for all the aged and disabled. An organised Child Health Service is not yet developed to the extent that Maternal Health Services have been developed in this country. It is of great significance when it is realised that such Child Health Services (if and when introduced) relate to a period in the development of Man where either permanent damage can be done, or the foundations for a happy and prosperous personality can be laid. Therefore, it becomes the duty of every patriotic paediatrician to initiate, or participate, and co-operate in the formation and organisation of efficient and satisfactory Child Health Services reaching every child in the country, so that all children in need of it will get the best paediatric care which the country can afford.

It is not at all sufficient to establish "Sick Child" centres in our cities and in hospitals, attached to Medical Colleges alone. Positive "Child Health Services" commencing with the "Well Baby Clinics", must be extended to other parts of the country both urban and rural where large numbers of children live. This can be achieved if our physicians not only believe in this developing concept of Child Care,

but truly set about practising it in their training, and employing sufficient number of workers, and establishing centres within easy reach of the population.

Such a shift of emphasis from the treatment of the *sick child* in an institution, to diagnosing causes arising out of economic and social conditions in the home, and in the community will be the only solution for a more productive citizen. It is a true process of learning experiences by which both the parents in a community and the physicians in an institution, begin to accept what is good for their children all round.

[The paper presented in the 4th National Conference of the Indian Academy of Paediatrics on 6th January, 1967 at I.I.T., Madras.]

FIRST-AID ADVICE

In view of the expansion of rabies and the fact that doctors may find themselves called on at short notice to treat people who have been bitten by rapid animals, the Expert Committee include in their report a detailed schedule of treatment.

The first step is the immediate cleansing of the wound which can be carried out if need be by the layman until the arrival of the doctor, followed by anti-rabies serum and vaccine treatment. The steps to be followed by the doctor in various eventualities are tabulated.

Primary cleansing of the wound should be carried out as soon as possible by washing and flushing with soap and water detergent, or water alone. The injured person should then receive medical attention as quickly as possible, for earlier the treatment is begun the more effective will be the results.

PROTECTING THOSE WHO WORK WITH ANIMALS

Certain persons, such as laboratory staff working with rabies virus, veterinarians, dog-handlers and field naturalists, face bigger risks of rabies than do the general public and for them the Committee recommend a course of injections to immunize them against the disease, followed by periodic checks and booster injections so long as the person risk.

PROTECTION FOR YOUR DOG

Vaccination of dogs against rabies is considered to be one of the most important weapons in controlling the disease and the Committee urge countries where infected areas exist to adopt a vaccination programme for dogs. Cats, too, can be vaccinated. The Committee stress that non-vaccinated dogs, cats or other pets that have been bitten by a known rabid animal should be immediately destroyed.

World wide Spread of Rabies among Wild Life

A widespread outbreak of rabies is taking place among wild animals in Europe, Asia, Africa and the Americas. The last outbreak of this kind was about 100 years ago.

The annual rabies survey conducted by WHO in 97 countries shows that among its human victims 1,453 people died from the disease in 1963 and 496, 915 received vaccine treatment. Figures from the latest survey are not yet complete but the indications so far are that the disease is continuing to spread.

Rabies in humans is an acute encephalitis caused by a virus transmitted usually by the bite of a rabid animal. Symptoms, which appear from 2 to 6 weeks later, include head-ache and fever, followed by a paralysis, delirium and convulsions, ending in death after 2 to 6 days. Vaccine treatment, if begun soon after injury, will ordinarily prevent the disease.

There are at present eight wild animals mainly concerned in the transmission of rabies, foxes, jackals, wolves, coyotes, skunks, mongooses, weasels and bats. These, at once victims of the disease and its agents, transmit the infection to domestic animals and thence to man.

In drawing attention to this danger to the world from rabies, the WHO Expert Committee on Rabies point out, in a report, World Health Organization Technical Report Series, 1966, No. 321, that a number of vaccines of established value are available for the immunization of both man and the most commonly affected domestic animals like dogs, cats and cattle. Further, now and rapid diagnostic methods (such as the fluorescent antibody test) enable the necessity for treatment, or continuation of treatment, to be swiftly determined.

INTERNATIONAL TRANSPORT OF DOGS AND CATS

A rabies-infected area is defined as one in which an indigenous acquired rabies infection has been confirmed in man or animals at any time during the preceding two years. The Committee recommend that countries now free of rabies should continue either to prohibit import of dogs or cats from infected areas or quarantine them for four, or preferably six months.

RABIES IN WILD LIFE

The present outbreak among wild animals is an example of the cyclical character of disease derived from wild life. Rabies occurs in well-defined areas in which the disease is enzootic—that is, there virus is always present in nature. It has been noted, says the Committee, that outbreaks of rabies develop most often in such areas when the species of animal that transmits the disease has become usually abundant. The only available method of controlling rabies among wild animals is to reduce their numbers. For many species, poisoning and gassing is far more efficient, and certainly less costly, than trapping and shooting but this method must be carried out by specialists so as not to endanger domestic animals and the human population.

The Committee stress that the aim is not to wipe out the vector species of animals but to reduce them below the threshold at which their number can support an epizootic of rabies.

BATS AND RABIES

Rabies transmitted by the vampire bat is an important cause of death in cattle in Latin America and has proved a major obstacle to the growth of the livestock industry. Since the vampire bat feeds only on blood, its numbers have greatly

increased in the areas where cattle ranches are situated. Cases of rabies among insect-eating bats continue to be reported from North America. There have been a few cases in Yugoslavia and Turkey and, more recently, in Eastern Germany.

The Committee point out that the main part of control work lies in warning the public not to pick up or handle any bat which appears to be sick or to be behaving in a strange manner.

FOXES AS RESERVOIR.

The fox is the main reservoir of infection for wild and domestic animals and for men in the Federal Republic of Germany, where in 1963, 2,071 foxes were among the 2,660 wild animals found positive for rabies. Domestic animals with the disease cattle, dogs, horses and swine numbered 726. In Denmark, in 1964, rabies was found in eight foxes, three cats and two deer, all coming from an area within 10 km. of the Danish-German border. As many as 18,000 dogs in the danger zone were vaccinated, lairs of foxes and badgers were gassed in a border zone 30 km wide and throughout a 60 km zone rewards were paid for killing these animals. Italy reports an increase in rabies among dogs in Rome during the summer of 1963 when 4,371 people were bitten by suspected or known rabid animals. There was a human case of rabies in England in 1963, the victim being a young Pakistani who three months previously had been bitten by a dog. In the USA there were 3,933 laboratory confirmed cases of rabies in 1963—200 above the 1962 figure. The increase was due mainly to a general rise in the number of cases among bats and to an outbreak among raccoons in the south-east of the country. Other shifts in the pattern of rabies in the USA include an extension of the already large outbreak among skunks in the central part of the country, the appearance of rabies among foxes in New England and an increase of rabies among dogs along the US-Mexico border.

Contrary to an often-held belief that rabies is mainly a disease found in hot countries, it is in fact frequently found among foxes and dogs in polar regions. The inhabitants, protected by their heavy clothing, are seldom bitten and it is only since the speed of air transport made quick laboratory identification possible that what was known as "*sledge dog sickness*" has been identified as, in fact, rabies. A case of rabies was reported in 1963 to WHO for the first time from the east-coast of Greenland: the animal had been bitten by a fox two weeks earlier. (From WHO Press Release, 28 February, 1966.)

Sudden and Unexplained Death in Infancy

Sudden and unexplained death in infancy is also called "crib death", or "sudden infant death", or in England, "cot death". It has no medical name as the cause or causes are unknown.

This mysterious condition strikes an estimated 10,000 to 20,000 babies in the U.S. each year and many thousands more in other countries.

Sudden infant death is most prevalent in infants between 2 and 4 months of age but may strike at any time from birth until 2 years of age. It often causes death in babies who are apparently healthy with little or no history of previous serious illness.

Sudden infant death does not appear to be hereditary, seldom occurring in the same family twice. The chances of its occurrence are estimated at 1 in every 500 live births.

A few general observations of the sudden death syndrome include—

(a) Death usually occurs in the period between midnight and 6 a.m.,

(b) More infants die from this condition in the winter and early spring months than at any other time,

(c) Sixty per cent of the babies affected are males and

(d) Death is believed to occur in as short a time as five minutes and there is usually little or no sign of struggle by the baby.

POSSIBLE CAUSES.

Many possible causes of sudden infant death have been voiced but to date, none have been proven as major factors in causing death. Some suspected causes are: a sudden

inflammation of the upper respiratory tract; allergic reaction to cow's milk; lack of sufficient defences against infection; or an overwhelming infection brought on by one or more viral or other agents.

Research is continuing on the inflammation of the upper respiratory tract theory in studies at the children's Orthopedic Hospital in Seattle, Washington. This research is supported by a grant from the National Institute of Child Health and Human Development.

Studies are also continuing on a possible allergic reaction to cow's milk, but scientists have also found a fairly high incidence of sudden infant death in breastfed babies so this theory is still questionable.

The lack of antibodies theory is based on the idea that there may be a critical period when a baby has lost most of the defences originally supplied by the mother during the prenatal period. Some scientists feel that during this time the baby, who has not developed his own antibodies, may be susceptible to infections causing sudden death. Antibodies are found in a substance of the blood called gamma globulin. This theory has so far not been proven since researchers have found that gamma globulin levels do not differ markedly in sudden death cases from those found in normal, unaffected babies.

The theory of overwhelming infections caused by viruses or other disease-bearing agents seems most promising as a cause of sudden infant death. Even this idea is open to question because one researcher, supported by the National Institute of Child Health and Human Development, found only one case positive for viral infection in 100 cases studied. However, other scientists have found a virus, the respiratory syncytial virus, which is known to be especially virulent in infants up to 6 months of age.

A theory which has lost support in recent years is that sudden infant death is caused by suffocation by blankets, sheets, pillows, or other bed clothes. Researchers have found

that most babies, unless restrained, cannot be smothered by covering bed clothes. When babies overheat or otherwise feel overly covered, researchers have shown, they can usually move around until they find an adequate airway.

Research on this syndrome is supported by the Federal Government through the National Institute of Child Health and Human Development of the Public Health Service's National Institutes of Health. Two prominent private organizations--The Mark Addison Roe Foundation, and The Washington Association for Sudden Infant Death Study, are also supporting research in this field. Sudden infant death cannot presently be predicted or prevented. Only through further research into all of the possible factors involved may scientists discover ways to predict and prevent this syndrome which rates as one of the top killers of babies in their first year of life.

