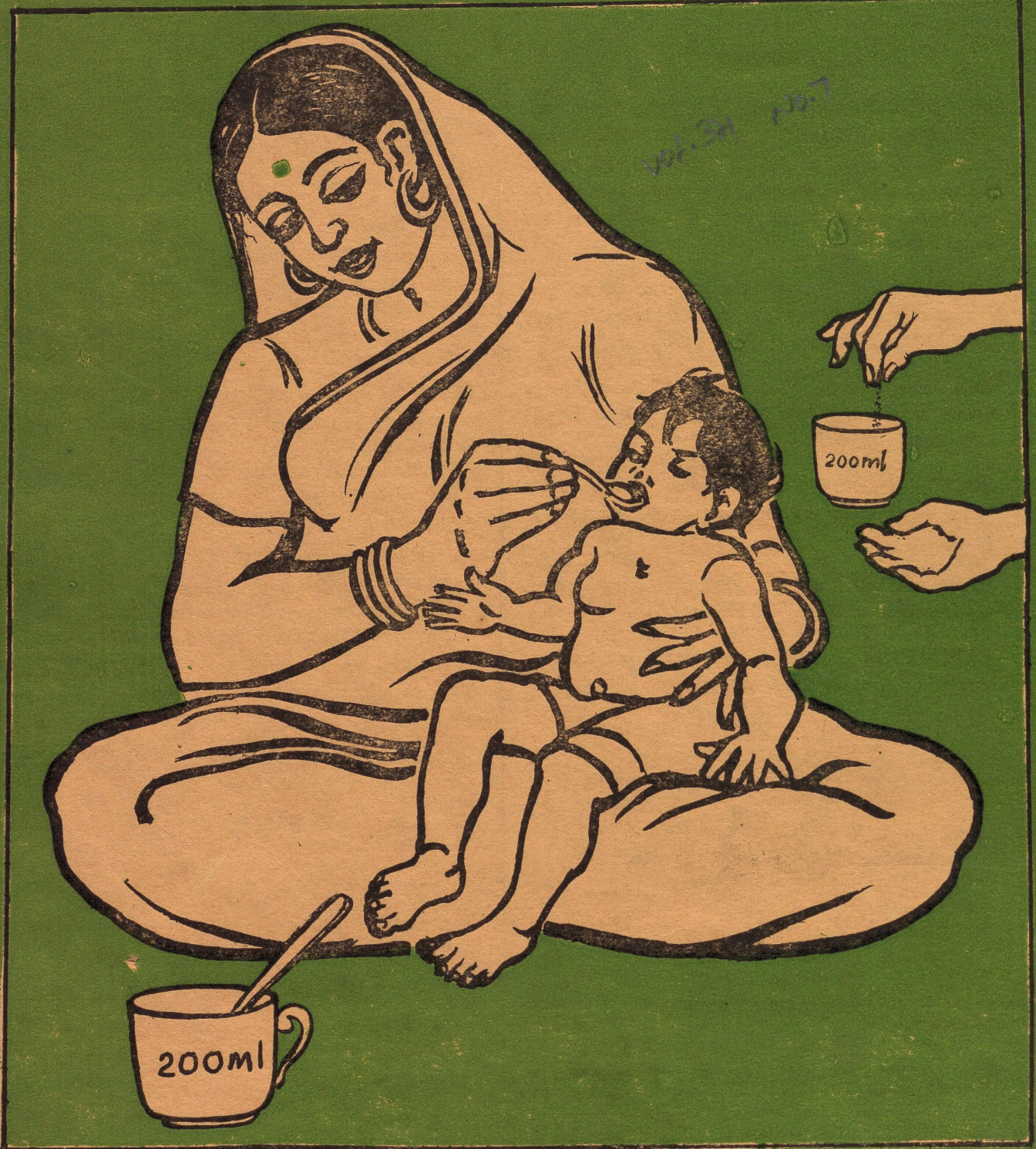


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DIARRHOEAL MANAGEMENT

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OBJECTIVES

Swasth Hind (Healthy India) is a monthly journal published by the Central Health Education Bureau, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, New Delhi. Some of its important objectives and aims are to:

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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Articles on health topics are invited for publication in this Journal.

State Health Directorates are requested to send in reports of their activities for publication.

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PRIORITIES IN DIARRHOEAL MANAGEMENT

DR M. A. KHAN

DR M. YUNUS

The most important, immediate, basic and life-saving measure to manage diarrhoea cases is the early replacement of lost fluids. It's neglect or delay could well mean a difference between life and death. Even in diarrhoeal cases where drugs have a role, fluids have to be supplemented as these have a more important and vital role.

ACUTE diarrhoeal diseases constitute one of the major causes of morbidity and mortality in India. Diarrhoeal diseases cause an estimated 1.5 million deaths every year or 2.8 deaths per minute. This also works out to about 500 out of every 1000 infants dying due to diarrhoea and about 200 pre-school child deaths out of every 1000 such children. For childhood diarrhoeas which are so common and important and their effects so sudden and critical, most of the care and precaution will still have to be provided instantly and at home by the individual or other family members, even before any form of medical consultation is possible. In the family it is the mother who has to face and handle such critical situations and hence she should be made aware of the basics of proper diarrhoeal management.

