swasthhind

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CHILDREN'S DAY NUMBER

Theme : Hungry Children—A Challenge to the World's Conscience.

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OBJECTIVES

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REPORT and interpret the policies, plans, programmes and achievements of the Union Ministry of Health and Family Welfare.

ACT as a medium of exchange of information on health activities of the Central and State Health Organizations.

FOCUS attention on the major public health problems in India and to report on the latest trends in public health.

KEEP in touch with health and welfare workers and agencies in India and abroad.

REPORT on important seminars, conferences, discussions, etc., on health topics.

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MALNUTRITION
—an invisible enemy

The most effective attack ever made against child malnutrition can now be mounted. Opportunities currently available can be used as an entering wedge to break the hunger-poverty cycle, with significant improvements accomplished in a short time on a large scale.

In the past few years several social and scientific break-throughs have suddenly made it possible to end child malnutrition. What we do in the next few years—neglecting or taking advantage of these opportunities—will determine whether we are going to destroy or save and improve the lives of hundreds of millions of children.

A serious commitment by peoples and governments to a major revolution in child health could accelerate progress for all the world's children, slow down the rate of population growth, reduce child malnutrition and cut deaths of children by at least half before the end of the 1990s.

Low-cost life-saving tactics are now available

Four simple steps can be taken right now to launch an antihunger revolution—Growth Charts, Oral Rehydration Therapy, Breastfeeding promotion, and Immunization, all on a mass scale. To make it easy to remember them, they have been given a nickname: GOBI.

● Growth Charts

—to make invisible malnutrition visible

In about half of all cases of child malnutrition, its invisibility is a major constraint on improving the child's condition. A mother who does not realize her child is malnourished will take no steps to improve the diet. Consistent undernutrition, successive infections, bouts of diarrhoea and other illnesses can all hold back a child's growth over weeks or months so gradually that a mother does not notice what is happening—but the lack of growth will not pass unnoticed by a monthly growth chart.

For example, if a child who has had measles fails to gain weight, or loses weight the following month, this will show up on the chart—and as soon as a mother sees this, her spontaneous reaction is to give the child more food. In the past children's growth charts have usually been kept in clinics or paediatricians' offices. Weighing, monitoring and evaluating information about a child's progress were the responsibility of health personnel. Only children brought regularly to a health service benefited—and most uneducated mothers do not bring children to a clinic or doctor until the child is obviously and seriously ill.

The revolutionary potential of the monthly growth chart kept at home by a mother is that it involves the person who cares the most on a daily basis in the task of improving a child's nutrition, instead of alienating her from that responsibility by professionalizing the process and wrapping its techniques and knowledge in mystery.

Experimental projects in the past few years have shown that the use of simple card-board child-growth charts kept by mothers who weigh their children monthly, and note the weight on the charts, makes malnutrition visible, and this alone is enough to reduce it. Such charts serve both as an early warning system and as encouragement to better nutritional practices.

Four ways to fight malnutrition

Growth Charts: to help a mother keep track of monthly progress, warning her when there are problems and encouraging her when her children's nutritional needs are being well met.

Oral Rehydration Therapy: an inexpensive and effective way to enable a mother to help her children when they suffer from dehydration, a frequent and dangerous effect of diarrhoea.

Breastfeeding: the best and most inexpensive "convenience food" for babies, to get them off to a good start in life, safely providing excellent nourishment and protection from infections.

Immunization: to prevent the six major diseases that are especially threatening to malnourished children; youngsters may protest, but wise mothers know its life-saving value.

● **Oral Rehydration Therapy (ORT) —to end the biggest single cause of all child deaths**

The average child in a poor community of the developing world has between six and 16 bouts of diarrhoeal infection every lear. These kill more than 5 million children a year—one child every six seconds!

Usually a mother's response to a child's diarrhoea is to withhold foods and fluids—the child thus becomes malnourished both by the illness and the treatment. Each episode of infection increases malnutrition, and each increase in malnutrition increases the risk of another infection.

Diarrhoea leads to dehydration, which leads to weight loss, and if children lose 15 per cent of their body weight in a few days they die.

In the past, dehydration could only be treated by qualified nurses or doctors using expensive intravenous feeding in an often inacessible hospital. But ORT enables mothers to treat their children inexpensively in their own homes. This breakthrough was made possible by the discovery that adding glucose to a salt and water solution can increase the body's rate of absorption of fluid by 2500 per cent.

Community development workers can also show mothers how to make up their own rehydration solutions by using eight teaspoonsful of sugar to one of salt per litre of boiled and cooled water. Thus ORT is a "people's medicine".

The need for ORT is clear. The technology is known, and simple. The cost is small. The means of dissemination are available. The receptiveness of parents has been demonstrated. Only an inexcusable lack of national and international will can now prevent bringing its benefits to the vast majority of children in need.

● **Breastfeeding**

—to prevent the most unnecessary malnutrition of all

Breast milk is the best food for a baby in any society, but in poor communities or the developing world the advantages of breatfeeding over bottle-feeding can mean the difference between life and death.

Usually unable to read the instruction on a tin of formula, or to afford enough artificial milk over many mothers, or to boil water every four hours, or to sterilize the necessary equipment, a low-income mother who abandons breastfeeding is spending a large proportion of her small income in order to expose her baby to malnutrition, infection and an early grave.

The cost of feeding a baby adequate quantities of artificial milk often works out to more than half of a poor family's weekly income. No wonder mothers dilute the formula to save money—and no wonder babies therefore become malnourished.

Breast milk and the colostrum which precedes in the first days of an infant's life have immunological qualities which protect babies from infection. Also the prolactin which breastfeeding releases in the mother's body is a natural contraceptive which can prevent several million conceptions a year in mothers whose bodies have not fully recovered from a previous pregnancy. Added to these health benefits are the fact that breastfeeding requires no time-consuming preparations: it is always sterile and at the right temperature; it is free; and it increases the natural loving bond between mother and baby in a joyous way.

Yet in spite of all these great advantages, the practice of breastfeeding has declined sharply in the developing world in recent years—from over 90% to as low as 10% in some areas.

Among the main causes of this decline has been increased availability and advertising of infant formulas. To a mother whose confidence may already be low because of poverty and lack of education, the appeal of a "scientific" and "modern" method of feeding her baby is very tempting, so that even the most innocent promotions ("for those who can't breastfeed" or "for mothers with insufficient milk") can create anxiety—and anxiety itself can reduce the ability to breastfeed.

In the past few years, however, a vigorous fight to promote breastfeeding has begun. At least 35 nations have now adopted special legal codes to regulate the marketing of breastmilk substitutes, and many manufacturers of infant formula have begun to change their marketing practices in accordance with the international code established in 1981 by the World Health Assembly. The results are already reducing malnutrition and saving lives.

● **Immunization**

—to kill off the six major child-killing diseases

Six common contagious diseases (diphtheria, measles, poliomyelitis, tetanus, tuberculosis and whooping cough) kill an estimated 5 million children a year in the developing world, accounting for approximately one-third of all child deaths. But it is now possible to immunize children against every one of these diseases.

Infectious diseases are closely related to malnutrition, both as cause and effect. Malnourished children have lowered resistance to infection and reduced ability to recover from it. A disease like whooping cough can induce increased malnutrition by the frequent vomiting it provokes. Measles halts weight gain for several weeks and claims 10 per cent of the body weight in a fourth of all cases. A malnourished child who catches measles is approximately 400 times more likely to die of it than a child who is adequately fed. Vaccines have been available for a number of years, but it was necessary to keep most vaccines frozen until one hour before use.

Therefore, children in remote areas and in tropical countries were usually beyond the reach of immunization. But vaccines have now been developed which are more heat-stable, thus more portable; they remain potent at higher temperatures, for longer times. In non-tropical countries refrigeration is no longer necessary. Even in the tropics less complex and expensive refrigeration is needed.

The result is that an ailment like measles may soon join smallpox on the list of major killer diseases which have been wiped off the face of the earth.

"The earth has enough for everyone's need, but not enough for everyone's greed."
Mahatma Gandhi

How these four health actions can be implemented

All these measures are low-cost and can be introduced in any area where there are a few trained community leaders. They do not depend on complex and long-range economic or political changes. They are available now. Each procedure would be mutually reinforcing, so that the beneficial impact of the whole would be greater than the sum of the parts—and they would all help to stimulate further people's participation in other health improvements and community development.

But to realize the full potential of any scientific break-through there must be an equivalent "social breakthrough", to make the new knowledge available to the 500 million

TREATMENT OF DIARRHOEA

When a child gets diarrhoea, care must be taken to prevent loss of water and salts, which can develop very rapidly, within a few hours. Hence, it is important to replace water and salts lost in the stools as early as possible. This is called rehydration and should be done within six hours after the onset of symptoms.

Rehydration should be continued as long as diarrhoea persists, and till the child starts taking normal diet such as, milk, cereals, etc. The health workers in the area should be consulted immediately and the child should be given medicine and treatment for the infections only when the doctor feels it is necessary. The child should be given water along with salt. This solution can be made at home by mixing 1/2 teaspoon of salt (three gm.) and five teaspoons of sugar (25 gm.) with one litre of water. It is three pinches of salt (three to four pinches will be equal to three gm.) Sugar can be measured with four finger scoop (which will be 25 gm.). The mixture is also available in shops selling medicines. The solution should be given with spoon or cup as frequently as possible until the child refuses. Breastfeeding should also be given along with this. Otherwise, half diluted milk formula with sugar can be given. This can be increased gradually and the dilution decreased. In four to six days the child should be able to take its normal requirement.

If the child is vomiting and does not retain fluid given by mouth, the fluid should be given intravenously. In such cases, the doctor or health worker should be contacted. Cases of the type should be treated in a clinic or in a hospital.

mothers and young children in the poorest areas of the developing world. Every available channel has to be used: local communities' own organizations, adult education centres, women's groups, community development workers, primary health care networks and health services, schools, billboards, mass media.

Even when technological know-how, basic services and community organizations are available, lasting progress depends on political will. A government truly committed to the greatest health of the greatest number of people at the lowest possible cost will support the training of thousands of paramedics in preference to the lengthy and costly training of a few highly specialized doctors. This is beginning to happen. Governments of developing countries are more determined than most of them were in the past to bring health care to the majority of the population rather than to concentrate most of their limited resources on expensive medical equipment and personnel which serve only the already privileged 10% of the population.