Courtesy: U.S. Public Health Service.

AROUSE PUBLIC CONSCIOUSNESS

"There is increasing realization that as unchecked growth of population will absorb much of the benefit which planned development of the country would otherwise confer. Besides, family happiness cannot grow in our environment of want and misery. Conscious limitation of the size of the individual family is, therefore, as important as planned development. Yet this is not a problem which is susceptible of remedy by legislation. Public consciousness has to be roused."

Dr. S. RADHAKRISHNAN,

Coronary Thrombosis—A New Theory

The two most usually fatal and otherwise serious forms of arterial blockage are coronary and cerebral thrombosis, that is blockages in the arteries which supply the heart and the brain, respectively, with blood. Cerebral thrombosis is usually an old man's disease. But "the coronary", as it is known, can easily kill a man in his prime.

The two coronary arteries are each about five inches (12 cms.) long. They cling to the outside of the muscular ventricles, the two chambers of the heart responsible for pumping the blood around the body. Like other arteries supplying muscles, they split up into many small branches in order to reach all parts of the heart-muscle. Any of these can become blocked, either by deposits on the wall (sclerosis), or by the formation of blood clots.

Such a blockage cuts off the heart-muscle from its supply of oxygen and energy-giving sugar. The effect of this is best judged from the fact that 40 per cent of coronary victims die from their first attack, about half of them within an hour after it has taken place.

WHAT CAUSES A BLOCKAGE.

A new theory as to the cause of one kind of arterial blockage has recently been put forward by two doctors at the West Wales General Hospital in Carmarthen, Dr. D. F. Davies and Dr. A. Clark. Their surveys of patients with heart disease show that certain constituents of the protein which normally floats in the blood stream, called plasma protein, tend to be reduced or missing in such patients. They suggest that the absence of this protein may reduce what they call the detergent effect of the blood plasma, so that it no longer keeps dissolved

material washed away from the walls of the arteries but instead allows this "sludge" to be laid down and so to form a partial or complete blockage.

As blockages tend to occur at the junctions of big arteries with smaller ones, the theory has some support. A similar effect is found at junctions in oil pipelines, where it is certainly caused by a reduction in surface or detergent activity in the oil.

Another possible cause of blockages in arteries may be an increased stickiness of the surface of one particular type of blood cell, the small flat cells without nuclei which are called platelets.

Other research has suggested that overeating animal fats, which has been put forward as a dietary cause of arterial blockages, may increase the stickiness of these platelets.

What is certain is that more research is now needed to unravel the biochemical pathways which link together the effects of blood protein, animal or vegetable fats in the diet, blood cell stickiness, fatty deposits on the walls of arteries and the other factors which have been shown to be at least partially responsible for arterial blockages. They are already probably the most important 'cause of' death in the Western World, and are becoming a more and more important cause everywhere else.

Source : *John Newal, Spectrum*

January 1966.

Family-Planning Programme in Korea

DR. (MRS.) H. M. SHARMA,
Director of Public Health.

"STUDIES ON FAMILY-PLANNING IN THE SONG DONG KU AREA."

Dr. Kwon, M.D., of the Seoul University is a specialist in Obstetrics and Gynaecology and he has conducted the studies on family-planning in the Song Dong Ku area.

Song Dong Ku area comprises 3.7 million population. The Population Council has given liberal assistance by way of funds, materials and workers for conducting the studies in the Song Dong Ku area. The 3.7 million population has been broken down into smaller units of 60,000 to 80,000 population, each of which is in-charge of a local administrative unit of Government with their staff. (Something like our panchayat union and village panchayats.) In each of these smaller units, 15 field workers were appointed by the Population Council and Government gave eight field workers, making a total of 23 field workers in each field unit. Technical control of the programme was by the Population Council, while administrative control of the programme in Song Dong Ku area was by the Government in Seoul city. Men private doctors who were willing to do I.U.C.D. insertion were given necessary training and they were put in-charge of doing I.U.C.D. insertion in the health centres in these units. Private doctors were paid 2 U.S. dollars and 15 cents (about 800 WON—Korean money) per case of Vasectomy done by them and the mother or father undergoing the operation was also paid 800 WON each. For each I.U.C.D. insertion the private doctors were paid one U.S. dollar and 30 cents. If the mother reported for a check-up, the private doctor was paid an additional 30 cents.

In Song Dong Ku studies on family-planning, it was found that the most effective media of propaganda and education in the family-planning programme is group meetings. The other medias were—

(1) *Mass media—radio, press, television.*—These were the cheapest of the methods available for audio-visual propaganda on family-planning.

(2) *Home visiting.*—This was found to be a very expensive method of propagating family-planning, because a number of field workers were required to do this.

(3) *Group meetings.*—The group meetings were the best form of education on family-planning and the most effective method (more effective than home visiting and less expensive than home visiting).

(4) *Mailing letters and information on family-planning.*—This was also found to be an effective method and less expensive than group meetings. But it is not more effective than group meetings.

CONCLUSIONS OF THE SONG DONG KU STUDY

1. The cheapest method of audio-visual education was found to be the radio, press and television, while the most effective method was group meetings.

2. In the Song Dong Ku Survey covering a population of 3.7 million, the pre-survey data showed that motivation was nil in the people for acceptance of family-planning methods while in the post-survey people were found to be highly motivated to accept family-planning methods. This was achieved by group meetings mainly.

3. The third important observation in the Song Dong Ku studies was that the fertility rate was higher in the pre-survey period and it was lower in the post-survey period.

4. In the pre-survey period, the birth rate was 3.7 per cent more than 37 per thousand of population and in the post-survey period it was 27 per thousand of population.

5. The death rate was higher in the pre-survey period and it was lowered in the post-survey period.

FAMILY PLANNING PROGRAMME IN TAIWAN

In Taiwan both the oral pill and the I.U.C.D. Programme are being implemented along with the Sterilization—Vasectomy Programme in Government hospitals and health centres.

Taiwan has a very successful I.U.C.D. Programme, as also Korea. In Taiwan, Intra Uterine Contraceptive Programme is very popular. Mothers, who are advised the loop method are given coupons by the workers. These coupons which are free, are good for "a limited time only"—one month from the date of issue of the coupon. Mothers need not pay for the I.U.C.D. insertion, if they get the insertion done in the health centres within a month from the issue of the coupon. It was found mothers came in large numbers to have the I.U.C.D. inserted because of this free offer of services valid for a limited time only. Twenty per cent of the target group of mothers were covered in one area by this method. The coupon system enables the staff to keep records of the number of mothers (along with their addresses) in each district, who have been inserted the loop.

FAMILY-PLANNING PROGRAMME IN CEYLON

The Swedish Family-Planning Pilot Project started its work in 1958 with a survey. They started with a midwife area of seven thousand population, then they went on to a medical officer of health area, covering a population of 95,000 and ultimately they took up 3½ lakhs population

which is the jurisdiction of a Superintendent of Health Services for their study. After the study was completed by them here, they switched over to the area of a midwife (population of 7,000) for follow-up work. This survey showed that the birth rate was 50 per thousand of population in 1958. It came down to 20.6 per thousand of population in 1960, in the project area. Therefore, there was a remarkable impact on the birth rate after the work done by the Swedish Family Planning Pilot Project in that area.

Dr. Kinch has been working in Ceylon from 1960. The agreement between the Government of Ceylon and the Swedish Family Planning Pilot Project for continuing the project work is signed every year.

In 1960, Family Planning Services were integrated with Maternal and Child Health Services. There are 50 provinces in Ceylon and each province is under the charge of a Superintendent of Health Services (who is in-charge of both preventive and curative medicine). Each Superintendent of Health Services is given a jurisdiction over about 2 lakhs population and has a number of Medical Officers of Health under him. Each Medical Officer of Health is in-charge of about 75,000 to 95,000 population. There are a number of midwives working under each Medical Officer of Health and each midwife is in-charge of from five thousand to eight thousand population on an average. Therefore, each Medical Officer of Health will have 15 to 18 midwives working under him. The midwives give advice to mothers on ante-natal care, post-natal care and family-planning. Generally, 65 per cent of deliveries are attended to in Government hospitals. In the project area, 85 per cent of the deliveries take place in Government hospitals. This is a great advantage for the programme, because, it is possible for them to find out the mothers who are in need of Family Planning Services.

Mothers are given family-planning advice when they come to hospitals for ante-natal care, post-natal care and also when the pre-school child attends school. Health education and family-planning education are given to the mothers when they are pregnant. After the child is born, family-planning services and contraceptive supplies are given to the mothers. For the loop services and for the obtaining the oral pill, mothers are advised to go to the nearest family-planning clinic. Supplies of contraceptives are given to mothers for three months at a time. The midwives visit them every three months and give the supplies.

In Ceylon, all pregnant mothers are invariably registered by the midwives and therefore there is complete coverage of mothers

Training programmes.—Training in family-planning is being given to doctors, nurses, midwives, health inspectors, health inspectresses, health educators, etc. Separate training courses are conducted for them. Doctors are trained in family-planning for one week. Nurses are also given one week's training in family-planning. Midwives are given a fortnight's training in family-planning. Doctors attend both rural and urban clinics in the demonstration areas for getting training in both rural and urban services. Doctors are given less of lectures and more of clinical training. For midwives, they give one week's lecture classes and one week's field training. The Swedish Family Planning Pilot Project also arranges for in service training for personnel, who are already working in the programme.

Health Education Preparation of Health Personnel

BY

NORMAN CRAIG

It is now recognised that every health worker should undertake health education as an integral part of his job. This means they have to be given training and guidance to make their work more effective. It is necessary to relate the theoretical teaching to life situations for any training programme to be meaningful and successful. This aspect has been given in emphasis in the "new approach" to training at the School of Public Health Minnesota.

At the School of Public Health, University of Minnesota, particular emphasis is given to post-graduate preparation in health education for all categories of professional public health personnel. Thus, while much time and effort is devoted throughout the year to the professional health education specialist, an equal weight is given to courses of study in health education for a wide variety of graduate students both from the School itself and from other Colleges and Departments on the campus.

All candidates for the degree of Master of Public Health are required to take a health education course of at least one quarter's duration. Although this is not required of those students who are in the Master of Science programme, a number of them elect to take the course as a part of their programme. In addition, each year we have a number of graduate students from the College of Pharmacy. There are also occasional graduate degree candidates from the College

of Education, School of Social Work, and other departments who take a minor in public health and these too include public health education in their programme of studies.