Management

In the management of a case of diarrhoea, recourse is usually taken to either of the following:

1. Replacement of fluids.

(a) ORS Packets.

(b) Intravenous fluids.

(c) Home Available Fluids (HAF).

2. Administration of drugs.

1. Replacement of the fluids

In the majority of cases, drugs have little or no role except in certain specific conditions. The most important immediate, basic and life-saving measure is, therefore, the *early replacement of lost fluids*. Fluid therapy is of vital significance in all cases of diarrhoeas but specially in young children. It's neglect or delay could well mean a difference between life and death. Even in diarrhoeal cases where drugs have a role, fluids have to be supplemented because they have a more important and vital role. The replacement of fluid may be carried out in various ways.

(a) *ORS Packets:*

Oral Rehydration Therapy (ORT) is potentially the most important medical breakthrough of this century. It is the best tool for handling the diarrhoeal problems. The most dramatic and large scale application of its effectiveness has been seen in West Bengal and Bangladesh following the 1971 war. It had

reduced the diarrhoeal mortality to almost zero in Thailand. To make an effective impact on diarrhoeal mortality, ORT should be made available as early and as close to the house of the patient as possible, that is why it was proposed that 100 packets of ORS be made available to each Village Health Guide by 1990.

However, in spite of all its revolutionary features and advantages, we still face certain practical problems regarding its supply and availability. Developing countries, especially vast ones like India, have a very large vulnerable child population of under fives. India has about 100 million child population of under five years of age which is even greater than the total population of many countries in the world. On a conservative estimate of an average of two diarrhoeal episodes per child per year and each episode requiring two packets of ORS, India's annual requirement would come to a colossal 400 million packets. The cost of different brands of ORS in the market is variable but even if we take it as an average minimum of Rs. 2 per packet, our annual requirement would cost about

Rs. 800 million. UNICEF in 1984 distributed only about 75 million packets worldwide, whereas India's production in 1984-85 was only about 15-20 million packets.

Hence, developing country like India cannot afford to spend so much on ORS alone, especially with its already meagre health budget and other equally important health problems to tackle it. Hence, wherever child population is very large and resources limited—a more feasible strategy would be to take recourse to Home Available Fluids.

(b) *Home Available Fluids:*

This is the most feasible and practical means to provide oral fluids in cases of diarrhoea. Its use does not affect our already strained health budget nor the family budget. These fluids are a good example of appropriate health technology and are in keeping with the ideals of primary health care. They just need to be promoted as they are already locally available at all times of the year. People have been using them for long and still continue to do so. Their use is therefore a part of the local culture and practice. What is required is just the education and motivation of the people regarding the use of these fluids in diarrhoeal cases. These fluids are always available at hand and so save visits to the doctor or the health centre—thus avoiding time loss and unnecessary expenditure. Most of these fluids contain the important electrolytes lost in the stool and vomitus.

The commonly used substances which can be utilized as home available fluids in diarrhoea are—weak tea, rice water, soups (all kinds), *dal* water, *lassi*, diluted milk, coconut water, lime water, any form

The commonly used substances which can be utilized as home available fluids in diarrhoea are weak tea, rice water, all kinds of soups, *dal* water, *lassi*, diluted milk, coconut water, lime water, any form of a light *sharbat*, fruit juice, plain water and *imli* water. An important point to be remembered is that the fluid should be slightly sweetened as this enhances absorption.

of a light *sharbat* or fruit juice, plain water and *imli* water. An important point to be remembered is that the fluid should be slightly sweetened as this enhances absorption. Most of such fluids contain some amount of potassium; if not, it can be provided through the addition of lime—which also makes the solution more palatable.

Home available fluids are the most feasible and practical means to provide oral fluids in cases of diarrhoea. Their use would have no effect on our already strained health and/or family budget. This therapy is a good example of appropriate health technology and is in keeping with the ideals of primary health care.

(c) *Intravenous administration:*

This plays a very limited role in the routine management of diarrhoeal cases and in the prevention and control of dehydration. This is so because dehydration develops in only 10 per cent of all diarrhoea cases of which the majority (95 per cent) are mild. Hence, it is of value only in critical situations which comprise only 10 per cent of all dehydration cases or one per cent of all diarrhoea cases. There are various other drawbacks associated with its use.

(a) *Cost:* Each bottle of saline or glucose costs about Rs. 11 and in the majority of instances where it is administered more than one bottle is required, as the situation is usually critical.

(b) *Availability:* The fluid is not easily and readily available especially in rural areas which are cut off from the towns and where 80 per cent of the diarrhoeal problem occurs.