Political commitment can achieve impressive results. Conversely, impressive results can help to bring about increased commitment. No advocacy is as convincing as successful action proving that substantial improvements are possible at low cost in a short span of time. This is why UNICEF, in co-operation with its many governmental and non-governmental partners in the development process, is actively supporting experimental pilot projects to demonstrate the effectiveness of "GOBI" in practice.

Additional long-range measures

The four tactics described (GOBI) could win major battles against malnutrition but, to win a total war,

(*Contd. on page 271*)

230 MILLION WOMEN IN DEVELOPING WORLD SUFFER FROM NUTRITIONAL ANAEMIA

PETER OZORIO

SOME 230 million women in the developing world, aged from 15 to 49, are estimated to be suffering from iron-deficiency anaemia, "one of the most frequently observed diseases in the world today."

This is a finding of a recent review, published in the statistical quarterly "The Prevalence of Nutritional Anaemia in Women in Developing Countries: A Critical Review," Erica Royston, WHO Statistician, *World Health Statistics Quarterly*, Vol. 35, No. 2, 1982.) that brings together information on the prevalence of anaemia in a total population of 464 million women.

Essentially what the report shows is that about half of all women in developing countries—that is 230 out of 464 million—are anaemic, suffering from a deficiency of one or more essential nutrients, chiefly of iron, and less frequently of folate.

Among areas covered are Africa, Asia and Latin America.

"Because of its deleterious consequences, and because it is so widespread, nutritional anaemia in women is one of the nutritional deficiency diseases that must be given high priority," the report states. "Most nutritional anaemia can be prevented."

The report also shows that the percentage of anaemia is higher among pregnant women than in non-pregnant ones. "From the information collated," the report says, "it would seem that about half the non-pregnant women and nearly two-thirds of the pregnant women have haemoglobin concentrations below those laid down by WHO as being indicative of anaemia."

This is due to the "dramatic increase in nutrient requirements" of pregnancy that is needed not only to replace body losses, but also to provide for the needs of the fetus and placenta and the increased blood volume of the mother.

"The need cannot be met by diet alone, but is derived at least partly from maternal reserves," the report says. "When these reserves are already low—from malnutrition or frequent pregnancies—anaemia results."

Women in the Third World have "on average twice as many children" as women in the industrialized world. "At any point in time, every sixth woman, aged 15 to 49 years, in a developing country is pregnant compared with 1 in 17 in developed countries," the report states.

This is the situation, region-by-region, in the developing world:

— In *Africa*, 63 per cent are anaemic out of 15.1 million pregnant women, as against 40 per cent anaemic out of 77.1 million non-pregnant women.

— In *Asia*, the figures are 65 per cent anaemic out of 43.2 million pregnant, and 57 per cent anaemic out of 253.2 million non-pregnant women. (No information was available for China).

— In *Latin America*, figures are 30 per cent anaemic out of 9.6 million pregnant, and 15 per cent anaemic out of 65 million non-pregnant women.

Maternal mortality

Severe anaemia in pregnancy has been shown to be associated with an increased risk of maternal mortality. While the maternal death rate for non-anaemic women is 3.5 per 1,000 births in Kuala Lumpur, Malaysia, the report notes by way of examples, the rate is higher by five-fold for those with severe anaemia, or 15.5 per 1,000 births.

Mild, or moderate, anaemia may "impair well-being, may reduce maximal work capacity, and adversely affect work performance," the report says, even though it is "more or less well tolerated." Few, if any, however, can function normally with severe anaemia.

Children are one the world over, and they could become a unifying factor in a world that is torn apart by strident and narrow nationalism.

Jawaharlal Nehru

Singularly at risk

The report cites two major reasons why women in the reproductive ages are singularly at risk of anaemia.

Firstly, "regular menstrual blood losses constitute a continuing drain of nutrients, which have to be replaced." About 40 ml of blood "equivalent to an average daily iron loss of 0.6 mg, is lost each month by a healthy woman and a small proportion often lose even more iron through their menses.

Secondly, "pregnancy increases the requirements of the woman's body to meet the needs of the growing fetus." Yet more often than not, diets in the developing world are inadequate for the needs of pregnancy, or to replace menstrual blood losses.

According to calculations of a WHO expert group, for women to "remain in iron balance," they need "three times as much iron as is required by an adult man."

Although women have higher requirements than men, in many countries their diets are "frequently more deficient than men's." And in certain societies food taboos, especially those that apply during pregnancy, aggravate malnutrition.

Anaemia can also be caused by parasitic diseases, the report adds, with the "two chief culprits being intestinal parasites and malaria." —

Anaemia among women in India

Smt. Mohsina Kidwai, Minister of State for Health and Family Welfare, said in Lok Sabha on 4 August, 1983, that "according to WHO report, which is based on a number of surveys and studies published in India, nutritional anaemia is a major health problem among women in India. Studies done by the National Institute of Nutrition, Hyderabad, and other institutions confirm this finding.

There is a programme of prophylaxis against nutritional anaemia among pregnant and nursing mothers, and children (1-12 years). Under this programme a combined Iron and Folic Acid tablet is administered daily for a period of 100 days to supplement the deficiency of Iron and Folic Acid in their diet. During the Sixth Five Year Plan the target is to cover 60 million mothers and as many children. 36.39 million mothers and 34.62 million children have already been covered during the first three years of the Plan.

Under the Integrated Child Development Service (ICDS) Scheme, sponsored by the Ministry of Social Welfare, diet supplements to expectant mothers and preschool children are being given in various parts of the country to reduce the mortality, as well as to improve the child health.

Besides, health education and nutrition education of the community, particularly mothers, have been intensified through mass-media channels and inter-personal communication by medical and para-medical staff to encourage intake of balanced diet by pregnant women and children.

HEALTH AND FAMILY WELFARE
—A Collective responsibility towards people

SMT MOHSINA KIDWAI

Family welfare cannot be viewed in isolation of other health programmes. Eradication of communicable diseases like malaria, typhoid, leprosy, etc., is important to ensure health and happiness, which is the objective of family planning ultimately. Even programmes like control of blindness, T.B. etc., are important in this regard. We are committed to 'Health for All by the year 2000 A.D'. This can be ensured only if preventive, promotional, curative and rehabilitative health care measures go together. Monitoring of our efforts in these areas will also be necessary to give us the correct position as to how much ground we have covered and how much remains to be covered.

WE are all engaged in a noble task as we are promoting the small family norm. It is directly related to the quality of life of the people and prosperity of the nation. Integrated with health, family planning promises the welfare of not only a family but the community as a whole. It constitutes one of the fundamentals of planned economic development of the country. It is central to all other nation building projects, for all our efforts towards development of economic resources will be nullified if the population explosion is not stemmed.

Family planing cannot be seen in isolation of other health programmes. If we advise people to merely plan their family without taking suitable steps to ensure good health of their children, they may not come forward with full confidence. It is, therefore, necessary that maximum efforts should be directed towards the promotion of health care activities for both mother and child. We have already started the Minimum Needs Programme under which we are pledged to provide basic health care facilities like immunisation of children to save them from infant diseases as also for expectant mothers, to protect them from nutritional deficiency and diseases such as tetanus, etc., provision of safe drinking water and improvement in sanitation. We also have the Integrated Child Development Scheme (ICDS) under the Ministry of Social Welfare, and School Health Programmes, etc. All these schemes must be properly coordinated and implemented vigorously to bring about a whole-hearted response to family planning by the people.

Opinion leaders

As the Prime Minister has rightly stated, family planning should be promoted as a people's movement. This can, however, be achieved only if the people are able to understand that the adoption of

the small family norm is both in their own interest as well as in the interest of the country. In fact, they should feel proud in taking part in the family planning programme. Opinion leaders like teachers, ex-servicemen, members of *Panchayats, zila parishads* and voluntary agencies must be encouraged to take the lead in promoting the family planning programme.

Family planning counselling

This brings me to another important point, *i.e.*, family planning counselling. It is the people's right to receive correct information about a programme that deals with their personal lives and welfare. We must make arrangements to impart such information at all important points of contact with the people, such as hospitals, post partum centres, dispensaries, primary health centres and sub-centres, etc. Such arrangements could be made even at other places where people congregate such as weekly markets, fairs and festivals, big exhibitions, etc. This counselling should not be confined to information about family planning methods, services and supplies only. Guidance about general health care, sanitation, etc., should also be imparted. In this connection, I see a great role for the village health workers too, including the Village Health Guide and Trained Birth Attendant. In case, health check up facilities are introduced at our primary health centres and sub-centres, people will definitely come forward in larger numbers and be prepared to benefit from family planning counselling.

Role of mass media

The role of mass media in health and family welfare education cannot be over-emphasised. More and more programmes should be designed, produced and presented over Radio and Doordarshan. All other popular means to increase awareness among the people about the various family welfare services and their significance besides health and MCH services are to be deployed. Mass media programmes are best followed up with an effective system of interpersonal communication, so that awareness can be converted into action without any lapse of time. I would rather suggest that communication and services should go hand in hand.

Acceptor an motivators

In the matter of services, we should bear in mind that the acceptor is going to be an important motivator also. He or she, should, therefore, receive the best attention and be fully satisfied. This is very important in the case of sterilisation. The pre-operation check up, hygienic conditions during operation and follow up after sterilisation should be treated as equally important and paid equal attention. Let us not forget that one single dissatisfied person may cause immense damage to the programme. It is a proved fact that disatisfied acceptors are more vocal. Similarly due care may be taken in selecting cases for IUD insertions and oral pill administration. Necessary follow up will have to be ensured in these cases also.

Adequate infra-structure

No doubt, all this demands that there should be an adequate infra-structure for providing the various health care facilities and services. Before we think of additional manpower, we may, however, ensure that the present resources of men and material are utilised to the optimum. The demand for additional resources will be justified only after that. Some of the States have not created or filled up certain posts in accordance with the pattern suggested by the Centre. There should be no difficulty in having additional staff to this extent at least.