DIFFERENT ACADEMIC BACKGROUND.

In an effort to design these courses to meet the needs and interests of each discipline as well as differences in academic background and experience of the individual student, course outlines are reviewed and revised each quarter. Since these differences are of great significance in planning for effective learning experiences, perhaps it would be useful at this point to describe in more detail the kinds of students taking part in these courses.

This past quarter, for example, we had the following distribution: Sanitations (9); microbiologists (7); Sanitary engineers (5); public health veterinarians (2); pharmacist (1); lay public health administrator (1); chemist (1). In addition to these rather "standard" categories, we had a doctoral candidate from School of Social Work and a Professor of Health and Safety from another university who is working toward an MPH in environmental health with emphasis on accident prevention. It is also worth noting that the group included three students from Latin America and one from Ethiopia. Finally, as an added challenge to the faculty, it is interesting to reflect that these 28 students plan to enter such a great diversity of fields as air pollution, water pollution, radiological health, accident prevention, food hygiene, housing and general environmental health.

CLASS SCHEDULE

The intent of the School is to offer this course in the Fall for sanitarians, sanitary engineers, biostatisticians and public health veterinarians. Two courses are offered in the spring, one exclusively for public nurses, the other for physician-public health administrators, public health dentists, epidemiologists and physicians concentrating on the field of maternal and child health. A somewhat condensed version is offered

at the same time in a separate class for students in hospital administration. In actual fact it usually proves to be difficult to draw hard and fast lines due to class schedules; programme conflicts, mid-year registrations, and other problems of an academic or administrative nature.

Prior to this quarter, a more or less standard approach was to take a problem census in the first class meetings in an effort to determine the particular health education needs and interests of each group. On the basis of this census, a course was designed in which we attempted to cover at least the main interests expressed. In an average quarter course of 18-20 class sessions of fifty minutes each, a dozen major topic areas would be covered through lectures, demonstrations, related reading assignments and class discussions. For example, in Fall Quarter of 1964, the following major headings were included: the learning process; communication theory and process; cultural factors affecting health behaviour; group process; large meetings, workshops, working conferences and seminars; staff training; community organization; design, selection and use of audio-visual materials; evaluation of methods and materials; programme planning for health education; role and function of the health education specialist. Some of the topics were dealt with in a single session while others, such as cultural factors, group process and community organization were allotted two or three class sessions.

While such an outline appears to offer a range of subject-matter which should provide a rather complete coverage of the health education area of activities, it is precisely this range and variety which has been a matter of concern for the health education faculty. We are keenly aware of the danger of superficiality in attempting to deal with all of these topics in the brief time available to us in one quarter. The size of the classes, often reaching as much as 35 students in a single section has been an added factor inasmuch as individual contributions to discussion of any topic were necessarily limited in order to distribute participation equitably through the class.

A constant concern is the need to relate theoretical presentations to real life public health problems in ways that will enable all students, regardless of previous experience and future career goals, to have a common understanding of health education concepts and their practical application.

One of our earliest considerations was the need to reduce class size to proportions which would facilitate the kind of teaching method we had in mind. We therefore divided the 28 students in two groups of fourteen each, trying to achieve an equitable distribution in the terms of professional interest, experience, geographical origin, and academic background. Arrangements were made to meet each group for fifty-minute class sessions on alternate days.

In planning the new approach adopted this year, we first undertook a series of discussions with faculty in environmental health and staff of local health agencies to arrive at mutual agreement as to the kinds of health education knowledge and skills which would be most useful to environmental health staff. At the same time we asked them to help us find examples of real life health problems actively engaging the efforts of health departments or other community agencies which could be used by student groups in a problem-solving experience.

HEALTH EDUCATION SUBJECT

On the basis of suggestions from other faculty added to our own experiences from the past, it was decided that the following topic areas represented an absolute minimum of health education concepts which should be learned and used by all health personnel: the learning process and factors involved in behaviour change; community organisation principles and methods; planning the educational aspects of health programmes; the communication process, individual group and mass; selection, use and evaluation of audio-visual

materials. These topics were presented against the background of introductory sessions describing the purpose and scope of health education and the role and functions of the health education specialist.

These subject-matter areas were presented to the students in the first nine class sessions of the quarter. They were essentially handled as lecture sessions plus reading assignments, and class discussion was limited to questions and answers directed towards clarification and understanding of the concepts presented.

At the end of this class series, a review session was held with the students and they were then given an examination to cover the theories and principles presented in this part of the course. This was to be the only written examination for the entire course and was aimed at finding out how well the students had acquired and retained the health education content which had been presented to them.

Selecting the Project

In the meantime, the health education faculty had continued working with environmental health faculty and representatives of community health agencies to develop the problems which would be the focus for student learning through the rest of the quarter. After reviewing a number of proposed activities we selected the following:—

(1) A project involving a community of American Indians with a variety of health problems related to an insanitary environment. Resources are available through the Division of Indian Health, United States of Public Health Services (U.S.P.H.S.), to install various kinds of sanitary facilities in individual homes and in the community.

(2) A city in Minnesota is committed to various kinds of efforts to reduce or eliminate air pollution. One possible approach would be to control authorized burning of trash and other wastes and to eliminate indiscriminate and ineffective incineration which increases air pollution.

(3) A suburban sanitary sewer district has been formed involving five suburban communities. In order to deal adequately with problems of ineffective sewage disposal it is desirable that a majority of individual homes and business institutions be connected to the main sewer system. This involves payment of a rather substantial initial charge for connection to the system and the payment of use charges thereafter.

(4) Several years ago an accident survey was undertaken in one of the Counties of this State. A decision has recently been taken to implement this study through a development of an action programme for safety and accident prevention. An accident prevention specialist has been assigned to work on this programme and is presently in the initial stages of determining how, where, and with whom such a programme might most effectively be initiated.

Three instruments were developed for use in this teaching experiment. One was a general document describing ways in which committees often function, suggesting steps to follow in organising for committee work, and providing hints to follow in attempting to obtain maximum effective contributions from both the Chairman and the individual members of committees. A second instrument set forth the objectives of the assignment and described the mechanism to be used, i.e., how the project had been selected, the composition of the student committee, the work schedule to be followed (meeting days and hours), the kind of report that would be expected from each group, and the place where students would meet.

The stated objectives were—

to develop an understanding of the principles and methods of health education and their application to specific community health problems;

to gain experience in health education planning; and

to develop practical experience in group discussion and co-operative planning.

Guidelines for Developing the Project

A third instrument was titled "Guidelines for Developing the Committee Project" and in this we detailed the steps we would expect the committees to follow. This document was developed by joint discussion with other faculty to form a preliminary draft and this draft was then discussed with the students to obtain their suggestions as to possible amendments, modifications, changes or additions which they thought might be made. With these changes or additions which they thought might be made. With these changes the document was prepared in final form. In general terms, the guidelines call for the following:—

(1) Clear definition of both the health problem and its health education aspects, including identification of the individuals or groups directly affected, why it is a problem to them, and what agency or institution has the major responsibility for working towards a solution.

(2) An assessment of the additional information required in order to work on the problem, including the social, physical, economic and cultural barriers to action and the actual or potential resources available.

(3) Development of a proposed plan for educational action, including selection of the "targets" and "agents" for a change process to be attempted, clear definition of the behavioural change desired, a description of the educational procedures to be used and of the evaluation procedure which would be proposed together with the criteria which would determine success or failure of the educational effort.

(4) If the educational procedures involved the design or selection of some kinds of audio-visual materials, the committee was asked to state the purpose of the materials toward whom they would be directed, by whom they would be used, and what factors had determined selection of these particular audio-visual materials as against other possible choices.

In all of the above, the Committees were asked to provide supporting material for the decisions that had been made. It was our hope that this problem-solving approach would place emphasis on the need for careful, sound planning of health education efforts, and would serve to point out the important contribution all members of the health team can make to health education planning.

We also wished to point up the advantages to seeking out and using all possible resources in developing solutions to community health problems. In developing this approach, we designated specific persons on the faculty or in community agencies to serve as permanent resources to the committee. At the same time, we suggested that the group studies might lead them to other possible agencies or individual who might be able to help. They were encouraged to identify such resources and to make arrangements for field trips, interviews, or other activities which would enrich their background for developing solutions.

Three weeks after initiating the project, the groups met together to hear progress reports on the four projects. At this time, each committee stated the problem briefly, described the procedure used to attack the problem, and summarized action taken to move toward proposed solutions. Each group had an opportunity to comment on the work done by the other committees and to suggest other possible lines of action or even to critically evaluate the procedure adopted.

Another two weeks were then given to the committees to pursue the problem further. It should be noted that our chief emphasis was on the planning procedure, on the need for defining the problem in manageable terms and taking action which could be feasible. We pointed out that we would be more content with one simple but possible action as

a practicable part of a long-range plan then we would be with a total plan of operations with evident defects in planning. In other words, we placed the emphasis on quality in planning rather than quantity in work production.

PRESENTATION OF REPORTS AND EVALUATION

In final sessions of the two class sections, the committees have presented their report for objective analysis and discussion by classmates, faculty and the resource persons designated for their project. Students have used a variety of methods for their presentation, one group "role playing" as health staff assigned to the project, another group presenting the report as though they were members of a health council representing various sections of the city concerned.

A brief evaluation form has been prepared for each student to use in analysing the work of his committee and the part he and other students played in developing the project. This instrument is used to help assess the total group performance as well as that of the individual student. The evaluation is in two sections, the student's attention on the ways his committee applied the learning process, communication process, and community organisation, the second is aimed at securing the student's opinion as to how well he feels his group applied one of five elements of planning (the collection of information essential for planning; establishment of objectives; assessing barriers to health education; appraising actual and potential resources; development of the detailed plan of operations)

There will of course be an added evaluation of this approach by the faculty members concerned and the staff of community agencies involved as resource persons. The total effort will be assessed on the basis of results obtained in formal examinations, the student project reports, and the student evaluation. In addition, it is planned to prepare

total evaluation instrument, to be administered to the students sometime during the Spring Quarter in order to obtain their views as to the strengths and weaknesses of this approach.

It is our feeling at this point that this new approach has certain strength which make it worthwhile pursuing as a general format. As should be true of any pilot project, experience has indicated ways in which our own planning of the course can be improved and these will be taken into account in the future. There appears to be an obvious benefit in the creation of a more realistic frame work for learning health education principles and methods. While it cannot replace the ultimate reality of on-the-job learning, as a compromise between the ivory tower and the community, it does seem to have sufficient merit to warrant further development.