(c) *Administration:* To administer the fluid sterile equipment and skilled persons are required both being difficult to provide in the majority of situations, as it occurs as an emergency.

(d) *Applicability:* It is applicable mainly in cases associated with shock and severe vomiting and is certainly not required for the majority of routine cases.

(e) *Feasibility:* In this method the mother is excluded from the care of the child. It is also not feasible for preventive use. It is costly and problematical—hence not consistent with primary health care technology.

(f) *Hazards:* Unsterile equipment may cause infection whereas improper monitoring may lead to over-hydration.

2. Administration of Drugs

Drugs have a limited role in diarrhoea. For proper use of drugs the

(contd. on page 178)

CHILD SURVIVAL : THE DECISIVE DECADE

A "near miracle" has been achieved in the world's decade-long fight against diseases that kill and maim children, delegates to an international conference agreed.

Encouraged by the progress in the survival and development of children, nearly 100 health ministers and experts set an ambitious goal for this decade of eradicating or bringing under control major diseases that still claim the lives of 40,000 children a day.

Ending a two-day meeting of the Task Force for Child Survival on 3 March 1990, the delegates stressed that achieving the new goals would require a strong new political commitment at all levels.

United Nations figures show that more than 10 million child deaths are being prevented each year through vaccine, but almost three million others die from vaccine-preventable diseases.

They also said diarrhoeal diseases and acute respiratory infections claim the lives of nearly six million children a year, and 100 million children suffer from malnutrition, making them vulnerable to simple infections. Malnutrition also causes severe problems such as anaemia, goitre, mental damage and blindness.

In addition, some 500,000 women die while giving birth, 99% of them in the developing world.

The Bangkok conference of the Task Force, also known as the Bellagio group, was organized by

WHO, UNICEF, the World Bank, UNDP and the Rockefeller Foundation.

It was the fourth such gathering since the Task Force was established in 1984 in Bellagio, Italy, with a call for dramatic improvement in immunization levels.

According to WHO-UNICEF figures, more than 80 countries have responded to the Bellagio call and given priority to accelerating immunization efforts and are striving to achieve the 1990 target of 80% or higher coverage.

At the end of 1988, BCG coverage (against tuberculosis) had reached 75%; the third dose of polio and DPT (diphtheria, pertussis, tetanus) 69% and 68% respectively. For measles, the figure is 60%. Tetanus toxoid for pregnant women (which protects both the women and the newborn child) rose to 39% for the second dose.

It is expected a global figure of 70% coverage of children will have been reached in 1989, compared to the 20% at the beginning of the decade.

As Dr William H. Foege, Executive Director of the Task Force, said at the Bangkok meeting: "The rapid increase of immunization these years has required a science base of vaccines, immunology and epidemiology.

But the real difference has been the human factor, including the coordination of UN agencies, bilateral structures, private voluntary

organizations, Ministries of Health, the development of primary health sciences, which get to most parts in the world."

The goals set by the Task Force and contained in the "Affirmation of Bangkok" will be sent to the heads of state and government who will meet 29-30 September in New York to discuss how to improve dramatically the situation of children for the decade ahead. In particular, the first ever World Summit for Children will consider how to achieve the immunization, by the end of the century, of all children against those diseases which can be prevented by vaccine.

This implies efforts to:

- control the six target diseases,
- Poliomyelitis, tetanus, diphtheria, measles, pertussis (whooping cough) and tuberculosis—which still cause almost three million deaths a year;
- add new vaccines against additional diseases of major public health importance, such as yellow fever and hepatitis B;
- use the immunization infrastructure to the benefit of other primary health care programmes;
- pursue research and development.

A vaccine purchase fund needs to be established as soon as possible with an initial capitalization of US \$ 50 million so that developing

(contd. on page 163)

DISASTERS

— An increasing awareness

COL. A. C. URMIL

LT. COL. M. S. SANDHU

Disasters can be classified into two broad categories, viz., *Natural disasters*, such as earthquakes, volcanic eruptions, floods, etc., and *manmade disasters* which may be intentional (dropping of atom bombs as in the case of Hiroshima and Nagasaki, etc.) and unintentional (like Bhopal gas tragedy and Chernobyl disaster).

"Disasters are not a new phenomenon in the ecology of man. What is new is the increasing awareness that some kind of disaster management should be promoted. It has become clear that improvisation is not the effective approach in a critical and emotive disaster situation. Predisaster planning and preparedness has become the order of the day and disaster epidemiology an integral part of a multi-disciplinary approach to disaster."

—E. H. Spirgi 1979.

What is meant by a disaster?

The dictionary meaning of 'disaster' is a calamity, a sudden or great misfortune. However, unlike a calamity or misfortune affecting an individual or a family, a disaster occurs like an explosive epidemic affecting masses and usually culminates into undue loss of life and/or property. It is always associated with mass panic and usually large scale movement of population. It disrupts the normal social life and administrative organisation of the affected

community and imposes a sudden demand on the public health machinery to cope with this stressful situation for which it is not usually fully prepared. The consequence of such unpreparedness is reflected by an increase in the amount of morbidity, mortality and disability which the community suffers.