One of the reasons for non-availability of requisite personnel could be the lack of facilities like residential accommodation, children's education, etc. in the outlying areas. This can be solved by pooling the resources with other needy departments like Education and Social Welfare. Common hostels could be established for lady workers belonging to the Departments of Health, Education and Social Welfare. Another way out could be to recruit workers locally so that they do not face any problems of dislocation.

Special efforts will have to be made to attract lady doctors to work in the rural and backward areas. This is so, because most of the demand for health and family welfare services is from women. They must be attended by qualified women doctors. In case provision of proper facilities takes time at a particular location, they could be posted at convenient places and given adequate transport to tour the adjoining areas.

Training of workers

Training of workers at all levels is another important area that demands attention. As mentioned earlier, the quality of service is imperative for the success of the family welfare programme. This can

be ensured only through proper training of the workers in the services that they are required to perform. This should particularly be ensured in the case of para-medical staff, Health Guides and *Dais*.

Coordination with other departments

Another important point is coordination with other departments. As mentioned earlier, family welfare programme is a pivot for all other programmes. The departments other than Health and Family Welfare should, therefore, find no difficulty in adopting it as an integral part of their normal activities. Here we should, however, take a precaution that the efforts of other departments do not be duplicated by our own activities. This should apply to the various voluntary organisations also engaged in the health and family welfare programmes. They could perhaps be given certain exclusive areas for operation.

Monitorink the progress

Monitoring of performance with respect to various aspects is very important. This should not be confined only to sterilisation operations and IUD insertions. Services like immunisation and school health programmes should also be monitored at all levels. This will not only keep the directors of the programmes informed about the prevailing situations in their areas but also enable them to take timely steps to rectify the shortcomings wherever and whenever they occur. Monitoring may not be taken in the sense of reporting only. All the facts gathered from the field must be analysed and evaluated to identify the strengths, weaknesses, opportunities and threats.

Lot of advancement has taken place in sciences that are relevant to everyday life. People should, therefore legitimately expect from us, that certain new methods may be found for easy and effective contraception. I understand that the Indian Council for Medical Research is already aware of this need and is working on a vaccine. I would appeal to them to step up their efforts and come out with this new method expeditiously.

States and Union Territories should look at all the health and family welfare programmes as a collective responsibility towards the people of the country. The State Governments and the Union Territory Administrations should take pride in their efforts to promote these programmes. They should work with a national spirit—the spirit of unity and integrity. The Centre can provide only guidelines and a certain amount of funds. But actual services are the responsibility of the States and the Union Territories. It will, therefore, be in the interest of their own image that they ensure the best possible quality of service. This can, however, flow only from the quality of training that they provide to the medical and paramedical staff. Every effort may, therefore, be made to provide necessary training to the workers engaged in all health and family welfare programmes.

I must draw attention to a very painful fact and that is the high rate of infant mortality. It is as high as 176 per thousand live births in U.P. The national average is 127. This is enormous and we are quite far off from our target of at the most 60 to be achieved in the next 17 years. This demands immediate attention and urgent steps. We must step up the immunisation programmes for pregnant mothers and infants. Steps may also be taken to ensure general health care of these vulnerable categories in the larger interest of their longevity as well as good health.

Involvement of voluntary agencies

We must make the involvement of voluntary agencies in the health and family welfare programmes as effective as possible. Timely release of grants in aid and proper coordination of services must be ensured in the larger interest of public participation in the national programmes meant for the improvement of quality of life of our people. A large number of voluntary agencies are already working in close coordination with the State Governments. But there are many parts of the country which have yet to reap the fruits of this activity. They have to identify suitable voluntary institutions and encourage them to participate in our activities. They may be based only in small specific areas, but that should not deter us from approching them.

—Extracts from the welcome speech by Smt. Mohsina Kidwai, Union Minister of State for Health & Family Welfare, delivered at the 9th Joint Conference of Central Councils of Health & Family Welfare held in New Delhi from 7-9 July, 1983.

NUTRITION AND WELFARE OF THE FAMILY

B. V. S. THIMMAYAMMA

"He who takes food in proper measures, lives a long life and lives without any disease, gets strength and has alertness of mind. Moreover his children are born healthy and without any deformity or disease.

—Mahabharata

Of the many factors that contribute to family welfare, nutrition plays an important role. Nutritional status of a family, largely depends on its socio economic status and availability of nutritious food. By nutritious food we mean, the inclusion of various food items in the diet such as cereals, pulses, green leafy vegetables, other vegetables, fruits, milk, sugar and jaggery, fats and oils and flesh foods which provide nutrients required for normal health. A balanced diet contains different types of foodstuffs in proper quantities and proportions providing adequate energy, proteins, minerals and vitamins required by the human body for maintaining health.

Energy is needed by the body to perform various activities normally. Just as a railway engine needs fuel for its smooth running, the human machine also requires energy to carryout its functions normally. Energy is mainly derived from cereals, roots and tubers, sugars, fats and oils nuts and oilseeds and pulses. Foods rich in *protein* are called body-building foods. Protein is required for growth and repair and replacement of tissues in the body. The major sources of protein are pulses, nuts and oilseeds, milk, meat, fish and eggs. *Minerals* and *vitamins* regulate the life processes and protect the body against diseases. That is why, minerals, vitamins and proteins are also called 'protective' foods. Rich sources of minerals and vitamins are green leafy vegetables, vegetables, fresh fruits, milk, eggs and flesh foods.

The importance of a nutritionally balanced diet has been well recognised long ago and is referred to in ancient Hindu scriptures. In Mahabharatha, it has been mentioned that, "He who takes food in proper measures, lives a long life and lives without any disease, gets strength and has alertness of mind. Moreover his children are born healthy and without any deformity or disease".

Dietary requirements vary

In any community or a family one finds the population consisting of infants, preschool children, school age children, adolescents and adults. The diet and nutrient, requirements of these groups will vary according to their physiological status and the type of activity they do. For example, as per the recommended allowances of Indian Council of Medical Research (1981), the dietary requirements of a pregnant woman doing sedentary work are as follows:

Foods	*Amounts (gms)/day*	
	Vegetarian	*Non-vegitarian*
1	*2*	*3*
Cereals	*445*	*445*

1	2	3
Pulses	55	28
Green - leafy vegetables	100	100
Roots and tubers	50	50
Other vegetables	40	40
Milk ml.	200	200
Fats and Oils	20	25
Sugar and Jaggery	30	30
Egg	—	One egg

Any seasonal fruit may be consumed depending on the purchasing power of the person.

Causes of inadequate nutrition

However many people do not give attention to the nutritive value of foods in their selection or cooking and processing. Rice is often washed several times and cooked in excess water. The diets of a majority of population are either improper or inadequate. Several nutritional deficiency disorders are commonly seen among our population. The most common causes for inadequacy and low nutritional quality of our diets are: (1) lack of knowledge regarding the utilisation of locally available nutritious foods that are cheap. (2) certain food beliefs and taboos. (3) Larger family size resulting in improper food distribution among family members. and (4) Low purchasing power. Early marriages, repeated pregnancies, short interval (spacing) between deliveries, low weight gain during pregnancy also contribute a lot to the poor nutritional status of vulnerable segments of population.

Vulnerable groups

Undernourished mothers in the olw socio-economic groups experience pregnancy complications resulting almost one in five in abortions miscarriages. still-births and premature deliveries. Infants who are at a disadvantage even from the time of birth. are exposed to further malnutrition due to delayed and inadequate supplementation.

Though prolonged breastfeeding is beneficial, delayed supplementation. inadequate and poor quality of supplements would result in various nutritional deficiency disorders. Some of the findings of nutrition studies carried out among different populations are indicated below:

Nearly 17% of infants are born before full term. 80—90% of preschool children (below 5 years) show retarded growth. 1-2% of children below 5 years show severe protein energy malnutrition 7-8% show different grades of vitamin A deficiency. and 35—50% suffer from anaemia.

About a fifth of the children in 5—12 years age show one or more signs of malnutrition, such as retarded growth. vitamin A deficiency. or B vitamin deficiency or anaemia.

Pregnant women and lactating mothers have low body weights. 50-60% show anaemia. over 30% have B-complex and vitamin A deficiencies. Nearly one fourth of the total deaths among mothers is due to anaemia.

Malnutrition is also prevalent in various degrees in adult population. Apart from general undernutrition/ overnutrition specific nutritional disorders are seen in various regions.

This indicates that in general most of the population groups are affected by inadequate diet and deficiency of nutrients in the diet. Nutritional deficiencies were observed to be more, especially. among mothers and children with an increase in family size (*i.e.*, 4 or more children).

Measures to improve nutritional status

How can the diet and nutritional status of the family be improved for achieving family welfare? The most important of the means are: (1) short term measure of supplementing the existing diets of vulnerable segments of population (*i.e.* pre-chool children, pregnant and lactating mothers with low cost nutritious recipes, (2) providing nutrition education to all members of the community, and (3) educating the community on the importance of limiting family size.

(1) *Supplementing the diets with low-cost nutritious recipes.*

Several low-cost nutritious recipes have been formulated to supplement the existing diets of young children and improve their nutritional status. Some of the them can also be used in the treatment and prevention of protein-calorie malnutrition. These recipes are mainly based on locally available, nutritious and inexpensive foods like cereals, pulses, nuts and oilseeds, sugar or jaggery and greenleafy vegetables. They provide about 300 calories and 10 gms. of protein.

Ready mix powders (such as Hyderabad mix), porridges (like wheat gram porridge) and solids (like kichedi/upma wheat-gram laddu or biscuit) were tried out among the pre-school children in the community and were found to be acceptable. For example, the proportions of 'Hyderabad Mix', are rosted wheat (40 gms.) rosted bengal gram dal (15 gms.) rosted groundnuts (10 gms.) and sugar or jaggery (30 gms). They are all powdered, mixed and stored. The powder can either be mixed in hot water or in

milk to make a porridge and can be given to the child easily and readily. These powders can also be stored in air-tight containers when prepared in large amounts.

Pregnant women and lactating mothers can also be given similar types of recipes in larger proportions providing about 500 calories and 20-25 gms. of protein to improve their nutritional status. There are national programmes of supplementary feeding for pregnant women and nursing mothers. School children get supplements through midday meal programmes.