TEN-YEAR GLOBAL PLAN TO END SMALLPOX

The World Health Organisation proposes to start a Ten-Year Global Smallpox Eradication Programme from this year.

The programme will be finalised at the 20th World Health Assembly Scheduled to be held in Geneva.

In a resolution to the World Health Assembly, the executive board of the W.H.O. says "Smallpox, continues to be a serious world health problem".

Smallpox areas, it says, are found mostly in South-East Asia, Africa and South America, South-East Asia alone reporting almost 70 per cent of about 60,003 cases all over the world.

In South-East Asia, India has reported as many as 29,050 cases which is 48 per cent of the world's total.

The resolution points out that India started Smallpox eradication in 1962 and carried out 457 million vaccinations up to the middle of 1966. Although smallpox cases started to decline, it was not as remarkable as expected.

Despite contributions made by a number of countries to the vaccine bank the next two or three years will continue to be critical since the needs of the programme are not yet fully met, and more donations are urgently needed, the resolution observes.

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**STATE HEALTH EDUCATION BUREAU
MADRAS**

WORLD HEALTH DAY

7th April 1967

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"Partners in Health"

DR. M. G. CANDAU,

Director-General of the World Health Organisation.

When we look at the state of the world's health and the progress which has been made, and the difficulties yet to be overcome, it is clear that the scarcity of trained manpower for the health services is an urgent problem almost everywhere and especially in the developing countries.

It is the key factor governing many plans for the improvement or expansion, and sometimes the actual maintenance of such services.

The physician is the central figure round whom health services are built and function. But the efficiency and output of a country's health institutions also depend on the personnel who support him.

The progress of medical science has made the need for the support so great that team work has become an essential feature of all health care. The day of the solitary research worker or the single-handed physician providing every form of medical care for his patients has indeed passed.

The "team" is the most efficient instrument for combining the efforts of health workers with different skills and experience for the greater benefit of the individual patient, or for the health care of a community.

Teams vary in size and complexity. They range from the group of a dozen highly specified individuals performing the amazing operations of heart surgery, to the three or four

health workers with simple skills who, based on a rural health post, look after the health needs of a widely-spread population of 5,000 or more.

Even although many people in well-off countries take it for granted, health is the result of careful team work. The simplest example is the birth of a child. In a highly developed country, the infant is the beneficiary of a complex network of services that prepare the way to health even before it comes into the world.

During pregnancy the expectant mother is examined regularly by the doctor, her blood is analysed by laboratory technicians and, if required, X-rays are done by an expert radiologist. Social workers guide her through administrative procedures. A midwife at a maternal and child health centre advises her about general health matters and the diet to follow during pregnancy. Even if child-birth is normal, specialized nurses take over the care of the mother and infant after a doctor or midwife has performed the delivery. Thus several technicians of various specialities have been mobilized for what is by no means an extraordinary event.

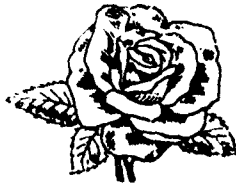
In cases where labour is difficult the number of technicians increases. In many countries the ambulance that speeds to the woman's home may be accompanied by a physician who is ready to give artificial respiration, injections, emergency blood transfusions. The stretcher bearer carries her directly to the operating room. Should a Caesarian prove necessary a gynaecologist and his anaesthetist are called in. Following modern techniques of anaesthesiology, the latter is entrusted with the vital function of bringing the patient back to consciousness and warding off post-operative shock. A premature baby is placed in an incubator and watched over by a team of paediatricians and specialised nurses until it can be returned to his mother. A new little man has been brought into the world because a number of technicians working in concert, were able to solve the problems of a difficult birth.

This child will continue to live and will grow into a strong adult because, others, with equally important although perhaps less spectacular roles, provide conditions that favour healthy development. He will drink clean water and pasteurized milk. He will eat sound meat and fish, thanks to veterinarians and sanitary inspectors. Vaccinations will build ramparts against major infectious diseases. His sight and hearing will be verified by the school health staff. With variations according to his country the child will reap the benefit of preventive and curative health services that come to his aid in case of accident or illness.

But if this child is born in a developing country where these services are not yet fully organized his chances of finding in his cradle this birthright of health, the greatest of gifts, are very slim indeed. He will find instead the danger of infection, parasitic diseases and malnutrition. He may not receive milk but almost certainly can expect polluted water. No one will be available to vaccinate him, to treat him in case of illness, or to perform an operation. In many countries still, all health problems are critical: everything needs doing, often from the ground up. Health technicians have a different role to play that in highly developed countries, where mental health, cardiovascular diseases, cancer, air pollution and the disposal of radio-active wastes are major problems. They may still be called upon to fight epidemics that have been consigned to history books in other parts of the world. They must do the best, they can do solve the most urgent problems, according to the country's needs, resources and way of life. In some cases it is even necessary to help the nation establish its health services, calling in foreign technicians to lay the foundations and get things under way until local people can carry on by themselves.

But no matter what the particular problem may be, there is always and everywhere an essential element in safeguarding health and that is team-work

Whether it is the fight against a long-established endemic disease like malaria or setting up a basic health service with dispensaries and clinics or the operation of an ultra-modern hospital, nothing can be done today without the co-operation of technicians of a great many different disciplines. It is to these "partners in health" that WHO dedicates World Health Day in 1967. Their responsibility is enormous, to guard the most precious possession of the individual and an irreplaceable economic asset of the nation—health.



"Partners in Health"

SAFEGUARDING HEALTH

No matter what the particular problem may be, there is always and everywhere an essential element in safeguarding health and that is team work.

"Existence is not enough, to live means to be healthy" wrote the poet Aeschylus in the 5th century B.C. The Bible confirms that without health riches are worthless.

The World Health Organisation has rejected the negative definition of health found in most dictionaries; that it is the state of someone who is not sick. For WHO health is something positive, "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

To arrive at this privileged state it is not sufficient that surgeons repair, replace or remove damaged organs or that physiotherapists teach the infirm how to use their limbs again. Armies of technicians, often working quietly behind the scenes, are needed to create the basic conditions for health in its most complete sense. The efforts of the best therapists are vain if their patients are homeless people, or lack elementary sanitation, or as even happens, are deprived of essential foods and safe drinking water. Illness and infirmity again find fertile ground. Health itself is like a plant that needs the right soil for full development. The ground must be prepared, for even the best gardener cannot grow roses on stones. Public health officers, sanitary engineers and other specialists in preventive medicine and environmental health are required for this task. They play the same role as the gardener who weeds and hoes and waters his roses.

Each of these two teams—so different in training and interests—is composed of individuals who share a single purpose. They are partners in a common undertaking, and on World Health Day, 1967 these "Partners in Health" are being justly honoured.

The partners in health are not limited to members of the health professions. The economist who helps to increase production and buying power, the road builder who makes it easier to reach a health centre, the educator who banishes illiteracy and widens his pupils' comprehension of the value of life, all contribute to prosperity and welfare. They create a demand for health and at the same time, make it easier to satisfy that demand. They are responsible for a change in people's attitude towards health that is perhaps the most influential force of our times: the recognition that health is their birthright, that disease is not an inevitable burden which must be endured.

For the collective awareness that accompanies any great surge forward is bred and nurtured in the community, without whose active participation there can be no change, no improvement. Thus the people themselves are essential in this partnership. The community, the family and the individual suffer the consequences of disease, play an active part in treating and curing it and an even more active role in the maintenance of health.



The World's Health Needs

Although overall patterns can be discerned, health problems differ according to region, climate and local conditions and also the wealth and stage of development of each country. Thus each one must work out its own strategy in the struggle for better health.

Anyone courageous enough to try to calculate the global cost of health would need a very accomplished adding machine. Even if it were possible to arrive at a representative figure for the prevention and treatment of the major diseases that plague mankind there would still be a long way to go. The complex organizational structure, not all of it medical, that makes it possible for man to live in the cleanliness and comfort of a healthy environment must also be taken into consideration.

The present expenditure is enormous—but still not great enough to take care of the health requirements of a world where practically half the people never manage to get quite enough to eat nor find the means to live decently.

The most pressing needs are known. Reports made by the countries of the world on their health situation and surveys carried out with assistance from the World Health Organisation reveal the general nature of health problems. They differ according to region, climate, local conditions and the wealth and the stage of development of each country, but overall patterns can be discerned. They are universal diseases such as tuberculosis and cancer. There are infections like smallpox ready to cross frontiers if vigilance is even slightly relaxed. There are certain endemic diseases, of which malaria is one, that are so hazardous that they affect the economic equilibrium of whole areas. A few are always in the spotlight either because of their severity, their contagiousness or the large

number of people that are afflicted. Equally fearsome, although each for a different reason, they do not require the same methods either of treatment, prevention or eradication. Without exception, however, team-work on the part of a large number of expert technicians is needed to control them.

The quarantinable diseases, cholera, plague, smallpox, typhus and yellow fever, whose victims formerly were counted in hundreds of thousands, even millions, are now held in check by a rigorous system of international reporting. However, fast transport and continually increasing contact between countries at the far ends of the earth have made it easier for these diseases to escape the networks of control. Yellow fever last year appeared in Senegal where it had not been known for years. Cholera, usually confined to a few ancient strongholds, principally in India, caused a serious epidemic in Egypt in 1947, subsided, then in recent years spread from Asia to countries of the Pacific. It is now making its way westward, and caused an epidemic in Iraq in 1961. The least privileged classes always suffer the most and they cannot with certainty be protected by vaccination since this is not always an effective preventive measure. Cholera is a disease that can only disappear when conditions of hygiene are transformed, especially by providing good drinking water.

The battle against smallpox is theoretically easier since vaccination works in this case. With leprosy, treatment is the only recourse: fifteen million people still suffer from this disease, and an estimated 740 millions in 67 countries are exposed to it. Until effective preventive measures are discovered—and recent work suggest that BCG may be one—treatment with sulphones gives best results against leprosy. Taken in the early stages, these drugs prevent infirmity: used systematically, they slowly but surely lead to cure.

The situation is much the same for trachoma which counted as many as 400 million victims even ten years ago. Although attempts to develop a vaccine have not yet been successful,

the use of antibiotics and the improvement of hygiene have greatly reduced the incidence of this eye infection. Health education helps to prevent trachoma from spreading.