Types of disasters

From the point of view of their impact on health, disasters can be broadly put into four categories, viz, (i) Earthquakes, (ii) cyclones and other destructive winds, (iii) Floods and sea surges, and (iv) Other inundations.

According to their genesis, the disasters can also be classified into two broad categories, viz, (a) Natural, such as earthquakes, volcanic eruptions, floods, etc., and (b) Manmade which can be further divided into (i) Intentional, e.g., dropping of atom bombs on Hiroshima and Nagasaki and (ii) Unintentional but usually due to human negligence as in case of Bhopal gas tragedy and the Chernobyl disaster.

From the point of view of protection of disabled people, disasters can be again categorised as— (i) those with no warning period and (ii) those with a warning period which permits evacuation of people at risk to safe places of shelter.

Disaster-prone areas

These can be classified into (A) Natural high-risk areas, such as, (i) seismically active or earthquake-prone areas, (ii) riverflood plains, (iii) tidal wave flood plains, (iv) areas subject to tropical storms and (v) areas in the vicinity of active volcanoes. (B) Potential man-made hazardous areas which will include (i) down stream of a dam, (ii) sites beneath which mining has taken place, (iii) sites in the vicinity of industrial plants with explosion/pollution risk, (iv) sites in the shadow of industrial refuse tips and (v) areas near major airports.

Examples of some disasters

A few examples of disasters which are still fresh in the memory of living generations are as under:—

(A) *Atom Bombing of Hiroshima* (6 August 1945) and *Nagasaki* (9

August 1945) during the second world war is regarded as the worst manmade disaster of the century with estimated casualties of 120,000 and 75,000 respectively.

(B) *Guatemala Earthquake* (1976) in which 92% lost their homes, about 76,000 sustained injuries and some 23,000 got killed. A sample survey of victims of this disaster brought out such startling findings as—

- 84% of the victims had no social security in the form of insurance.
- 46% were dissatisfied with the medical care received by them.
- 13% could not return to their former employment because of their injury, *i.e.*, they needed vocational rehabilitation.
- 12% had to wait 2-3 days and 16% for one week before admission into a hospital.
- Even for first-aid, 13% had to wait for 2-4 hours, 12% for 4-8 hours and 21% for 2-3 days.

(C) *The Tidal Wave And Cyclone Disaster in Andhra Pradesh* (1977) which claimed some 25,000 lives. The victims included mainly the young people, the old and the weak.

(D) *Bhopal Gas Tragedy* (1984) is regarded as the worst air pollution disaster so far and was due to accidental leakage of methyl isocyanate (MIC) from its plant. It affected about two lakh people and claimed 1,754 lives, according to one published report.

(E) *Chernobyl Nuclear Plant Disaster* (1986) which resulted in the death of 28 people and 203 suffered from radiation sickness. The material

losses amounted to two billion roubles approximately.

Consequences (disaster damage)

The consequences and their magnitude primarily depend upon the nature of the disaster itself. Some of these are predictable qualitatively if not quantitatively. These can be put into two broad categories:—

A. Human suffering due to lack of shelter, injury, disability and death.

B. Monetary loss due to loss of property (individual and public).

The health effects and other effects of a natural disaster can also be categorised into 'short-term' and 'long-term' effects. Short-term effects vary according to the nature of the disaster *eg*—

(a) *In earthquakes* many deaths occur. Severe injuries requiring intensive medical care are overwhelming. Falling roofs and walls while standing up are common cause of fractured clavicles. Spinal injuries and pelvic fractures are also common. Food scarcity and population movements are rare but increased risk of infection due to exposure by shelterless victims remains a potential problem.

(b) *During high winds*, few deaths occur. Severe injuries are moderate. Food scarcity is commonly seen and population movements are rare. Hurricanes usually leave behind a significant number of persons with physical disabilities such as spinal cord lesions, blindness and deafness.

(c) *During tidal wave and flash floods*, many deaths occur although severe injuries are few. Food scarcity and population movements are common. Potential increased risk of infections is present.

(d) *During floods*, deaths and severe injuries are few. Food scarcity and population movements are common. Potential risk of infectious diseases is always present.

Besides above, the victims of any disaster are also prone to suffer from a variety of psychological disorders, such as, (i) various forms of anxiety, depression in predisposed individuals (ii) Post disaster syndrome (temporary confusion, disorientation).

Increased risk of communicable diseases remains a potential risk following natural disasters which result into overcrowding and deterioration in environmental hygiene particularly affecting the water supply and disposal of human wastes. This again depends largely on the previous sanitary levels of that area. Sometimes, shortage rather than contamination of water supply emerges as a major problem. During famines, prolonged malnutrition predisposes to gastroenteritis, measles and respiratory group of infections which become leading causes of death. Disasters also disrupt the ongoing disease control programmes in that area. Explosive outbreaks of malaria (more than 75,000 cases) occurred after Flora hurricane across Haiti in 1963 which destroyed houses sprayed with DDT and also increased the breeding sites.