Apart from these supplements, prophylaxis programme of massive dose of vitamin A concentrate (*i.e.* 200,000 IU), once in 6 months, to all the pre-school children, has been implemented since 1970, on a national scale (through maternity and child health and primary health centres) to prevent blindness due to vitamin A deficiency. Similarly a programme to prevent anaemia among mothers and children is also in operation in maternity and child health and primary health centres through the distribution of tablets containing iron and folic acid. Immunization is also important.

(2) *Nutrition education*

Nutrition education to the community can be undertaken on different practical aspects through various approaches as group discussions and demonstrations, which will have beneficial effects on the community. Flip charts and mass media such as radio and television can be very effective. Apart from doctors, Auxiliary Nurse, Midwives and other health workers, local teachers can also be engaged as agents of nutrition education. Among the topics that need to be included in such programmes of nutrition education are: importance of breast-feeding: introduction of supplements to the infant, preferably between 4-6 months, use of locally available nutritious, inexpensive foods such as wheat, ragi, etc., in supplements; hygienic ways of artificial feeding (only if unavoidable); desirable cooking methods to retain nutritive value of foods; dangers of malnutrition; timely nutritional and health care.

(3) *Education regarding family size*

The community also needs to know more about the economic and nutritional advantages of small family. Limitation of family size preferably with two or three children is desirable. Smaller the family, better is the nutritional status. Means of improving the family income through cottage industries, raising of poultry, kitchen garden may be emphasized. Family budgeting particularly expenditure on food and selection of foods which provide good nutritive value at low cost also form and essential information. △

Courtesy: NUTRITION
July 1983

(Contd. from page 264)

additional strategies are needed. Among these are : increased agricultural productivity; agricultural research; land reform and jobs; family planning; food subsidies; and nutrition education.

Family planning—Too many births too close together undermine the nutritional well-being and health of both mothers and children. Family planning is therefore another important step to be taken in order to reduce both maternal and infant mortality and to increase maternal and child health.

It is an interesting, though seemingly paradoxical, fact that population growth actually goes *down* rather than up when infant mortality is reduced and life expectancy is increased. Families in areas where health services have reduced child deaths tend to have fewer children than families who expect many of their children to die. When death rates have fallen to around 15 per 1000 people (which is about the average for low-income developing countries today) each further fall of one point in the death rate is usually accompanied by an even larger fall in the birth rate.

Thus a "survival revolution" which reduced infant and child mortality by half and prevented the deaths of 6 or 7 million infants each year by the end of the century would be likely to bring births down as well, by between 12 and 20 million a year.

Nutrition education—This is another vital element of basic community services and primary health care. Economic growth and increased agricultural production will not in the themselves achieve a significant or permanent reduction in the numbers of the hungry, nor will temporary food subsidies, if people remain ignorant about what food is good for them.

Development workers' training must include health and nutrition education which they can pass on to their neighbours through community centres and schools, inculcating improved eating and sanitation habits. △

(This article is based upon the 1983 "State of the World's Children" Report by UNICEF'S Executive Director James P. Grant)

Integrated Child Development Services

What does a child need? Acceptance, love and nurturance, nourishment for his body, stimulation for his mind. Every mother wants to provide all these yet she cannot always do so: Poverty and privation, sharing the burden of earning for the family, lacking the health or energy or being in a remote area; these and other related factors hinder her mothering. In such cases, the government has to intervene with suitable aid. ICDS is the pledge made by the nation that the child will not be neglected.

With a view to provide a package of services to the children, the Integrated Child Development Services Programme (ICDS) was formulated and initiated in 1975-76. This programme addresses itself mainly to issues involving those who have not reaped the benefits of the country's prosperity.

The ICDS focuses on Point 15 (women and children) of the new 20-Point Programme, and also co-operates in strengthening the thrust of the 20-Point Programme in the areas of Drinking Water; Family Planning; Health; and Education.

Under this programme

Assistance is provided to children and mothers through:

- Supplementary nutrition for children and mothers.
- Immunization of the child.
- Nutrition and health education for the family.
- Access to health care.
- Pre-school education for children.
- Functional literacy for adult women.
- Providing a link with other services.

Supplementary Nutrition

A vast proportion of the children of this country suffer from protein-energy malnutrition in their early years. Their growth is slowed down, and they become vulnerable to disease. Over an extended period, the effects are likely to affect future development.

A major aim of the ICDS is to supplement the daily diet of the child under six. Every month a child's weight is recorded and those who are below the norms are put on a supplementary diet. The *anganwadi*, the centre for children, provides them each with a supplement that meets about one-fourth the child's total daily requirement. It is known that development before birth is dependent on the mother's health. Therefore, diets of pregnant women and nursing mothers are also supplemented. Local availability and familiar tastes are taken into account. The cost of a fraction of a rupee for one child's daily supplement is minimal, and the benefit is considerable.

Immunisation

Prevention is better than cure. Immunization against infectious diseases is an important part of this programme. Children at the *anganwadis* are protected from polio, tetanus, whooping cough and diphtheria, typhoid and tuberculosis. Expectant mothers are also immunised against tetanus.

Nutrition and health education

It is important that the family is aware of the major factors in health care and nutrition. Mothers are encouraged to breast-feed their child as long as possible. All mothers of child bearing age are given an informal education in nutrition. Mothers of children who suffer from extreme malnutrition are helped individually. Several methods of communication are used including folk media.

Health check-up

The services of ICDS reach out also to the mother. Periodic health examinations of pregnant and lactating mothers is an integral part of the programme.

Regular health checks and home visits by the *anganwadis* staff are an important aspect of this scheme.

By March 1985, the country will have 1000 ICDS projects providing basic needs to young children in a total population of about 80 million in tribal, hilly, and backward rural areas and urban slums.

The mother is given advice and aid for the care of the infant. She is encouraged to bring her children to the *anganwadi* for immunisation and medication.

Referral services

ICDS enables the integration of several aspects of child care. When a child has been identified as needing expert treatment, the family is referred to a hospital or other specialised institution. When impairments are detected early, they can be prevented from developing into handicaps.

Pre-school education

'A space to grow, the right to know'

In the home the infant moves from the mother's lap to the 'angan' where other children play. Here he is in the presence of his mother and other women in the family. From the 'angan' he moves to the *anganwadi*.

A familiar person from the neighbourhood serves here as the caregiver. Cousins and friends play together. Toys and other learning materials are created with local colour. In this setting he has a fair chance to develop competence, social skills, and, above all to be happy.

Exploring the world around is a natural activity for every child. Through his senses he learns about his immediate environment. Through learning he widens his experience. Through knowing and feeling he becomes a person in his own right.

Functional literacy for adult women

The women in the family play the major role in the care of their children, and for them the ICDS scheme provides courses in functional literacy. The approach is to start with their needs and their problems. Home-management, nutrition, child care and hygiene constitute the contents of this aspect of ICDS. Functional literacy thus becomes at once the instrument and the goal, for enhancing the quality of life for the mother and child.

Courtesy: DAVP

Let's give the child his childhood, the nation, its human wealth.

HEALTH EDUCATION

—Health education should be made an integral competent for all health and welfare programmes including education to emphasis the promotional and preventive aspects of health through improvement of environment and development of sound health practices.

—A fixed percentage (5 to 10%) of the total budget of a particular health programme should be earmarked for carrying out health educational activities. A part of this amount should be subsequently pooled together and kept at the disposal of the Central/State Health Education Bureau to have an integrated health educational programme.

—Health education should be made compulsory in primary, secondary and higher secondary educational and population educational institutions and under Adult Education Programmes and it should be ensured that the education of the community is undertaken through these school children in the form of child to child, child to parent approach.

—Health education cells/units may be established in health related agencies including organised sector for planning, implementing, monitoring of the programme. Nodal institution for coordinating this programme and providing guidelines and consultancy service will be Central Health Education Bureau/ State Health Education Bureau.

—At present 18 State Health Education Bureaux have been well developed and rest of the States are yet to set up such institutes. All the States Health Education Bureaux should be developed on the pattern suggested by the Government of India. The State Governments/UTs may earmark adequate funds for the establishment of new Bureau, where there is none, and strengthening of existing Bureau according to the pattern suggested.

—Use of print media is feasible only to limited extent due to high prevailing illiteracy. In these circumstances, the folk indigenous media should be suitably developed for providing health education to neo-literate masses by coordinating the resources and expertise of all developmental programmes and voluntary agencies working in the field of health, family welfare and nutrition programme to suit the local needs. The vast vistas opened up by television, radio, etc., should be fully harnessed for the propagation of health education.

—To provide trained manpower, specialised training in Diploma Course in Health Education should be provided so that they can take care of hospital health education, school health education, etc.

BLINDNESS IN CHILDREN

Vitamin A deficiency

CHILDREN who do not get enough vitamin A in their food may become blind. They have vitamin A deficiency. Several thousand young children in India are blind because they do not get enough vitamin A in their food.

Who can become blind

Children between 1 and 5 years are most likely to become blind from vitamin A deficiency. In some areas in India people mostly eat rice. Children in these areas often do not get enough vitamin A in their food and suffer from vitamin A deficiency.

Symptoms of vitamin A deficiency

If a child has vitamin A deficiency, he does not become blind suddenly. He becomes blind slowly.

If you notice that a child has some early signs of vitamin A deficiency, you can cure him. You can save his eyes completely.

Look for these signs

—If a child cannot see well in dim light, he has *night blindness*. Night blindness is the first sign of vitamin A deficiency.

—If the white part of a child's eye is dull and dry he has an early sign of vitamin A deficiency.

—If a child has greyish foamy patches shaped like triangles on the white part of his eye, he has *Bitot's spots*. Bitot's spots are another early sign of vitamin A deficiency.

If a child has one of these signs, you must treat him quickly. If you do not treat him quickly, the child may become completely blind. In severe cases of vitamin A deficiency, the black part of the child's eye becomes damaged. Then the child becomes totally blind. We call this kind of blindness, *Keratomalacia*.

Treatment of vitamin A deficiency

We can treat vitamin A deficiency with food. Some foods contain a lot of vitamin A. If we give a child these foods, he will not get vitamin A deficiency blindness.

Vitamin A is present in milk, eggs, ghee and fish liver oils. But these foods are expensive, and some parents cannot afford them.