Some diseases, like tuberculosis, which affects eleven million people and causes some three million deaths each year, stand out because they demand both prevention and treatment. Tuberculosis is everywhere but it can be banished for all practical purposes, as it has been in Holland, by combining several well-tried techniques: vaccination with BCG, systematic application of the tuberculin test, regular examination with X-rays and treatment of open cases. Once again, the ultimate result depends on raising the standard of living of the affected populations.

It is everywhere apparent that medical treatment alone is seldom sufficient to conquer a disease, prevention is necessary. A potent drug has recently been discovered for bilharziasis, a severe infection caused by a parasitic infestation, which affects nearly a hundred million people throughout the world. However, it is of little use to treat bilharziasis if waterways are not cleared of the fresh water snails that harbour the parasite. Farm labourers working in irrigated fields and children paddling in infected streams are continually reinfected. The application of molluscides to kill the snails is among the measures that can stop the trouble at the source.

The successful eradication of malaria in several areas of the world is an encouraging example of the results that can be achieved with a world-wide co-ordinated programme. The use of long-lasting residual insecticides against the mosquito carriers of malaria have reduced its incidence in an impressive manner. Of course surveillance must be maintained in areas where malaria has been eliminated (populated by 444 million people), while eradication is underway in other, sometimes contiguous regions (with 723 million). Carriers of malaria parasites must be tracked down by blood examinations and treated with appropriate drugs. The result entirely justify the effort. Country after country can look forward to a sounder

economy and consequently to a higher standard of living because its people, no longer laid down by fever again find the energy to work

Paradoxically, the scourges that affect the developed countries are proving more difficult to deal with because their causes are more complex and often not clearly understood. Cancer, of hidden origins, is one of them: cardiovascular diseases, the first ranking cause of death in Europe and the United States, is another. So far there are only hypotheses to explain them. Road accidents and domestic and occupational accidents must also be considered. Taken together they are third among the causes of death in many European countries, striking mainly children and young people in the prime of life. As road accidents are proved, prevention is difficult.

The question of mental illness is only now being brought into the open. Its greater importance to-day may be the price we pay for a technical civilization whose "inhuman" aspects have been incompletely assimilated. It is one of the contradictions of our times that in the developed countries diseases said to be the fruit of civilization are replacing the infections of the past—knives that still maintain their supremacy in other parts of the globe.

It would almost seem that disease must have its due. When a country is prosperous enough to have virtually eliminated the effects of malnutrition of mass infections and of a destructive environment new problems take their places. The struggle for health is universal and probably eternal and campaigns will always be needed. They may not use the same weapons, but they have the same enemy—disease in all its forms and in its many aspects, old and new. For man the result is always the same; misery.

The Medical Profession

The doctor plays a unique role in the health team, partly for historical reasons and partly because of the length and scientific character of his training. Nevertheless he is only one of several partners and his efficacy depends on the co-operation of all other members of the team.

When man finds himself without food or shelter he usually takes matters into his own hands and does something about it, but when he is stricken by disease he turns elsewhere for help, to the supernatural or to another man to intercede for him or to take care of him. He is now only a step from the witch doctor and the medicine man, traditional healers who are to be found even in the most advanced societies. And in certain parts of the world sick people still have no possibility then to go to such healers or to anyone who professes to be able to ease their suffering.

The need for help which, exposes man to the frailties of other men has led society to regulate the practice of medicine. Nowadays only those whose training has prepared them for the unimpeachable practice of medicine are allowed to treat others.

Medical education is the acquisition of knowledge that makes it possible to utilize scientific judgment in interpreting the indications of disease, in deciding on treatment and in forming an opinion as to the outcome. It is difficult and long, requiring a minimum of six years university level education and perhaps four more of specialization.

There must be time for a strict training in ethics: changing nature by nurture. The medical man comes to know much that is intimate about his patients and can do great harm

if he is not trustworthy. The Hippocratic oath that every physician takes is 2,500 years old. Medicine and religion grew together and led to the establishment of universities.

Only a few centuries ago medical education was mainly apprenticeship. Formal training gradually became the rule, shorter at first and lengthening with the advance of the sciences on which medicine is based. These advances have been particularly rapid in our times. Fathers of the present generation of doctors did not study microbiology at medical school; radiology is new and techniques such as electrocardiography have quite recently become part of medical practice.

As knowledge advanced and it became clear that no one should be allowed to practice medicine unless he had learned all the basic essentials in medical education became essentially the same in all countries. There is still room, and need, for familiarity with locally prevalent diseases, but the scientific basis of medicine is universal. There can be only one medicine that which enables its practitioners to use the best possible scientific judgment.

The responsibilities of medicine and its intellectual human and material rewards have for thousands of years attracted some of the best men of their time. While these attractions are still strong, other equally challenging and satisfying careers are now open, some of which are less expensive to study, less exacting, and bring quicker and larger financial rewards. Many people who might have gone into medicine are now drawn to the technological sciences: others become research workers, sometimes after they have studied medicine.

The expansion of knowledge has had other results, for a medical student cannot now learn everything that medicine has to offer, nor can his studies be any longer than they are. In any case others can perform functions that do not require full medical education but are based on medical knowledge. The separation of pharmacists and dentists from medicine is relatively old. The separation of nursing as a profession dates

from about a century ago. Later still other professions were recognized, optometry, physiotherapy, X-ray and medical laboratory technology. Sanitation which is the application of principles of environmental hygiene to protect man's health, has become another profession, represented by the sanitary engineer and the sanitarian. Sometimes these are all grouped together as the medical professions. They have been also called "medical and allied subjects", "medical and paramedical professions" and collectively, the "health professions".

Whatever the term used, the fact remains that the care of health and the prevention and cure of disease have become a team affair rather than the responsibility of the doctor alone. The number and quality of the services he can perform depends to a great extent on the number and quality of the persons who share his responsibilities. In many cases some of the functions of each of these professions can be delegated to persons with more limited training called auxiliaries. There are auxiliary and assistant nurses, dental aids, sanitation inspectors, laboratory technicians. There are medical auxiliaries to whom a doctor can delegate certain functions in the diagnosis and treatment of common diseases. The greater the number of persons practising the paramedical professions and the more auxiliaries there are, the better the service a doctor can give. This service is of a nature that he alone is able to provide.

It is common to judge the services available by comparing the number of doctors to total population. Some countries are relatively well provided for: Austria, Czechoslovakia, France, Israel, Scotland, the United States of America and USSR have one doctor for between 500 and 1,000 people. The proportion is very small in many others, especially some new, independent countries like Mali, Niger and others, with one doctor for over 50,000 people. In India, for instance, there is one doctor for 5,800 inhabitants.

This ratio gives only a rough indication of the situation. Doctors may be concentrated in one part of the country, very often in cities where hospitals are to be found. If communications are good, people far away from a doctor may be better served than those nearer but less accessible. The nature of the prevalent diseases in a country also makes a difference. Diagnosing and treating malaria or yaws is much less time-consuming than heart disease, cancer or mental illness. In places where the latter are common, people are more likely to call the doctor, for in such countries the preventable diseases have been reduced and the average age of the population has increased. It also makes a difference whether, in the main, the population depends on the private practice of medicine or whether medical care is part of the public and community health services.

For the past twenty years it has been the privilege of WHO to help the countries of the world in their attempts to develop better services for the health care of their people, based on an adequate medical profession. WHO puts the collective experience of its 127 Member States at the disposal of individual countries. It is helping with fellowships to train doctors and paramedical personnel abroad, when education institutions are not available in the country itself. It is helping countries to assess their needs, to set goals, to develop their own training facilities. It provides teaching personnel from institutions of other countries. It is helping selected doctors, nurses, dentists, sanitary engineers, sanitarians to prepare for teaching and for careers in research. It is helping medical schools in their efforts to raise the standards of training while adjusting the programme to the local patterns of disease. It is teaching more about prevention and about the role of the doctors as a team leader to guide and supervise his co-workers.

Nurses

In a world that needs more nurses, those who serve most bear heavier burdens and face increasing responsibility.

Whether they wear veils, caps or starched coifs like wings, they are the "ministering angels" of novels who succour and comfort the sick. In addition nurses are now-a-days members of a profession that is universally known, **universally needed.**

However, like so many others today, it is a profession that is undergoing profound changes. A crisis as severe as that facing medicine and similar to it in many ways confronts the nursing profession. In developing countries there are seldom training schools or the money to pay adequate salaries; often the necessary basic health service upon which they depend has not yet been set up. In certain regions of Asia there is one nurse for eight thousand people. In Africa the percentage varies but may be as low as one for twelve thousand people. Such a situation poses urgent problems that demand immediate attention. One solution is to use auxiliary nursing personnel in large numbers to cope with needs until sufficient fully trained nurses are available.

The crisis is not confined to underdeveloped countries. In Europe, instead of the one nurse for three hundred and fifty people that is considered acceptable by international standards, there may be only one for eight hundred and fifty, as in France, or one for twelve hundred, as in Portugal. For although lack of money is only a partial explanation, nurses in general are certainly underpaid for the difficult work they do. They have other disadvantages. Their hours do not fit in with family life: they rarely have Sunday off. French nurses are free one Sunday in almost two months, for frequently they cannot take their holidays with the rest of

the family. The nursing profession needs higher salaries, better education, adequate living quarters but also greater opportunities for advancement.

The trouble goes still deeper. Some time ago nurses in New York City went out on strike, not for higher salaries but for better working conditions. This is significant and points to the heart of the matter. Along with the technical progress that has completely revolutionized medicine in the past twenty or thirty years the nurses duties have become increasingly difficult and responsible. They are called upon to handle more powerful and therefore more dangerous drugs. An error can be fatal, as can an accident to a machine that permits a patient to breath or performs some of the vital function. The nurse is aware of the growing importance of her role and consequently feels discouraged that it is often not sufficiently appreciated. The nurse no longer is simply the doctor's servant; although not essentially a therapist she is equally important and suffers from lack of recognition.

Often she cannot use all her abilities to the full. Even if she is not entirely conscious of it she knows quite well that her function is not just to administer injections and give medicines according to schedule. She must observe and assess the need for nursing care, console and educate the sick. It may easily be forgotten that these are essential aspects of the nursing profession. It is an unfortunate state of affairs that the nurse who finds herself in a position to be able to do all this is rare indeed.

It is often said that nurses are the doctor's eyes and ears. This, then, is, or should be, an important part of their task. The doctor only sees the patient for a few minutes at a time but the nurse remains at his side day and night and is aware of slight as well as dramatic changes in his condition. Keen observation of unspectacular symptoms such as loss of appetite, change of complexion, fatigue or excitement, stiffness, even

weeping fits or feelings of being mistreated or neglected can help the doctor make his diagnosis or modify a course of treatment.