Besides the above problems, burial/cremation of corpses and disposal of carcasses are other major problems to be tackled with on a war-footing.

Management of casualties

This includes rescue of the injured and those trapped in wreckage etc, first aid, evacuation to hospitals and definitive treatment. The efficiency of management depends upon (i) availability of

enough medical and paramedical personnel trained in disaster medicine, (ii) adequate hospital facilities to care for victims, (iii) enough transport (ambulances, helicopters, etc) for speedy evacuation of casualties and (iv) standing orders/written plans for individual hospital and all other agencies likely to get involved in providing relief to disaster victims.

Handling of casualties

When the number of casualties is high and the medical facilities are inadequate, the concept of 'triage' or classification of patients according to the priority in receiving the medical attention (as in case of war) is followed so that the maximum number of injured are benefitted despite a very short period of medical attention (sometimes as little as two or three minutes for each patient). For example the casualties can be allotted the priorities as under:—

priority I : Those who have problems with vital functions (respiratory, circulatory etc, and unconscious patients) and need immediate treatment.

Priority II : Seriously injured who require an urgent operation but can wait for 6-12 hours after receiving the medical first aid.

Priority III : Hopeless cases whose sufferings must be relieved as much by a treatment as by spiritual comfort.

All other cases with slight injuries can be called priority IV cases (last priority) who should be separated from other priority groups to prevent psychic disorders in them which precipitate panic and chaos.

Recommendations for effective management

For tackling the problems associated with disasters more effective

recommendations on following aspects have been made:—

- (a) More attention towards public awareness and preparedness.
- (b) Publicising information through public media (pamphlets, posters, radio, TV etc).
- (c) Special training to medical, para-medical, Red Cross and other voluntary workers (teachers, students, NCC, Scouts etc).
- (d) Special training to disabled high-risk category so that they know how to protect themselves against fumes, gases and other contaminants.
- (e) What action to be taken in case of fire, burns, haemorrhage, fractures etc.
- (f) How to breathe when there is little oxygen available.
- (g) How to survive when buried under rubble, an avalanche or other heavy objects.
- (h) Dissemination of information regarding location of main fuse box, main water valve, gas tap and fire extinguisher and also where candles, match-box, wheel chair and creches are kept.
- (i) How to use the emergency bag' containing essential items which should be provided to every disabled person according to nature of his/her disability.
- (k) Suitable and adequate transport for speedy evacuation of disaster victims to hospitals.
- (l) Special plans for emergency expansion of hospital facilities, e.g., extra beds, surgical facilities, transfusion fluids, drugs, patients' clothings, food, water, fuel, medical

comforts, standby generators etc.

- (m) Plans for opening emergency/auxilliary treatment centres and rehabilitation centres for disabled people.
- (n) Every country to have a Manual of Disaster Preparedness and its own relief plans.
- (o) Courses in management of disaster injuries and other associated health problems to be included in the medical curriculum.
- (p) Attention to building location and construction standards.
- (q) Provision of hazard warning systems.
- (r) Insurance (social security) of people residing in disaster prone areas.
- (s) Measures to mitigate a future disaster.
- (t) Predisaster planning which means the general organisation required to promote the greatest possible efficiency in disaster management at the lowest cost. If further implies a reliable assessment of urgent and long-term needs in terms of mass casualty management.

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Swasth Hind

SHRI RASHEED MASOOD IS NEW HEALTH MINISTER

Shri Rasheed Masood has taken over as the Union Minister of State for Health and Family Welfare in April, 1990. He succeeds Shri Nilamani Routray.

Born on 15th August, 1947 in Gangoh, Distt. Saharanpur, (Uttar Pradesh), he took his B. Sc., L.L.M. degree from the Aligarh Muslim University and entered the legal profession soon after. A dedicated social worker, Shri Masood evinced keen interest in the lot of the poor sections of the society. He took up the cause of farmers, agricultural labourers and worked for value-based politics. He is devoted to the cause of speedy and all-round development of the society and environment through provision of health and social welfare, improved roads and housing, education facilities, communal harmony, national integration and

better international understanding etc.

Shri Masood was a Member of the Sixth and Seventh Lok Sabha during 1977-79 and 1980-84 respectively. He was a Member of the Estimates Committee in 1983-84. He had represented India at the Inter-Parliamentary Union Conference in 1978 (Sofia), 1980 (Oslo), and 1982 (Seoul). He has visited more than 20 countries of Europe and Asia. He has also held important positions both in Lok Dal and Janata Party. He was a member of the Rajya Sabha (1986-89), General Secretary—Janata Party (1988-89), Deputy Leader, Rajya Sabha (1988-89). Shri Masood is the General Secretary, Janata Dal from 1989. He was also Deputy Leader, Lok Dal Parliamentary Party (1982-84). Chief



Shri Rasheed Masood

Whip of Lok Dal (1982); General Secretary, Lok Dal (1984-87); Member Parliamentary Committee on Offices on Profits (1980-84); Whip, Lok Dal (1980-82) and General Secretary, All-India Kisan Kamgar Samachar (1980-84).