Many inexpensive foods also contain vitamin A. *Palak*, amaranth, *Methi*, carrots, papaya and mango are all inexpensive foods. They all contain plenty of vitamin A.

Sometimes, people do not eat these foods. They think these foods are harmful. Perhaps they are ignorant, or superstitious. Perhaps they have a false belief about these foods. But we *know* that these foods are good. We must encourage children to eat them.

We can save a child's eyes in another way. We can give him massive doses of vitamin A by mouth. The National Institute of Nutrition in Hyderabad has studied this method carefully. They found that if you give a child 200,000 I.U. (60,000 micro gms) of Vitamin A by mouth every 6 months, he will be fully protected from vitamin A deficiency. This is especially important for children between the ages of 1 and 3 years.

If we give a child massive doses of vitamin A we can easily and safely prevent blindness. The Government of India has started a national programme for prevention of vitamin A deficiency. They use this method.

How can a pregnant mother protect her unborn child

A pregnant mother should eat plenty of foods which contain vitamin A. Then her body can give vitamin A to the baby inside her womb. If the pregnant mother gets plenty of vitamin A, her unborn baby also gets plenty of vitamin A. This protects the baby from blindness due to vitamin A deficiency.

Courtesy: NIN, Hyderabad

HEALTH EDUCATION
new tasks, new approaches

PROF. KENNETH STANDARD
&
ANNETTE KAPLUN

HEALTH education finds itself faced today with tasks unparalleled in its history. Changing disease patterns and cultural expectations, new views about the relationship between the governed and the governing and between community members and health care providers, fuller recognition of the ability of the common person to think and act constructively in the identification and solution of his or her problems—all these have led to a reformulation of some of the basic tenets of public health and consequently towards a reorientation of health education.

Furthermore, it is realized that health science and technology have reached a point where their contribution to the further improvement of health standards can make a real impact *only* if people themselves become full partners in safeguarding and promoting health.

It is not accidental that education features prominently in the Declaration of Alma-Ata, nor is it by chance that the Global Strategy for attaining "health for all" as well as W.H.O's Seventh General Programme of Work constantly refer to educational activities as the means *par excellence* for encouraging the involvement of people from all walks of life and for making them true artisans of health and development. A W.H.O. Expert Committee on New Approaches to Health Education in Primary Health Care was, therefore, convened in Geneva to appraise the new tasks of health education and advise the Organization on the new approaches needed.

Need for critical assessment

Historically, health education has been committed to prevention and more recently to health promotion with greater emphasis on people's involvement. Nevertheless, health education practice has remained in many cases static, not evolving sufficiently with time. The Expert Committee endorsed the pressing need for a critical assessment of the many coexisting models and structures that have grown up over the years. Such an assessment must be conducted with the courage to admit that some may be wrong or in need of modification and the confidence to select those which promise to be a sound basis for the effective realization of primary health care.

"To identify priority areas for action [in health education]....it is necessary to go the people with respect for their values and their felt needs. It also requires a scientific study of the situation." With its focus on people on the one hand and on a scientific approach on the other, this statement perhaps more than any other demonstrates the two trends that characterized the thinking of a recent W.H.O. Expert Committee that met in Geneva from 12-18 October, 1982 to discuss new approaches to health education in primary health care. The views and conclusions of the experts are summarized below in an article by the Chairman of the Expert Committee and a W.H.O. consultant.

What are the changes needed and how can they be achieved?

Four target areas for new approaches

Four areas—technology, resources, models, and roles—were identified by the Expert Committee as needing close attention.

People-oriented technology

Health care providers tend to motivate people to want what they think people should want rather than

professionals in fulfilling one of their major responsibilities, that of providing the public with knowledge about alternative types of behaviour and their outcomes so that people are in a position to make choices and accept the consequences.

Evaluation

With programme implementation comes the need for monitoring progress. In inviting Member States to strengthen their managerial process for health development, W.H.O. recommended "a careful evaluation with a view to improving effectiveness and increasing efficiency". In the past, very little evaluation of health education activities has been undertaken. Linking health education with a specific outcome is relatively new and not easily accepted by those who are responsible for educational activities. Today the difficulty is compounded by the need to devise new indicators and methods that will make it possible to evaluate the non-professional input in the field of health without imposing professional concepts regarding the importance or the appropriateness of benefits.

Research

Research in health education should aim at developing a body of knowledge in full harmony with the concept of primary health care that will be useful for planning, management and practice. For example, data are needed on effective ways of involving communities in defining problems, developing criteria for evaluating solutions, elaborating hypotheses, and interpreting results. Such community involvement would guarantee more realistic evaluation criteria: if the people define the problems, they are more likely to help define the solutions.

Another priority for research in health education concerns the area where people's felt needs overlap with the epidemiologically assessed needs. It is in this area what health education activities are likely to yield their maximum return.

Ethics

As a backdrop to research, planning, and action, ethical issues are raised throughout the report of the Expert Committee, which stressed the importance for health care providers of being sensitive to the needs, preferences, and priorities of individuals and communities—especially when these differ from their own. But the views of the community may also differ from those of persons who are in decision-making positions. The health care providers thus have a difficult task: not only must they avoid actions that will promote values from the "system" contrary to those of the community, but they also must serve as the people's "advocates" by making their needs and preferences known to the decision-makers.

"To be helpful in evaluation, when called upon, means placing evaluative technology at the disposal of the lay health group, not imposing professional ideology regarding the importance and appropriateness of benefits."

Lowell S. Levin, background paper for WHO Expert Committee on New Approaches to Health Education in Primary Health Care.

All who act as health educators must be aware of the power they wield. Health education is a very potent force that can sharpen people's awareness to the point where unfelt needs become felt needs and felt needs become demands with political, social, and cultural implications. It is not a strictly technological matter—nor is primary health care: health care providers deal constantly with socioeconomic and hence political issues.

The new approach to health education in primary health care thus matches people's expectations to take a full part in the affairs of the community and the world at large. Men and women have become gradually aware of their rights as human beings. They are demanding social equity. These aspirations are perfectly compartible with the new approach to health education.

As Dr A. Moarfi, then Associate Director of WHO's Division of Public Information and Education for Health, has pointed out, "the individual is a reacting and interacting being who, despite physical, social, economic, and political constraints, has a considerable degree of freedom. Even in the most adverse circumstances he is at least free to think, to dream, to have vision. "And it is by respecting the individual's freedom and dignity that health education can provide the ecological setting for health for all by the year 2000.

Courtesy: WHO CHRONICLE
No 2, 1983

FOOD POISONING

Dr L. N. Mohapatra

Preventive measures against food poisoning include preventing or at least limiting contamination, inhibition of multiplication of bacteria in foods and killing of pathogenic organisms. Control measures at every step, like cooking and processing, storage and distribution of food stuff, particularly liable to harbour food poisoning organisms, need to be ensured.

The term food poisoning is vague. Illness resulting from ingestion of unwholesome food could be called food poisoning. This may be due to food containing inorganic or toxic chemicals, poisonous food of animal or plant origin and toxic products or infections caused by several bacterial species.

Many well known bacterial infections like enteric fever, dysentery, cholera are often food borne. This is also true for some of the viral and parasitic diseases like infective hepatitis and trichinosis, tapeworm infections and emoebiasis. Besides these, ingestion of organic or inorganic toxic chemical substances result in ill-health. Poisonous foods such as toxic fungi (mushrooms) and berries and animal products also cause gastrointestinal upset. Some individuals are allergic to certain food stuffs which do not cause harm to others. These are all examples of food borne infections and intoxications.

What is food poisoning

In medical terminology food poisoning, to be more precise "bacterial food poisoning", means gastrointestinal upset caused by several bacteria or their toxic products present in foods. It is characterised by outbreaks which are explosive in nature. The causative agent is in the environment with a source or reservoir and is disseminated through contaminated food which is capable of supporting the growth of the contaminating organism. It is caused by the preformed toxin (bacterial) present in the processed food or an acute infection by the bacterial agents transmitted through food. The former is called the "toxin type" and the latter the "infection type". Botulism, another bacterial food poisoning, is also a result of bacterial multiplication in the food but is due to a preformed toxin that acts on the nervous system. Hence, it is conventionally discussed as a separate disease entity.

In the 19th century food poisoning was usually regarded a chemical reaction to ingestion of toxic substances resulting from decomposition of protein referred to as "Ptomaines". The term ptomaine poisoning is now discarded because the vast majority of food poisoning cases have been caused by bacteria which are not proteolytic and, therefore, cause no alteration in the taste of food consumed.

Symptoms

It is often possible to distinguish the "infection type" of food poisoning from the "toxin type" by careful examination of cases.

In the infection type the illness appears after a period varying from 4 to 36 hours (usually between 8 to 24 hours). Nausea, vomiting, diarrhoea, abdominal pain and slight rise of temperature are the usual symptoms. These symptoms gradually subside and the patient recovers in a few days in favourable cases. In a severe infection the patient suffers from extreme thirst, cramp, coma and often dies.

In the toxin type of food poisoning, the symptoms appear early, *i.e.*, within one to six hours (usually about three hours). The onset is more abrupt, vomiting is more violent and diarrhoea is less prominent. Fever is usually absent and the patient recovers in a day or two.

The attack rate varies greatly in different outbreaks, partly due to uneven distribution of the infecting organism or toxin in the food and partly due to variation in individual susceptibility. Usually the attack rate is high but the case fatality rate is low. Sex has apparently little effect, but age is important: most of the deaths occurring in the very young and the very old age groups.

Causative agents and their source

Several bacterial species are responsible for food poisoning outbreaks. The *infection type* of this illness is caused by Salmonellae, Clostridium perfringens, Bacil-

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Causative agents and their source

Several bacterial species are responsible for food poisoning outbreaks. The *infection type* of this illness is caused by Salmonellae, Clostridium perfringens, Bacil-

lus cereus, Vibrio parahaemolyticus, E.coli, Y.enterocolitica and a few other organisms. Most of these come from the environment and contaminate the food. They come from the animals and animal products, from soil and also from the human carriers who harbour these organisms. Their presence in foods in large numbers before consumption leads to the gastrointestinal upset.

The *toxin type* of food poisoning is caused by Staphylococcus aureus, which produces a powerful enterotoxin while multiplying in food. This toxin is not destroyed by heat-in ordinary cooking process. Consumption of food containing this preformed toxin leads to diarrhoea and vomiting.