For it is the patient that counts. The patient is not merely a typhoid case or a fracture but a suffering human being with a certain social, family and economic background. It is well known that emotional problems affect the progress of a disease. In many cases psychological help may be indispensable to recovery. Unconsciously many people refuse to get well because they are afraid of finding themselves once again confronted with what seem to be overwhelming problems; problems they were unable to solve in the past. By listening and sometimes find a way to overcome difficulties, an understanding nurse may be as important to the patient as medicines.

Finally there is the often neglected role of the nurse as a teacher of health. It is not enough to cure the patient and send him home. He must be taught how to protect his health first by following doctor's orders and perhaps by observing a direct or a rehabilitation programme and also by simple complying with general rules of health. If such precautions are not taken there is always the risk of relapse or a new illness. From the human as well as the economic point of view the role of health promotion and prevention is too often forgotten, and it is primordial.

For various reasons the nurse can often perform only one of these functions—that of giving basic care and dispensing medicines. She herself may be unaware of all the possibilities and therefore confine herself to being a good practical nurse, efficiently performing specified techniques. She may not feel called upon to go any further. What is more, her training may have prepared her for it. Traditional nursing education does not always emphasize the educational role of the nurse in the prevention of disease and the encouragement of positive health as much as is desirable. The place of the

nurse on the medical team in many instances remains ill-defined and she does not quite understand everything that is expected of her. This is also sometimes the case with others: the social worker, physiotherapist, dietician, psychologist. But in health services where team spirit is well developed and **responsibilities are distributed in a coherent manner the work goes smoothly and efficiently and people receive the care they need.**

Finally, and this is one of the major obstacles preventing the nurse from carrying out her unique functions—she is overwhelmed by other duties that should be performed by others. **Secretarial help could take care of some of the paper work and auxiliary and domestic staff free her from lesser tasks for example.**

An international nurse who holds a high administrative post emphasized that nurses must be offered possibilities of advancement while remaining in a position that permits them to continue to give direct care to patients. At present an outstanding nurse can only rise to an interesting position, materially or socially if she goes into teaching or administration. This means losing the personal contact with the sick that was her principal motive for taking up nursing.

Fortunately the impulse of nurses to serve humanity remains a strong one. But they must have proper working conditions and chances of professional advancement so that they will not become discouraged and withdraw from nursing. With such improvements more young women would be induced to choose a profession in which they would develop their capacities to the fullest and at the same time be of inestimable service to others.

The Health Educators

One of the most recent additions to the health team is the health educator, although his function, that of increasing public awareness of the conditions that influence health and disease has always been and continue to be an important part of the work of the doctor, the nurse and every other member of the health team.

Who is the most important person on the health team? Who calls the doctor, follows the treatment, corrects harmful habits and sees that the children have good food and come to be vaccinated. Everything depends on the layman whether he is sick or well. Now-a-days when so many illnesses can be prevented so many diseases effectively treated, what the ordinary person does about his health is the key in the lock of medicine.

Everyone has his own beliefs, taboos and fears where health is concerned. What is important is whether these preconceived ideas and the habits and customs that go with them are harmful, and prevent people from seeking good advice, or whether they are beneficial, and lead to longer and happier lives. It is the aim of health education to help people to better health to make the best use of the health services that are available and to regard health as a valuable asset, a worthy investment of time and money.

All members of the health team are doing health education when they talk with patients, discuss health matters with administrators or give talks in schools or on the radio. Everyone learns something each time he is told how to keep well, visits a health centre, or observes the effect of a good diet on a child.

The battle for new ideas

To understand the importance of the ordinary man and woman let us consider the mother of a family in a poor country who has to feed and educate her children with limited

resources. She wants to do the best for them and perhaps would like to make use of the local health centre, but she is not alone. She has a family, a husband, perhaps a mother or grandmother who has always had strong views on how to bring up the children. These people may be old-fashioned, they may not believe in the health centre. The woman will have to struggle against all sorts of opposition and in the end may not even think it worthwhile to risk the disapproval of her relatives by going to the health centre and spending the time and money that is required. If she does, and the staff of the health centre suggests ways of doing things that the relatives have never heard of, she will be in dilemma and may have to defend her position at home. Should the child be vaccinated? How should the baby's diarrhoea be treated? What food should it be given during weaning? The team at the health centre can be effective in helping the child only to the extent that the mother becomes a member of that team, works with its members and with their support and her new knowledge and skill influences the family. If she is not regarded as a member of the health team they will remain outsiders and only be consulted in emergencies.

Then there is the cardiac patient who has recovered from a heart attack in a modern hospital. He not only has had a grave illness but also, probably, a severe psychological shock. Now, in his middle years, he may have to adapt himself to a new way of life. For financial and other reasons it will probably be difficult for him to make the necessary adjustments. His family may pamper him too much while, on the other hand, his friends and employers make light of his illness. If this man is to be brought back to good health he must work with his doctor, nurse, physiotherapist, over a long period in a joint enterprise. He must be prepared to learn and they must be prepared to teach him. His friends, relatives and employer should also be made aware of his real needs, capabilities and limitations.

Health Education in schools

Health education, besides being an essential part of medical and public health work, is also carried on in schools. Teachers are valuable members of the health team and their training is a worthwhile investment. If children learn the grammar of health along with their ordinary school work they will acquire good habits and also will find it easier later in life to talk about themselves to doctors and others concerned with their well-being. Health education in schools is not continued to the class-room. What children see around them impresses them as much as their lessons. The cleanliness of the washing facilities, the state of the class-rooms and the latrines, the work in the school garden and the kind of food served in the school meals are all daily examples, good or bad, that gradually are assimilated and become a part of the child's way of life. Many people play a part in the school health team. Janitors, cooks, gardeners as well as teachers, school nurses, dentists, doctors all contribute something. The school medical service can impress children and teachers with the importance of medical examinations and the early correction of defects. It provides opportunities for talks with parents about a child's health needs and brings them into the health team.

Although people of many different backgrounds can promote health education, in recent years it has become a profession in itself. The work of the health educator, in general terms, is to organize health education activities in an area, to act as an adviser on sociological and educational methods and to show members of the health team how to use their opportunities for health education.

In anti-malaria work, for instance, where the main attack is against the mosquito that transmits the disease from one person to another, the health educator, may be called upon to study the social problems that hinder the business of spraying insecticide inside houses. They may have to find

out what people believe to be the cause of malaria and to relate those beliefs to modern scientific ideas. Hours or even days may be required discussing with the village elders, ways and means of getting suspicious or even hostile people to allow the spraymen into their houses.

Interpreting health for the layman.

In the case of tuberculosis control, drugs that must be taken over a long time are nowadays an important part of treatment. After a few weeks the drugs begin to take effect and the patient feels better and looks better, although he is not yet cured and may still face a long period, during which he must rest and continue to take his pills. It is easy for him to forget them, tempting for him to go back to work. Perhaps his wife is replacing him as the family bread-winner and doesn't understand why this is still necessary. His employer may be impatient with him. In such situations the health educator might be called on to study the social and psychological factors that hinder successful completion of the treatment and suggest methods of dealing with them to the health workers concerned.

The health educator, in other cases, may have to work out clear and simple language for an instructions booklet, or test pictures to find out what they mean to illiterate people. Health educators work with school teachers in planning the health education of children and in preparing teachers to carry this out. They also conduct research on fundamental problems of communication in health matters.

Perhaps most important of all, they are professional persons, trained to look at health from the layman's point of view. They are able to complete a two-way exchange of information, conveying this point of view to the members of the health team and teaching the man in the street the part he can play in safeguarding his own health.

The Sanitary Engineer

Man's desecration of his physical environment is something that has pre-occupied philosophers, religious leaders and temporal powers throughout the ages. In the present century, when the need is greater than ever, the sanitary engineering profession has emerged whose exclusive duty is to mount guard over the air, water, food and shelter that are essential to man's life on this planet and to repair some of the more obvious damage to them.

The sanitary engineer, whose role is to control man's environment so that it enhances rather than detracts from his health and comfort is, of necessity, a member of the health team. The work he does may be less spectacular than that of a surgeon performing a delicate heart operation, but its steady, purposeful character is fundamental in making it possible for the human race to continue to live in the modern world.

He is an engineer in the physical sciences and a public health worker in the biological sciences. This combination of skills brings him into contact with members of the medical professions on one hand and the public works engineer on the other. And because of the scope and complexity of environmental health problems the sanitary engineer works with a team of his own composed of the biologist, the chemist, the sanitarian and representatives of a growing number of other disciplines.

Never enough water

He is continually faced with new problems, although the old ones are not yet solved and hospitals in many parts of the world are full of victims of insalubrious living conditions.

Water is one of the greatest of them. Its ability to spread deadly and debilitating disease—cholera, typhoid, dysentery, bilharziasis, river blindness—is well known and the simple matter of getting enough good water to the people of the world has so far defined all the technologists.

This is not merely the case for the developing countries where it is not rare for a woman to walk miles each day to bring back the family water supply, a tin on her head and a bucket in her hand. In some of the world's biggest cities there are still buildings whose tenants fetch their water from an outside tap or fountain.

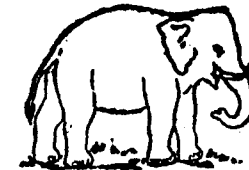
The spectacular growth in population that we are witnessing and the continually increasing industrialization that is characteristic of our times provide still more challenges for the sanitary engineer. There are more and more people and they live closer and closer together, especially near factories that provide them with work. This means that they are not only exposed to the usual disease hazards of everyday life but also to those that may arise from close contact with modern industry. The task of protecting man is continually more difficult. Countless new chemical products are put on the world market every year. Their toxic wastes pollute the air, water and soil, yet too little is known about the long-term effects of exposure to these product substances. The pesticides and herbicides that increase food production may not be unmixed blessings for the consumer.

Air pollution is becoming acute. Industrial wastes, along with those from fuel combustion, outside fires and automobiles combine to create a formidable problem in many places, especially in affluent societies where air pollution seems to be a concomitant of economic progress. Trees, monuments, houses are attacked and damaged. The human respiratory system is not immune. During fog and smog when toxic fumes are held down by blanket of the upper atmosphere the death rate may go up in a marked fashion.