As a journalist, he edited a Monthly "Turning Point" from 1977 to 1978. A keen sportsman, he won a Gold Medal in the All India Shooting Competition at Madras in Rifle Shooting in 1989.

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countries can deliver additional vaccines through their existing immunization systems.

Health education—the basic human right

During the closing session of the conference, Dr Hiroshi Nakajima, Director-General of the World Health Organization, and Mr James P. Grant, Executive Director of UNICEF, underlined the overall goal of reducing the deaths of children under five, thereby saving 50 million young lives during the last decade of the century. This in turn would result in lower birth

rates as parents become convinced their first born children will survive.

They also stressed the utmost importance of cutting by half the current toll of 500,000 deaths of women dying while giving birth.

They unanimously agreed that health should be an integral part of development and that "health for all by the year 2000" should become a reality. Translating these health calls into action would cost roughly US \$ 2.5 billion a year, according to UN officials, who added that the money can and should come from reduced military spending.

Dr Nakajima and Mr Grant further emphasized the importance of educating parents on the basics of protecting their children. They noted that universal and primary education and the reduction of illiteracy, especially among women, will be more extensively dealt with at the World Conference on Education for All, opening in Jomtien, Thailand, next week.

They concluded that health and education should be considered as basic human rights and that spending in these areas should be seen as investment for development.

—W.H.O.

IMMUNIZATION TECHNOLOGY MISSION

The Universal Immunization Programme is poised to achieve the targets set for the year 1990 except in certain parts in the country which are expected to protect all the pregnant women with tetanus toxide and at least 85 per cent of the infants with DPT, OPV, BCG and measles by 1991. The thrust in the 8th Plan period would be to sustain the increased levels of coverage and move in the direction of achieving the ultimate objective of the eradication of vaccine-preventable diseases.

THE Government of India launched the ambitious Universal Immunization Programme in 1985 with the target of Universal Child Immunization by 1990 in pursuance of achieving 'Health for All' by 2000 A.D. In the year 1986, the Government announced the establishment of a Technology Mission for vaccination of children and pregnant women. The objectives of this programme were widened from not merely increasing levels of vaccination coverage but also moving towards a status of self-reliance in the area of vaccine production and other equipment.

Strategy

The Universal Immunization Programme signifies an approach under which a specifically defined geographical area is expected to enhance the immunization coverage of infants with three doses of DPT and OPV and one dose of BCG and measles to a level of 85 per cent and two doses of Tetanus Toxoid for pregnant women to a level of 100 per cent. This task was expected to be performed in selected districts. In the first year of the 7th Five Year Plan period, 30 districts were taken up under this programme. Today all the 450 districts of the country are under the Universal Immunization Programme.

Operational Arrangement

The programme is being implemented through the network of primary health care infrastructure which consists of one Sub-

centre for every three to five thousand rural population, a Primary Health Centre for every 20 to 30 thousand population and a Community Health Centre for every 80 to 120 thousand population. The female multipurpose worker, located at the Sub-centre, is the key person in the implementation of this programme.

Vaccine Production

The country is today self-sufficient in vaccine production except in case of Oral Polio Vaccine. When the programme was initiated in 1985, the entire quantity of measles vaccine required was being imported but today we have indigenous production of this vaccine. As far as the plan of Oral Polio Vaccine is concerned, it is hoped that by the year 1991-92, indigenous production would be available. The capacity build up in the country for production of vaccines is sufficient to meet the demand.

Equipment and Supplies

Over the five year period from April, 1985 to March, 1990, 95 per cent of the equipment had been procured and distributed except in the case of cold boxes which are being indigenously produced for the first time in the country. The total supplies planned during the period were 11,000 ice-line refrigerators and deep freezers, 120 walk-in cold rooms, 34,000 cold boxes and about 1,50,000 vaccine carriers and day carriers. The requirement for syringes and needles is also

very high and today this is being met from indigenous production.

National review

The Government of India also got conducted an Independent National Review jointly by NIHFW, UNICEF and WHO in May, 1989. This review had indicated that coverage levels differed significantly from one place to another in the country and that while there are places of excellence which need to be appreciated, there are also places of very poor performance which need to be assisted to raise their performance levels.

Initiatives

The success which this programme has registered can be attributed to a number of initiatives taken up by the Government over the last few years. Significant strides under the Immunization Programme have been made in the following areas:

- (i) Training and re-training of staff at national, district and field level;
- (ii) Initiating systematic approach to Immunization in urban areas;
- (iii) Involving professional bodies and voluntary agencies in the implementation of the programme;
- (iv) Engaging Medical Colleges in implementation and

(contd. on page 183)

PERIODONTAL DISEASES

— A Silent Scourge

LT. COL. G. P. I. SINGH

All forms of periodontal diseases are definitely preventable. A great majority of cases which are not hopelessly affected, may be stopped, lesions healed and the disease permanently controlled by simple and rational treatment. However, it is now increasingly being realised that reducing tooth loss from a periodontal disease, if left to the conventional dentist-patient relationship is largely ineffective at community level. Public health approach is the only answer.