Botulism is another type of food poisoning where the toxin produced by C.botulinum present in food leads to symptoms involving the nervous tissue. This is manifest in partial paralysis of the eyeball movement and pharyngeal paralysis. Diarrhoea and vomiting are not the presenting symptoms, though vomiting may be there initially.

Prevention

Food safety programme is aimed at ensuring wholesomeness of foods for the consumer. One careless food handler, or one human carrier of disease producing organisms jeopardises the health of a number of persons. The bigger the catering establishment (restaurants, conteens, hotels and hospital kitchens, etc.), the greater is the danger. Preventive measures include preventing or at least limiting contamination, inhibition of multiplication of bacteria in foods and killing of pathogenic organisms. Control measures at every step, *i.e.*, cooking and processing, storage and distribution of food stuff, particularly liable to harbour food poisoning organisms, need to be ensured. This has to be planned based on universal scientific education. The salvation of mankind lies in scientific plannig of life.

Courtesy: AIIMS New Delhi

INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE

There is an urgent need for stocktaking and a review of strategies and their implementation process both for the country and the regional programmes as well as in the areas of international cooperation to ensure that the International Drinking Water Supply and Sanitation Decade (IDWSSD) achieves its objectives. This was stated by Dr U Ko Ko, Regional Director, WHO South-East Asia Region, while opening a Regional Consultation on IDWSSD in New Delhi on 8 August, 1983.

Explaining the scenario in the Region when the Decade was launched in 1981, with the target of providing safe water and adequate sanitation facilities to all by 1990, the Regional Director said that the South-East Asia Region had started the Decade with one of the lowest coverages of the population with water and sanitation. Though visible progress had been made due to national and international efforts, the rate of implementation of the programme is still slow due to the lack of internal resources and the low quantum of external aid, the lowest compared with other Regions. This had resulted in a large segment of the population remaining without safe water and sanitation facilities.

While a number of countries had prepared Decade plans and had increased budgetary allocations to the sector notwithstanding the pressure on development capital, there was no country in the Region where the national budget for the sector was adequate to cover the backlog of work and meet the targets. In this context, Dr Ko Ko highlighted the need for using appropriate technology which was not only relevant to the situation but was also effective, workable and affordable.

The five-day consultation was attended by senior water and sanitation programme administrators, planners and health officials from the Region and the representatives of UNDP, UNICEF and the World Bank, who are supporting Decade activities. Among other things, the consultation reviewed the status of the Decade activities in the Region, identify the major factors inhibiting progress in achieving national objectives and indicate what actions should be taken to remove the constraints. The question of shortfalls in human and material resources required to meet development objectives, the imbalance between requirements and available financial recources, the inadequate health impact of water supply and sanitation programmes and slow progress in community education and participation was also taken up.

—W. H. O. Release

FEEDING AND TOILET TRAINING OF CHILDREN

DR ARUN K. GUPTA
and
ASHA KHOSA

Among the groups which shape and influence child personality and behaviour during early years, the role played by the family is probably the most important. The childhood experiences and interactions with the parents, peers and other significant groups in different social settings are recognized by social scientists as important determinants of the process of socialization. From a helpless mass of protoplasm, the growth of the child in the family through purposive directed activity into an individual with a balanced integration of his needs and purposes with that of social order is a complicated process in which the child is forced to buy social conformity and approval for himself through a gradual process during the course of which he aquires many habits and sacrifices his natural urges. This paper reports the results of a pilot study on habit formation in relation to feeding and toilet training of children in families of different socio-economic status.

A STUDY

PARENTAL expectations and demands which ultimately govern child behaviour and habit formation are not similar in all families and societies. They depend upon a numer of factors. Some of these are: educational level of the parents, age, socio-economic status, culture, religion, ethnic background, neighbours and child rearing practices respectively.

Even though child rearing practices in relation to feeding and toilet habits have been studied in the past, the attempts can be described as being isolated patching and out of date. Thus, the data on the development of these habits in the Indian situations is quite scanty. With poverty, mass-illiteracy, hunger, unemployment, lack of awareness, large families and increasing malnourishment on the one hand and lack of proper educational programmes for the community and mothers in general on the other, we do not have reliable data regarding the feeding and toilet habits of the children. For example, it is not known which methods and modes are adopted by mothers belonging to different socio-economic status families for the feeding, weaning and toilet training of their children. Also, not much is known about the problems encounted and the practices followed by them, in habit formation. Since the knowledge of current child rearing practices is important from the point of view of devising child care programme for the parents and mothers from the different socio-economic strata of society, it was decided to launch a research project in this connection. The specific objectives set for the pilot study were to know:

1. What is the duration of (i) Breast feeding, (ii) Bottle feeding, (iii) Toilet training, and (iv) Bladder training, in the families belonging to different socio-economic strata?
2. How do mothers belonging to the different socio-economic status families respond to children during feeding?
3. How strictly do mothers follow schedule of feeding children in families with upper, low and middle socio-economic status respectively?
4. When do mothers belonging to different socio-economic strata start weaning children and which methods do they follow in weaning?
5. Which problems in their children are perceived during weaning by mothers of different socio-economic status families?

6. Which restrictions are placed on children by mothers on ways of eating in different socio-economic staus families?
7. What are the locations permitted to children for urination, and defecation by mothers in the different socio-economic status families?
8. How much concerned are the mothers regarding cleaning their children after defecation in different socio-economic status families?

Sample

The sample consisted of 150 mothers who were selected at random from the high, middle and low socio-economic status groups, each group comprising 50 mothers. Average age of the mothers was 26 years.

Procedure

Data were collected through home visits by the field workers followed by interviews with the mothers. For this purpose, an interview schedule was devised covering different aspects related to feeding, weaning and toilet training habits. The responses given by the mothers were statistically analysed and frequency counts were made. The data were tabulated and interpreted.

CONCLUSIONS

Duration of breast feeding

The duration of breast feeding in lower socio-economic status families has been found to be significantly more as compared to the same in the middle and upper socio-economic status families. The duration of the breast feeding is 12 to 18 months in the former group, while in 28% families of the upper groups it has been found to be as low as 0 to 4 months.

Duration of bottle feeding

The duration of bottle feeding has been found to range between 9 to 36 months. However, for 64% families in the upper group, 74% in the middle group and 58% in the lower group, it ranges between 13 to 18 months. For 32% mothers from the low socio-economic status families, this duration was only 9 to 12 months. Among 26% mothers in the upper socio-economic status families also the duration of the breast feeding was the same. Thus, in both the upper and the lower socio-economic groups, the duration of bottle feeding has been found to be lower as compared to the middle socio-economic status families.

Duration of bowel training

The duration of bowel training among the upper and middle socio-economic status families has been found to range between 9 to 12 months, even though, in the middle socio-economic status families, this duration may extend to 16 months. This period ranges from 13 to 18 months among 64% of the lower socio-economic status families. Thus, the length of bowel training is somewhat longer in the middle and lower socio-economic status families.

Duration of bladder training.

In the lower socio-economic status families, the length of bladder training usually ranges from 13 to 20 months. By this time, almost 92% of the children attain bladder control. In the middle and the upper socio-economic status families, the training period ranges between 13 to 24 months. Thus, bladder control is attained earlier by the children in the lower socio-economic groups.

Mothers response during feeding

It has been found that almost 30% of the mothers in the upper socio-economic status families never respond in any form to their babies during feeding. This percentage is significantly higher than the percentage of similar behaviour in the lower and middle groups. The extent of mother-child interaction during feeding has been found to be the highest (80%) in the lower socio-economic status group.

Schedule of feeding

Schedule of feeding for children in the upper socio-economic status families has been found to be quite strict (50%). This was comparatively higher as compared to the figure for the lower socio-economic groups in which only 30% families had somewhat strict schedule.

Thus, there are more flexibility and laxity in the feeding schedule in the lower and middle socio-economic status families. In the lower socio-economic group, feeding is predominantly determined by self demand by the child (52%).

Reasons for beginning weaning

The main reasons among the lower socio-economic status families for weaning have been found to be physical ailments and pregnancy of mothers whereas in the upper socio-economic status groups, the reasons were (1) age of the child, and (2) desire on the part of the mother to be free.

Thus, weaning seems to depend upon physical and family reasons, *i.e.*, out of necessity in the lower socio-economic status families.

Methods used in weaning

The methods used by the lower and middle groups in weaning consist of denial of milk by applying some bitter material on the breast and refusal of the mother to sleep with the child. On the other hand, in the upper socio-economic status families, the mothers used strictness. They resort to slapping and total refusal to give breast feeding.

Feeding problems

The perception of the feeding problems faced by the children during weaning has been found to be most acute among the mothers in the high socio-economic status families. Lack of appetite and interest or liking for some particular food by their children have been identified as problems by mothers from higher socio-economic status families. Against this 64% mothers in the middle socio-economic group and 48% in the lower socio-economic group did not report any feeding problems with the children. It seems that they are somewhat ignorant to the problems mentioned above.

Restriction on way of eating

The mothers in the middle socio-economic status families have been found to insist most on the children eating with the right hand, and on their eating only while sitting. As compared to this, restrictions on eating are considerably less imposed by mothers in lower and upper socio-economic status families. This suggests that disciplinary restrictions are maximum in the middle income group families.

Location for defecation

Among the middle and higher socio-economic status families, defecation by children is permitted in lavatories or bathrooms. On the other hand, probably because of lack of bathroom (lavatory) facilities, defecation by the children is allowed at the back of the house (in one corner), in the lane, or even anywhere outside the house. Thus, the availability of proper facilities for easing out may go a along way in inculcating proper attitudes and concern for defecating later on.

Mother's concern for cleaning after defecation

Mothers in the middle socio-economic status families show greatest concern for cleaning the child immediately after defecation (86%). This concern on the other hand, in least (40%) among the mothers in the upper socio-economic status families. It is implied that mothers in the upper socio-economic status families are either not directly responsible for cleaning their babies themselves or else they do not show adequate awareness of the need to clean the child immediately after defecation.

Location permitted for urination

Sixty-four per cent mothers from the middle socio-economic status families insist that urination should be done only in the lavatories as compared to 38% of the mothers in the upper socio-economic status families. The results show that both the upper and lower groups are not very strict regarding the place of urination.