Water and air are the most obvious and universal problems with which the sanitary engineer has to lead but there are many others. He is concerned with the handling of solid wastes produced by cities that necessitate the installation of elaborate refuse-disposal system capable of processing millions of tons a year.

The sanitary engineer has a role to play throughout the whole of man's life, in all its aspects. This role varies in different countries to be sure. In one he must eliminate the conditions that foster the spread of infectious and parasitic diseases, provide water for rural areas and cities alike and content with the results of man's poverty and ignorance. In another he must cope with the effects of technical progress and industrialization. But whatever the problem and the circumstances responsible for it the sanitary engineer wages war on disease, side by side with the doctor, the nurse, the sanitarian and everyone else concerned with man's health and comfort.

Source : World Health Organisation.



World Health Day Celebration in the City

PREVENTIVE ASPECT OF MEDICINE STRESSED

Shortage of medical personnel and lack of adequate public co-operation formed, the main themes of talks by doctors and administrators at a function held at Rajaji Hall, on 7th April to celebrate 'World Health Day'.

The Day marks the anniversary of the constitution of the World Health Organisation. The theme of this year's celebrations was "Partners in Health". Sardar Ujjal Singh, Governor of Madras, stressed that the partners should work together in a spirit of co-operation to eradicate diseases. The partners included the public and the theme sought to enlist better public participation in schemes to control the spread of diseases. (Text of the speech given separately).

Mr. Sadiq Pasha, Health Minister stressed that these ideas had not yet percolated to villages and that the present official propaganda was not enough. He endorsed the Governor, Sardar Ujjal Singh's appeal to doctors to serve in villages. India to-day had roughly one doctor to every 4,000 for its citizen, but nurses were fewer.

The Secretary, Health Services said no new medical college should be started in the Fourth Plan period. Instead there should be more schemes for the benefit of the people.

Dr. Ramachandra Rao, City Health Officer said there was no public co-operation for preventive schemes. There might be positive results if doctors with curative practice had families attached to them and their salaries cut for every case of disease among their patients. He said this to stress the preventive aspect, which most citizens and some medical practitioners ignored now. (Text of the speech given separately).

Miss H. Heyes, WHO Nursing Educator stressed the need for better nursing training methods.

"Partners in Health"

SARDAR UJJAL SINGH,
Governor of Madras.

"I am indeed very happy to participate in the observance of the 'World Health Day' this evening. This marks the anniversary of the coming into force of the Constitution of the World Health Organisation in 1948.

It is well known that the World Health Organisation has been taking active interest in spreading knowledge and in helping to train personnel in combating diseases by both preventive and curative methods and rendering technical services in such fields. A great deal of attention is being paid to the training health workers and a number of countries receive assistance from the World Health Organisation. It is therefore appropriate that the theme chosen this year is "Partners in Health". I would like to take this opportunity of conveying our deep appreciation of the activities of this organisation and our gratitude for all the help rendered by this organisation in the matter of eradication of diseases and in the training of workers.

You will all agree that the enjoyment of good health is one of the fundamental rights of every human being and one of the primary duties of a State is the improvement of public health. In building up India into a welfare state, the health of the people is of paramount concern, for material advancement and economic prosperity all are dependent on the hard work and toil put forth by the people of the country. In order to enable them to put forth strenuous and sustained efforts in the furtherance of our economic development, the people must be physically strong and healthy and be assured high standard of health by methods, preventive and curative. A healthy body and a sound mind are essential for a man to make his maximum efforts for increased production in order

to raise his standard of living. To enjoy good health not only means absence of disease and sickness but also possession of positive good health; that is a state of complete physical, mental and social well-being which is very essential for happiness, the increased production of wealth and achievement of peace and security in the land.

Our country is vast and our population is large. Ours is mainly an agricultural economy. We are also a land of villages. Since the dawn of independence, concerted efforts have been made to raise the standard of public health in our country. We have to fight against poverty and disease, prevalence of insanitary conditions, defective nutrition, inadequacy of medical and preventive health organisations, illiteracy, unemployment and unhealthy social customs. Our task is very heavy and with all the progress we have made so far, we are still far away from the standard of health reached in other advanced countries and we have to make up the leeway as speedily as possible. A good progress has been registered in the prevention and control of disease and in the promotion of the health of the people in general.

Our Five-Year Plans and health projects have all been designed to fight against disease and poverty and to improve and extend the various health and curative services, both qualitatively and quantitatively. Attention has been paid to the provision of protected water-supply and improvement of sanitation, control of malaria, tuberculosis, filariasis and provision of rural health centres, maternity and child health centres and also family-planning centres.

Health authorities and health workers throughout the world are working towards the goal of ensuring perfect health. Notwithstanding their best efforts, when we look at the state of world's health, we find we are confronted with the problems of shortage of trained manpower, growth of population, etc. At present, the doctor is the central figure around whom health services are built and function. The efficiency and output of these services depend largely on the

different categories of personnel who co-operate with the doctor. India has launched many health programmes for the control and eradication of many communicable diseases like malaria, tuberculosis, leprosy, smallpox and cholera. It will be realised that only team work will produce the desired result in this task.

There is not only shortage of doctors, nurses and other auxiliaries in the country but even the available numbers are unevenly distributed in urban and rural areas and in different regions and States. The total number of doctors in the country is estimated to be about 108,000—one doctor for 4,600 persons, as compared to one for 500 in U.S.S.R. and one for 760 in U.S.A.

Madras State has 192 doctors per million population as against an all India average of 227 (number of lady doctors is, however, the highest exactly in Delhi).

The availability per million population varies widely between urban and rural areas. In urban areas there are 825 doctors for one million population whereas in rural areas the number is only 88. The ratio varies greatly from State to State. There is wider disparity in the distribution of woman doctors who are mostly concentrated in towns and cities. I would therefore appeal to the members of the medical profession, on this occasion, to go to rural areas in large numbers and serve the rural population. Vast masses of our people live in villages and it is they who need all the care and attention that we can give.

The other important category of health manpower is nursing personnel which includes nurses midwives auxiliary nurse midwives and health visitors. The estimated strength of nursing personnel in India is 81,619, and the ratio of nurses to doctors works out to be 1 : 2, whereas the desirable norm would appear to be about three nurses to a doctor. I understand that there is a great demand in our State for admission to nurse training centres and applications are nearly six for one a seat.

The theme chosen for this year, namely, "Partners in Health" needs to be properly appreciated. The common people who require to be educated on the need for taking drinking water from safe source, importance of keeping the environment clean, proper disposal of waste, observance of rules of hygiene, the importance of clean and hygienic food supply in hostels and the need for taking preventive measures, form one of the most important partners in health. The medical man who prevents and cures diseases, the nurses who are the ministering angels who succour and comfort the sick, the auxiliaries who work towards attaining community health, the health educator who educates the patient and the public about preventive and curative aspects of disease and other health problems, and the sanitary engineer who provides safe drinking water, are all partners in health.

The ultimate success of all our schemes—whether in the field of health or in other fields—depends largely on the measure of public co-operation that is forthcoming. The aid offered by international organisations like the World Health Organisation is itself illustrative of the spirit of co-operation that animates its endeavour in this field. With the co-operation of all agencies, the Government, the voluntary social service institutions and the people at large—we should be able to achieve our ideal of Welfare State, where it will be possible for every one to enjoy the highest standard of health attainable in our country. There is growing awareness on the part of the people that health is their birthright and that "disease is not an inevitable burden which must be endured."

I do hope that the celebrations of World Health Day will give us encouragement and enthusiasm to promote the cause of the World Health Organisation and to work for the promotion of national health.

(Speech delivered at World Health Day Celebration.)

Collective Responsibility in Community Health

DR. A. RAMACHANDRA RAO,
Health Officer, Corporation of Madras.

Perhaps it would have been more apt to the theme of the day, if workers of the other disciplines who are partners in health have been requested to speak today instead of the Health Officer who mainly depend upon others' co-operation. However, my long and close association with World Health Organisation justifies my presence here today. For the attainment of any type of development, be it physical, mental or spiritual, the first pre-requisite in man is health and it is the most precious thing we possess and at all costs it should be preserved. Nothing can be achieved without this basic pre-requisite of a sound mind in a sound body. Realising the importance of health, the Constitution of India has stipulated that raising the level of nutrition and the standard of living of its people and improvement of public health as one of the primary duties of the State. Similarly the constitution of World Health Organisation also enunciated that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being. "Health" in the words of the World Health Organisation "is something positive, a state of complete physical, mental and social well being" and not mere absence of disease or infirmity.

The very definition of health shows how comprehensive it is and how difficult it is to attain such a state in a community. Hence it is not one man's job and it can never be one man's job. For the matter of that it is not even the job of the State alone. Every citizen may have the right to demand it as a fundamental right but at the same time he has got the greatest responsibility of preserving not only his individual health but also that of the community at large, of which he is a member.

Physicians, nurses, chemists, veterinarians, microbiologists, technicians, engineers, why almost staff of every discipline is involved in the promotion, maintenance and preservation of health of a community. All these are partners in this limited concern which has as its main aim, to raise the standard of living of the people, to prevent sickness and disability in the community and to promote, maintain and preserve the positive health amongst them. It is not at all uncommon for people, even learned people to think that it is the duty of the health officer only to see to and to look after the health of the citizens. It may be his responsibility. But no Public Health programme can be solved, unless there is active involvement and continuous co-operation from the most important partner in the health, viz., citizen.

In sickness, the co-operation of the citizen is always forthcoming. But such a thing is never seen in prevention of sickness and preservation of health. A practitioner of curative medicine gets all the co-operation from the patient since the latter is interested in his recovery. But if the medical officer of health goes to healthy man and advises him and he should take prophylactic inoculations and vaccinations periodically, that he should take elementary sanitary precautions to ward off communicable diseases, and that he should keep his house and surroundings clean and tidy, the health officer not only does not get any co-operation, but on the other hand he is usually asked to mind his own business. This is the fundamental difference between the attitude and the approach of the citizen towards a practitioner of curative medicine and practitioner of preventive medicine. All of us talk and almost parrot the proverb "Prevention is better than cure" but few of us follow the truth. The anxiety a citizen shows when he is sick to get himself cured, he does not show even a hundredth part when he is healthy to prevent himself from sickness. This seems to be a natural feeling with human

beings since it is nothing peculiar to our country alone. Perhaps if sickness is taxed and the health is rewarded we may change our attitude. But we cannot blame the citizen completely too. This apathic attitude to preventive medicine is noticed in physicians also. Majority treat the individual patient but have no time to look after the members of the family of the patient, and prevent them from getting the disease and promote healthy surroundings to their patients. Perhaps here also if there is a family physician system and National Medical Services and the physician is charged or through his salary is cut, for every sickness he treats in his allotted families, he will certainly change his attitude and bestow more attention to preventive medicine. Not only in prevention of diseases but in maintenance of sanitation also, the important role a citizen has to play is not at all realised. If every citizen keeps his house and surroundings clean and tidy and collects all the refuse and rubbish and empties it into the municipal cart or lorry when it comes, then half of our problems are solved, and all the surroundings will be sanitary. But how many of us do this? We sweep our houses and put all the sweepings into the neighbours' compound if it is a big one or throw it just on the roadside even if there is a dust-bin. This is a usual sight. Similarly, there may be latrines inside the house but all the children are allowed to ease on the roadside. Of course one may say it is the duty of the Health department to clear the rubbish and to clear the refuse wherever it is, but is it not the duty of the citizen to see that in his own interest his house and surroundings are kept clean?