THE father of Microscopy, Antoni Van Leeuwenhoek, in a letter to the Royal Society of London on 17, September, 1683, reported his startling earliest finding as, "There are more animals living in the uncleaned matter on the teeth in one's mouth than there are men in the whole kingdom, especially in those who never clean their mouth.....". He was indeed only underlining the malady of periodontal diseases recognised and documented in every culture, as revealed by paleontologic studies in relation to ancient Egypt.

"Periodontal disease" is a general name given to the inflammatory diseases of the oral tissues that support the teeth (periodontium). These tissues comprise of the gums or Gingiva, the cementum covering the teeth and the supporting periodontal ligaments (fibres) extending between the roots of the teeth and the bones of jaws. Till lately the common terms used to denote these diseases were "Pyorrhoea" and "Gingivitis".

The extent of the problem

Periodontal diseases are among the most wide-spread diseases of

the mankind. It has been estimated that Gingivitis affects 80 per cent of the young children, and almost the entire adult population of the world have experienced Gingivitis or more serious form of the disease.

The significance of these diseases lies in the fact that these diseases are the major cause of tooth loss all over the world. In India 80 per cent of the teeth extracted after the age of 30 years are due to periodontal diseases.

The disease—causes and characteristics

The disease process begins on the teeth with deposition of a soft biological bacteria—free membrane containing glycoproteins from the saliva. This is called the pellicle. Micro-organisms normally present in the mouth get embedded in this carbohydrate-protein matrix which gets firmly attached to the tooth surface and is known as plaque. Later, this plaque gets mineralised by deposition of calcium phosphate salts from the saliva. This scaly deposit is called calculus.

The metabolic products of micro-organisms, immunologic response of the periodontal tissues, combined

with mechanical irritation due to calculus lead to inflammation of the gums. Further bacterial deposits on the calculus forming new plaque continue the destructive cycle which may culminate into destruction of gums, pocket formation between teeth and gums, pus in these pockets (pyorrhoea) and ultimately destruction of jaw bone and tooth loss. The tooth loss in advancing age is not simply a normal ageing process but cumulative effect of periodontal diseases.

Many scientific studies have been undertaken in various parts of the world, from among backward societies in poorer regions of Africa and Asia to advanced modern Scandinavian countries; among different occupational groups like unskilled labourers to Corporate executives; school children and professionals like doctors; metropolitan cities and rural areas and so on. Nearly all the studies bring out certain factors which need to be understood by the public at large. These are:

- (a) *Age*: Gingivitis is the principal form of the disease among children. Worldwide, the prevalence of gingivitis in chil-

dren 6 to 13 years of age varies from 35 to 99.4 per cent.

Advanced periodontal disease/bone damage is essentially the disease of adults being 80 to 95 per cent in people aged 55 years and above.

Intensity as well as prevalence of the disease characteristically rises as the age advances with a typical "dip" at 16 to 19 years of age. This reduced incidence at that age (teenage) is attributed to increased social awareness and consciousness of oral hygiene.

(b) *Oral hygiene*: Understandably, the prevalence as well as intensity of the diseases rises as the oral hygiene status of communities declines. This is ascribable to the number and variety of bacteria present in the unclean mouths. While bad smelling breath is relatively innocuous outcome of bad oral hygiene, the latter leads to a cumulative silent destruction of periodontal tissues. Poor oral hygiene is the resultant of many conditioning influences, some of which are described in succeeding paras.

(c) *Socio-economic status*: Predictably, the disease prevalence is higher as well as worse in intensity among lower socio-economic groups as

Personal habits like smoking, tobacco chewing, etc. have a definite deliterious influence in initiation as well as worsening of periodontal diseases. In addition to direct toxic effect of tobacco and high temperature smoke, the tobacco smokers and chewers usually have a poor oral hygiene.

Better education, better social awareness, ability to afford dental treatment and above all a positive attitude towards better oral hygiene lead to better periodontal status.

compared to higher socio-economic strata. Better education, better social awareness, ability to afford dental treatment and above all a positive attitude towards better oral hygiene lead to better periodontal status of advanced societies.

(d) *Personal habits*: Personal habits like smoking have a definite deliterious influence in initiation as well as worsening of periodontal diseases. Similarly those with habit of chewing tobacco have a higher incidence of these diseases. In addition to direct toxic effect of tobacco and high temperature smoke, the tobacco smokers and chewers usually have a poor oral hygiene. Betel leaf and betel nut (*paan* and *supari*) chewing, a common Indian habit, also is responsible for these diseases. The injury caused by betel fragments which lodge in dental crevices as well as abrasive action of chewing betel nut produces attrition and damage to jaw bone. Slaked lime (*choona*) which usually accompanies betel chewing, stimulates alkaline saliva and enhanced deposition of calcium salts and hence calculus formation.