IMPLICATIONS

The pilot study brings out the importance of educating mothers especially those belonging to the lower and the higher socio-economic status families regarding different aspects of child feeding and toilet training. The present study has revealed that habit training in the middle socio-economic status families is on somewhat stricter and well defined lines whereas among the lower and the upper groups, it is varied, generally less strict and more casual. The popular feeling that children, from upper socio-economic status, are bound to have better habits, therefore, appears to be a myth. Programmes of child care and education for mothers of higher socio-economic families, therefore, is also required.

Most of the problems related to the feeding and sanitary training in the lower socio-economic status families appear to be due to necessity rather than by chance. In the light of the finding that the mothers in the lower socio-economic status families force their children to leave breast feeding because of their being on the family way, highlights the importance of family planning and control in such families. Coupled with the lack of sufficient food and means to buy better food and lack of facilities, children in the lower socio-economic status families, once devoid of mother's milk, are likely to show symptoms of malnutrition later on. Supplementary meals and feeds for such children, therefore, should be provided. △

"PEOPLE'S MEDICINE"

With the right ingredients available, and with the knowledge that drinking—not the withholding of fluid—is the right response to childhood diarrhoea, ORT could become a 'people's medicine' and put into the hands of parents themselves the means to save the lives of most infants who die each year from diarrhoeal infections.

—International Exchange News

Ninth Joint Conference of the Central Councils of Health & Family Welfare

IMPORTANT RECOMMENDATIONS

THE 9th Joint Conference of the Central Council of Health and the Central Family Welfare Council, held in New Delhi from 7—9 July, 1983, made a number of recommendations on health and family welfare. We publish below some of the important recommendations of the conference.

Family Welfare

—The Family Welfare Programme including Maternal and Child Health and Primary Health Care, on which the future well-being of the country and the people are dependent, should be accorded top most priority amongst all programmes.

—The Family Planning Programme is to be promoted entirely on voluntary basis and should be based on information and acceptance of family planning methods. This may be achieved by educating people about the advantages of delay in marriage, deferment of the arrival of the first child, adequate spacing for the second child and stopping thereafter.

—Raising of the status of the women is very essential for the acceptance of small family norm. In this context, it may be necessary to examine what measures including social, legislative and administrative, are necessary for raising the status of women.

—The Child Marriage Act lays down the minimum age for marriage for boys and girls. The provisions under this Act require to be brought to the notice of the people particularly in rural areas. The media machinery available at various levels in the States should be utilised to bring out the benefits accruing by observance of the provisions of the Act. Appropriate studies should be undertaken to identify the socio-cultural factors leading to the perpetration of the practice of child marriage.

—The contributors to the family welfare programme so far have been mostly women. It is, therefore, necessary to motivate more male members of the community to come forward to accept the family planning methods. Besides, vasectomy is easier and less costly. Concerted efforts have to be made to motivate more male members as also to secure their better involvement in the programme.

—It was strongly affirmed that the participation of voluntary and non-governmental bodies and community groups is a key strategy in making the family planning a people's programme.

—It was urged on the Government both Central and States, to take further positive steps, in consultation with experienced voluntary organisations, to encourage a far greater involvement of the non-governmental sector. It equally urged upon all organisations and groups in the non-governmental sector at all levels—national, State, district and village—to come forward in large numbers and take a bigger role in promoting this national programme.

Maternal and child health

—For more effective implementation of mother and child health care programme each state may appoint at the State Headquarters level an officer of the rank of a Deputy Director or above who should be in overall charge of MCH and immunization activities. For the timely monitoring of the programme, the D&E Cell in the State as well as the Ministry should be suitably reinforced.

Schemes for Scheduled Castes/Tribes

—The States/Union Territories should take immediate necessary steps to strengthen the infrastructural support for the implementation of various schemes included in the Tribal Sub-plan and Special Component Plan for Scheduled Castes so that the funds earmarked under these schemes are properly and fully utilised and physical targets are achieved as planned.

School health

—School Health Services should be planned in such a manner as to cover all primary school children both in rural and urban areas as a time bound programme during Seventh Plan period. The resources of health, education and social welfare departments, both at Central and State Government levels, should be coordinated to provide at least one medical examination to each child every year and to provide treatment for minor, acute and chronic health and nutrition problems.

Leprosy eradication

—All the leprosy endemic States should pass through an intensive compaign of multi-drug regimen of treatment with enhanced case-detection, health education, concentrating in high endemic districts first, followed by other endemic districts. The number of districts earmarked to be covered per year should be increased so that all the high endemic districts are covered within 5 years time. The facilities of multi-drug treatment should also be made available free of cost to infectious leprosy patients being treated in recognised leprosy institutions and at suitable outdoor clinics.

—Liberalised grant-in-aid should be given to individual volunteers and voluntary organisations or institutions undertaking case-detection, treatment assessment, rehabilitation, training and research work in the field of leprosy and the different existing grants-in-aid schemes for leprosy should be revised on a realistic basis giving higher rates of grants, providing additional staff for enhanced activities and funds for purpose of material, equipment, construction, etc.

—In order to create confidence among the patients and a climate for removal of the social stigma associated with the society, the obsolete Lepers Act of 1898 should be repealed, if not already done.

Tuberculosis control

—The National T.B. Control Programme should be made a 100 per cent centrally sponsored scheme.

—A whole time properly trained State T.B. Officer with supporting staff should be provided at the Directorate level by each State and Union Territory for effective supervision, implementation, monitoring and extension of the activities under the T.B Control Programme.

—A high powered board, consisting of eminent experts and officials be appointed by the Government of India at Central level and by each of the State Governments at the State level for taking expeditiously the policy decisions required for vigorous implementation of the programme and for effective monitoring.

Control of blindness

—Ophthalmic Cells in the Directorate of Health Services in all States should be created under the National Programme for Control of Blindness for planning, monitoring and evaluation at the State level.

—The existing rate of financial assistance of Rs. 60 to voluntary agencies is far too inadequate and should be revised to Rs. 120 per intraocular operation. The eye camps organised by the Government agencies should also be assisted to provide for drugs, dressing, spectacles and food.

Malaria eradication

—National Malaria Eradication Programme should be made a 100% Centrally sponsored scheme with adequate provision of funds.

—Suitable bye-laws should be framed and enacted by State/Local bodies to prevent/reduce domestic and per-domestic mosquito breeding.

Unqualified Medical Practitioners

—All States/Union Territories should take action on the most immediate basis to put an end to the problem of unqualified medical practitioners by making suitable provisions in the State Acts.

Admission to Medical Institutions

—All States/Union Territories should take steps to put an end to the practice of charging capitation fee for admission of students medical institutions.

Indian Systems of Medicine

—Mushroom growth of Indian Systems of Medicine and Homoeopathy Colleges should be checked effectively and no new college should be opened without prior approval of State Government and Central Council of Indian Medicine/Central Council of Homoeopathy.

—Adequate production of Indian System of Medicine and Homoeopathy drugs of appropriate standard is an essential part of the proper delivery of medical services under these systems in the country. Urgent steps need be taken for the production, collection and conservation of raw drugs of herbal, mineral and metallic origin.

Licensing of drug formulations

—A strict control over the licensing of drug formulations should be exercised and only such formulations as are therapeutically rational and for which adequate stability data, detailed methods of analysis are provided should be licensed, Screening Committees should be constituted for this purpose and States which have not constituted such committees should take immediate action to do so.

—A more stringent action should be taken against manufacturers whose products have been reported to be sub-standard.

Food Adulteration

—The Central Government should immediately set up a Statutory National Food Quality Board with necessary functional units as recommended to develop policies and strategies for implementations of prevention of food adulteration activities in the country.

—State level Food Quality Board be set up in each State for proper implementation of the programme.

Health in Parliament

LOK SABHA

28 JULY 1983

EYE DISEASES

Shrimati Mohsina Kidwai Minister of state for Health and Family Welfare, informed the Lok Sabha that for controlling the problem of blindness in the country, the Government of India had launched the National Programme for Control of Blindness. The Programme was being implemented by Government as a 100 per cent Centrally assisted Central sponsored scheme all over the country during the Sixth Plan period. The main features of the Programme were:

(i) Equipping the Primary Health Centres with Ophthalmic equipment and trained Ophthalmic Assistants to render primary eye care services, development of ophthalmic wing of District Hospitals, strengthening of Ophthalmology Departments of selected medical colleges, establishment of Regional Eye Institutes, development of Dr R. P. Centre, New Delhi, as national level apex institute for various eye care activities including surgical services. Besides, Dr R. P. Centre and the Regional Eye Institutes have to carry out research in the eye care services and provide training facilities.

(ii) Establishment of Mobile Eye Units for comprehensive eye care services including performance of intra-ocular operations and more particularly, cataract operations in eye camps.

(iii) Cataract being the most common cause for blindness in the country, provision of grant-in-aid to voluntary organizations and *Zila Parishads/Panchayats* for organizing eye camps in rural areas and towns up to one lakh population and metropolitan slums for performing cataract and other intra-ocular operations.

(iv) Augmentation of the stock of trained Ophthalmic Assistants by establishment of training schools for the training of Ophthalmic Assistants who are to be posted at the Primary Health Centres and District Hospitals, etc.

(v) Imparting health education on eye care through all media of mass communication with particular emphasis on ocular health amongst children and all other vulnerable groups and orientation of teachers, social workers and students about the problems of eye health care and nutritional deficiency.

(vi) Distribution of antibiotic tubes for treatment against trachoma.

With inclusion of this National Programme under the revised 20-point programme, the performance of cataract operations and the progress of establishment of various infrastructural services has been intensifed.

So far the following services have been developed under the programme:

Name of service	*Achievement upto 1982-83*	*Targets for 1983-84*	*Targets for 1984-85*
1. Mobile Unit	63	15	—
2. PHCs	1660	—	900
3. Distt. Hospital	298	44	50
4. Medical College	32	10	10
5. Regional Institute	4	2	—

The Government of India had set up a Working Group to formulate an appropriate strategy taking advantage of the experience of the implementation of the National Programme for control of Blindness during the last five years, the advances made in the field of surgical and medical science, the extended reach of mass media and other relevant factors. Time bound action was in hand to take decisions on the recommendations of the Working Group on Control of Blindness.