Fundamentally one should realise that preservation of health in a community is a collective responsibility in which the citizen himself has got a great role to play. Without his active co-operation nothing can be done. An indifferent and non-co-operative citizen is an anti-social element in the community. Such a person may be physically and mentally

healthy but according to the definition of health by World Health Organisation socially he is considered a sick person since he has not realised his responsibilities and obligations to his neighbours.

But this requires a lot of education. Health education is an art and science by itself. Each and every one cannot do it. There is a methodology. A trained person only knows, when, where and how to apply his technique to get the people round. Health educators are therefore very important partners in health.

Environmental sanitation is a comprehensive word. It is not simple collection, transport and disposal of refuse and rubbish. Provision of safe and potable water, sanitary collection and disposal of human and animal excreta, provision of well-ventilated houses, etc., all come under environmental sanitation. This shows evidently that the health officer alone is not the custodian of the health of the city. The water works engineer, the drainage engineer, the building engineer, chemist who tests the quality of water, who purify the sewage and analyse the food-stuff, technicians who man the laboratories are all active partners in health without whose assistance health officer can do nothing.

At the peripheral level on the field simple workers like sanitary inspectors, the conservancy inspectors, even the ordinary labourers who get into the drains and clean the sewers they are humble partners in health. They are the most important units of foundation on which alone the whole public health set-up is built.

A veterinarian who deals with animals through whom human beings contract diseases, an entomologist who deals with pests through bites of which we contract several diseases are silent partners in the health.

The health officer is concerned with the life of the citizen right from the cradle to the grave. The band of workers of the maternity and child welfare scheme consisting of the

women medical officers, public health nurses, the health visitors, maternity assistants, family planning workers, etc., who look after the citizens from the time of conception to the birth of the child and through the various stages of child's development and do everything to preserve the health of the mother and child and preserve harmony in family by giving advice, form part of the team of the health workers. Thus all of us belong to an army of soldiers drawn from various disciplines. The main aim of the army is to wage war against the common enemy the disease when we are attacked and to preserve victory, viz., the community health during the peace time. But the problem facing us today is that we do not have enough soldiers to fight. Everywhere there is a dearth of personnel. It is estimated that we in India have only one doctor for 5,000 as against one for 500 in USSR, one for 750 in United States of America. Further there is a terrible disproportionate distribution of even these meagre number of doctors between the urban and rural areas. It is estimated that there is only one doctor for 12 thousand persons in rural areas, and there is an acute shortage of women doctors in rural areas. Same is the case with nurses and other paramedical personnel.

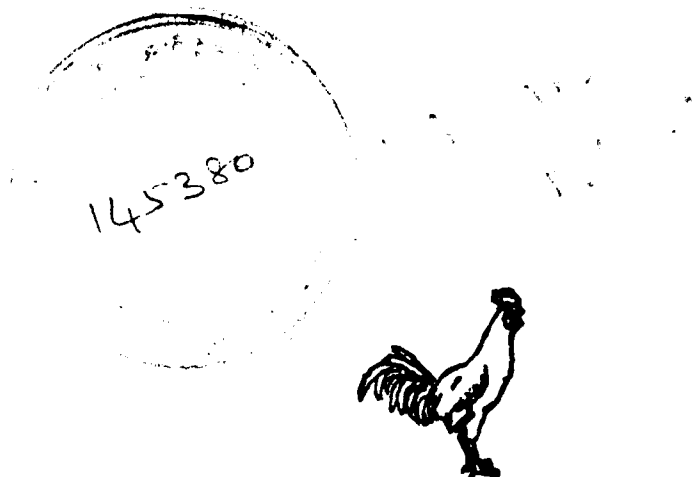
On the preventive side the problem is the same. There is only one health inspector for several villages and even in urban areas there is only one for 20-30 thousand people.

There is an acute shortage of technicians in the laboratories. Thus we find in all spheres of public health activities we are short of personnel. Everyone knows that the health is an important commodity which has to be preserved at all costs. But people should come forward to join the team and make it strong to fight the enemy the disease.

The problem is continuous problem. Till our country achieves our objectives there should be a three-pronged drive. Firstly the existing staff must change their concept and widen the scope of their work and see that their disciplines aim at

not only relieving suffering of individuals but also prevention of health. Secondly the citizens in their turn should learn how to live and let others live in health and comfort and realise that they play a very important role in maintenance of community health and co-operate in every effort of the Health department and lastly more and more young men and women should join the army of health workers and work shoulder to shoulder in this freedom struggle, viz., the struggle for freedom from sickness and squallor in the world.

(Speech delivered at World Health Day Celebrations).



“ The Requirements of Partnership ”

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It is possible for a single group of persons to conduct operations in the world of industries or law with the other members in the community being hardly aware of the happenings. However, in the field of health, it will be easy to see that every human being is involved right through his life. Formerly, it was said that while the priest was required to hatch, to match and to despatch, the doctor was required only at the first and the last of these domestic occurrences. But now the medical team is definitely required to match also.

While we talk of partnership in the sense of persons co-operating with one another to share the gains and losses and apply it to the field of health, it will be seen that the partnership in health should be of the most understanding and profound variety. Nowhere is the statement of Mahatma Gandhi that “there be no happiness for any one of us until it has been won for all” more true than in the realm of communicable diseases.

Realising this and the fact of the one world of to-day, with the wide geographical differences being encompassed by the jet planes, partnership is being increasingly forged by International Health Organisation. In this partnership between nation and nation, however, the position should be more reasonable than what it is to-day. The manpower needs of the U.K. and the U.S.A. should not be provided by the doctors from a poor country like India. There should be no feeling that while the highest standards of health should be guaranteed to the free citizens in those countries, something very much less is sufficient for the equally free but not equally rich citizens of this country.

Man and woman should have an intelligent partnership in health. At our Medical Centre more than one wife has told our social worker pleading with her to take family planning counsel that the husband is not very much interested in accepting our advice. Women undoubtedly know the difficulties of repeated child bearing and are always more co-operative in accepting family planning suggestions, if only the husbands will be reasonable.

Doctors of every category should show a perfect understanding and spirit of co-operation. This applies not only to the specialists and the general practitioners trained in modern medicine but also to the relationship between the doctors practising modern medicine and the indigenous systems of medicine. Rightly or wrongly we have to grant that in India the indigenous systems of medicine are thriving and do have the support of the Governments in the country. An effort, therefore, should be made to evolve, by operational research, a practical method of integration of the two systems with the very essential assurance that no patient, regardless of his economic status, will ever suffer.

With the modern advances in the science of medicine and the organisation of medical care, doctors should function as the leaders of a team containing many workers in the professions supplementary to medicine, such as nursing, social work, dietetics, laboratory technology, diagnostic and curative X-Rays, etc. There is absolutely no doubt that in a developing country such as ours the growing need is to rapidly increase the facilities for the training in these supplementary professions. I personally feel that no more medical colleges should be opened in the IV plan period but that every doctor should be provided with all the medical auxiliaries he requires. Among the medical auxiliaries we include also the lay health volunteers and these are of two categories, (a) who are entirely honorary and (b) who are paid a small token

incentive based on their performance, e.g., bringing candidates for the introduction of the loop or supervising the drug treatment of tuberculosis patient.

Talking of lay health volunteers, consider the enormous amount of health work the students can do in the forthcoming vacation, if only the programme of social work by students is properly organised by those in authority and not just talked about as usual.

The occult strength of the student community has become overt in recent months.

And lastly the most important person is the patient himself who should give his co-operation fully and unreservedly.

Needless to say, workers in other fields, industrialists, economists, educationists, administrators and so on have all got to make their contribution to the organisation of health and medical care on sound lines. Here again it is unfortunate that those have taken very little interest in matters of health and hardly seem to realise that the plans related to industries or the nation's economy cannot be fulfilled without ensuring the health and well-being of the citizen. To imagine that the country can continue to be a microbe's paradise and still the targets for agricultural and industrial production could be achieved as expected is totally erroneous. It is a pity that the Planning Commission is consistently reducing the allotment on health.

Any kind of partnership can succeed only if the partners are assured of equal status and given mutual respect.

Here I would like to lay down two basic principles:—

(1) No person who has been specially trained for a particular profession should be called upon to do work which does not require his or her training. For example, nurses should do nursing and not spend all their time writing diet, drug and dhoby accounts.

(2) No person who is not technically trained should be called upon to do a job which he is not competent to discharge.

Lastly the requirements and the impediments to the establishment of a happy and successful partnership in health; or for that matter in any sphere of activity, between all the persons concerned can be summarised by the letters in the word "CIVICS". Civics is a subject we studied in our school days, when we were really educated on essential principles of human co-operation, community sense and service to fellowmen. The first letter 'C' stands for constructive action, co-operation and community sense. The 'I' stands for interdependence as against isolated independence. The 'VI' stands for vested interests which are the biggest obstacle to progress. Indeed the 'VI' stands connotes vested interest even in the case of some V.I.Ps. The 'C' stands for communication. Half the trouble in the world is due to lack of communication of ideas and intentions between man and man. And the last letter 'S' stands for spirit of service which is most essential. It can also stand for the sin of secrecy about which Gandhi has written frequently. People and institutions are afraid of demanding and accepting co-operation from many others because of their unwillingness to expose their daily work to the public gaze.

You will agree that the problems connected with changing the face of the nation's health (or economy), are not those of money, or machines, but entirely those connected with man himself.

(Speech delivered at World Health Day Celebration.)