4 AUGUST 1983

HEALTH GUIDES SCHEME

Smt. Kidwai, in reply to a question said, "the Scheme is being implemented since 2 October, 1977. Under this scheme a Health Guide is selected for every 1000 rural population/every village. The Health Guide is a voluntary worker selected by the community having his own independent vocation. During his three months training he is paid a stipend of Rs. 200 per month and an honorarium of Rs. 50 per month thereafter. He is also supplied a medicine kit every quarter containing medicines worth Rs. 150. All the 430 Primary Health Centres in Maharashtra have already been covered under this scheme since 1 April, 1982. As per information received from the State Government 27304 Health Guides have been trained till 31 December, 1982.

The amount released to the State Government under the Scheme since 1977-78, is given below:

Year	Actual funds released (Rs. in lakhs)
1977—78	47.66
1978—79	133.10
1979—80	104.72
1980—81	126.80
1981—82	240.70
1982—83	504.72
1983—84	225.00 (first two instalments)

Supply of Health Guide Kits has been decentralized since 1 April, 1979. The respective State Governments are now procuring and supplying these items through their own arrangements."

POPULATION SUFFERING FROM CALORIE OR PROTEIN DEFICIENCY

The Minister of State for Health and Family Welfare said that from the nutritional point of view children below the age of six years and pregnant women constitute the vulnerable groups. Various inter-sectoral nutrition programmes were being implemented to supplement the nutritional deficiencies in the vulnerable groups.

IMPLEMENTATION OF SPECIAL HEALTH SCHEMES IN ADIVASI AREAS

Smt. Kidwai said "special programmes to tackle the problems of the predominantly *adivasi* areas have already been launched besides setting up a primary health centre for a population of 20,000 and a sub-centre for a population of 3,000 for tribals instead of 30,000 and 5,000 respectively in the non-tribal/non-hill areas. Some work on the genetic and pathogenetic mapping on the *Onges* tribes of Andaman and Nicobar Islands, *Kuthia Kondha* and *Jung* tribes of Orissa suspected to be demographically declining has been done. A team from the Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry, has submitted its first report on *Onges* Tribes. The Tribal and Harijan Research Institute, Orissa (THRTI) has set up a Cell to investigate the problems in Orissa. The Government has given priority to the programmes of predominantly *adivasi* areas of the country. Some medical scientists at the All India Institute of Medical Sciences are working on the genetic aspects of diseases affecting tribal population especially on haematological (sickelcell diseases) and communicable diseases and genetic disorders.

The Indian Council of Medical Research has taken up the following:

1. Study of haematological and clinical profile of sickelcell anaemia in scheduled tribes/scheduled castes.
2. The study of health nutrition status of tribes in Madhya Pradesh.
3. Setting up of Regional Medical Research Centres for tribes.

The Central Councils of Research in Ayurveda and Siddha, Homoeopathy and Unani have also taken up research work in *adivasi* areas. A scheme regarding research on diseases to which scheduled tribes/scheduled castes are generally prone has also been launched during the Sixth Five Year Plan. The other health problems of predominantly *adivasi* areas like leprosy, tuberculosis, malaria, blindness, goitre and other endemic ailments are being tackled under the respective national programmes. Further, a committee has also been recently constituted to review and evolve recommendations in regard to programmes for scheduled tribes in the country."

11 AUGUST 1983

NEW SCHEMES TO LOOK AFTER THE HEALTH OF WOMEN AND CHILDREN

Smt. Kidwai told the Lok Sabha that the ongoing schemes which were being continued during the current year were as follows:

Scheme	Targets in lakhs
1. Prophylaxis against nutritional anaemia	
(a) in mothers	120.00
(b) in children	120.00
2. Prophylaxis against blindness due to Vitamin"A" deficiency among children	250.00
3. Immunization	
DPT—Infants	145.00
Polio ,,	75.00
BCG ,,	150.00
DT-Children (5-6 years)	130.00
Typhoid ,,	100.00
TT-Children (10 years)	40.00
TT-Children (16 years)	25.00
TT-Pregnant women	115.00

Action was also being taken to expand the health infrastructure in the country by setting up of primary health centres, rural family welfare centres, urban family welfare centres, post-partum centres, etc. Paediatric units had been established in many district hospitals and some sub-divisional hospitals. A large number of medical and para-medical personnel had been trained including *dais*, village health guides, auxiliary nurse, midwives, lady health visitors, etc.

Oral Rehydration Therapy with ORS (Oral Rahydration Salt) powder to control diarrhoeal diseases among children was another important activity. The ORS packets were distributed through primary health centres, sub-centres and Village Health Guides.

IMPLEMENTATION OF NUTRITION PROGRAMME

In reply to a question the Minister of State for Health and Family Welfare said "as envisaged in the Sixth Plan, education on health, hygiene and nutrition, etc., of mothers and children is being imparted to the people both through multi-media channels such as radio, TV, posters, films, exhibitions, folk media, press advertisements, opinion leader camps, song and drama, etc., and also through intra-personal communication of medical and paramedical staff working in urban and rural areas as for example doctors, male and female multi-purpose workers, trained *dais*, village health guides, etc. and staff of mass media organization at the centre as well as in the States. An integrated programme (ICDS) providing a package of services such as nutrition education, non-formal education, referral services, health check-up, immunization, supplementary nutrition is being implemented by the Ministry of Social Welfare".

IMMUNISATION PROGRAMME FOR PREVENTION OF DISEASES

Shrimati Kidwai said "immunisation programmes are being undertaken for prevention of diphtheria, whooping cough, tetanus, poliomyelitis, tuberculosis and typhoid for children and tetanus toxoid immunization for pregnant mothers which also prevent tetanus of the new-born.

The country is self sufficient in the production of all vaccines required for the programme except the polio vaccine. Polio vaccine is imported in bulk. It is diluted and ampouled by the Haffkine Bio-Pharmaceutical Corporation Ltd., Bombay for use in country. Action is being taken for indigenous production of Polio Vaccine."

18 AUGUST 1983

CHILDREN IMMUNIZED AGAINST DISEASES

Kumari Kumud Joshi, Deputy Minister for Health and Family Welfare said in Lok Subha that the number of children immunized against diphtheria, tetanus, typhoid, tuberculosis and polio during the years 1980-81, 1981-82 and 1982-83 was as follows:

(Figs. in Lakhs)

Vaccine	1980-81	1981-82	1982-83
DPT	71.5	91.1	92.64
Polio	16.1	29.1	38.93
BCG	130.34	135.74	132.48
DT	102.3	107.4	94.14
Typhoid	16.2	27.1	43.76
TT(School)	2.50	18.06	31.07

CHILDREN'S BLINDNESS DUE TO PARENTS MALNUTRITION

Kumari Joshi said that according to a W.H.O. Report, 52,500 children become blind every year due to malnutrition caused by Vitamin 'A' deficiency.

A scheme to prevent blindness caused by Vitamin A deficiency among children, through oral aministration of massive dose of VITAMIN A was in operation. This scheme was implemented mostly in rural areas of all States/Union Territories.

Besides educational efforts to popularize breast feeding, appropriate weaning foods, use of green leafy vegetables and other food stuffs rich in Vitamin 'A' were being intensified through all media of mass communication and inter-personal communication channels.

ICDS and other social welfare schemes were also helping in the prevention of blindness. △

BOOKS

NUTRITION

We publish below a list of Selected articles on "nutrition" published recently in various national and international journals:

—Beliefs and practices of urban mothers regarding "hot" and "cold" foods in childhood illnesses.
Real, M. et al
Annals of Tropical Paediatrics 1982 Jun; 2(2): 93–6
FOOD HABITS/NUTRITION

—Diet and development.
Holt, KS
Child care, Health and Development 1982 Jul-Aug; 8(4): 183—201
CHILD DEVELOPMENT/CHILD NUTRITION

—Education for nutrition.
Albart, L
Central African Journal of Medicine 1982 Aug; 28(8): 193—4
NUTRITION—EDUCATION

—Importance of seed proteins in human nutrition.
Casey, R and Wrigley, CW
Plant Foods and Human Nutrition 1982; 31(3): 189—90
NUTRITION

—Improving the health, nutrition and sanitary conditions in a village through the education of women and children.
Devadas, RP et al
Indian Journal of Nutrition and Dietics 1982 Aug; 19(8): 255—7
RURAL HEALTH/HEALTH EDUCATION

—Nutrition policies for the elderly.
Schaefer, AE
American Journal of Clinical Nutrition 1982 Oct; 36(4): 819—22
NUTRITION—IN OLD AGE

—Nutrition and aging; assessing the nutritional status of the elderly patient.
Scholl, R.
Journal of the Kansas Medical Society 1982 Jul; 83(7): 368—70
NUTRITION/AGING

—Nutrition education programme in Naickennapalayam village.
(Editorial)
Indian Journal of Nutrition and Dietics 1982 Aug: 19(8) : 258—9
RURAL HEALTH—INDIA/NUTRITION—INDIA/ HEALTH EDUCATION—INDIA

—Nutrition education; what are we trying to achieve?
Laing, R.
Central African Journal of Medicine 1982 Aug; 28(8): 184—5
NUTRITION—EDUCATION

—Nutrition teaching.
Neuberger, A.
Human Nutrition: Clinical Nutrition 1982; 36C (2): 101
NUTRITION—EDUCATION

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—Population and social indicators of food and nutrition in Peninsular Malaysia.
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Improving the Health of Children

In a world distracted by so many deceptive and dangerous kinds of progress, we refuse to accept that such truiy human and truly civilized progress as saving the lives and improving the health of the world's children should be abandoned at the first sign of difficulty. And we believe that if the political will can be found to seize the opportunities now offered by recent social and scientific progress, then the goal of adequate food and health for the vast majority of the world's children need not be a dream deferred.

—*UNICEF*

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"There is nothing more primeval than the child. There have been so many changes in man, according to time, place, education and tradition, but the child remains today exactly what he was hundreds of thousands of years ago. That changeless, eternal wonder, the child, is endlessly reborn to man, through the ages, and yet he is as new and tender, as innocent and sweet, as he was on the very first day."

—Rabindranath Tagore