(e) *Mouth cleansing habits*: Efficient tooth cleansing has been demonstrated repeatedly to be important in maintaining periodontal health and reducing disease prevalence irrespective of the method used.

It is a common belief that tooth brushing is more effective than the use of stick (*datun*) or fingers with various abrasives, in suppressing debris and calculus. But there is no scientific evidence to prove it. Similarly various materials used for mouth cleansing show no superiority over each other (including charred tobacco (*Misri*), charcoal, rice husk, cowdung, snuff and various proprietary tooth pastes and powders). The only scientific fact is that tooth brushes used in a correct manner by educated, higher socio-economic groups account for better periodontal health in these groups.

(f) *Diet and nutrition*: Contrary to popular belief, nutritional status plays no significant role in initiation of periodontal diseases except in cases of extreme malnutrition. Further, there is no significant relationship to specific nutrient deficiencies except that Vit. 'B' complex and 'C' deficiency states may lead to a higher periodontal disease proneness.

However, physical characters of the diet are known to be influencing the onset and progress of these diseases. Soft diets lead to accumulation of debris, gingivitis, calculus formation and loosening of teeth. Diets rich in refined carbohydrates (sucrose), eg., sweets, chocolate support an increased rate and amount of plaque formation. Friction provided by mastication of fibrous foods, limits the growth of the plaque to some extent.

(g) *Sex, geographical location and race*: These factors have no significant influence except that during pregnancy existing gingivitis is known to be aggra-

vated, possibly due to hormonal influence. Pregnancy itself, however, does not cause periodontal diseases.

(h) *Drugs*: Several drugs including contraceptive hormones, corticosteroids, anti-epileptic drugs and anti-cancer drugs are known to influence the course of periodontal diseases.

(i) *Other Oro-dental conditions*: Irregular alignment and crowding of teeth is commonly associated with periodontal disease. This is possibly due to accumulation of irritating food debris, food impaction as well as continuous low-grade injury to jaw bones owing to uneven occlusive pressure. There is no relationship to dental caries. Interestingly however, the areas least prone to caries, *eg.*, front teeth, have maximum proneness for periodontal diseases and *vice versa*.

(j) *Other habits*: Habits like clenching and tapping of teeth, tongue thrusting, bruxism (rubbing of jaws over each other usually during sleep), mouth breathing, etc., are known factors which initiate as well as perpetuate periodontal diseases.

Prevention and control

Although the current knowledge appears adequate for prevention and control of these diseases at individual or community levels, large scale prevention has rarely been implemented. This is due to the fact that unless the traditional patterns of oral hygiene are altered, provision of treatment or counselling facilities alone will not change the high prevalence of periodontal destruction. It entails a mammoth effort in terms of money and resources to achieve desired change in community awareness and concept of these disorders.



Periodontal diseases are among the more widespread diseases of the mankind. It has been estimated that gingivitis affects 80 per cent of the young children, and almost the entire adult population of the world have experienced, gingivitis or more serious form of the disease.

This is further complicated by the fact that this is a slow chronic process and rarely causes a disability serious enough to warrant a prompt and repeated prophylaxis (pre-emptive treatment) or restorative therapy at the right time. Clinical evidence and research indicate that unless this is done, the damage caused to the supporting structures of the teeth in early adult life is irreparable, while in middle age it destroys a large part of natural dentition and deprives many people of all their natural teeth long before old age. The total effect of the periodontal diseases on the general

health of the population is yet to be assessed.

All forms of periodontal diseases are definitely preventable. A great majority of cases which are not hopelessly affected, may be stopped, the lesions healed and the disease permanently controlled by simple and national form of treatment. However, it is now increasingly being realised that reducing tooth loss from periodontal disease, if left to the conventional dentist-patient relationship, is largely ineffective at community levels, *e.g.*, public health approach is the answer.

(contd. on page 183)

THE DRUG ABUSE PREVENTION

— A Developing Perspective

T. S. SAINI

THE references to various intoxicants, e.g., *madira*, *soma ras*, hashish and marijuaan, are available in our ancient literature. But the question is of why and when these intoxicants are used. The purposes and occasions are not clearly specified.

During the British Period the Royal Opium Commission and Royal Homp Commission in 1883 came into being to regulate production and revenue of these intoxicants. The concept of health and educational interests were very meagre.

The interest in this area began in 1930 from Ranchi mental Hospital. In 1950 research into the problem gained a momentum. From 1963 to 1986 quite a good number of surveys on different populations were conducted in various parts of the country to measure the magnitude of drug problem. The prevalence and pattern of different drugs were also studied.

During 1970-1988 the Government of India, Ministry of Health and Family Welfare, constituted two Drug Addiction Committees-(i) Gopalan Committee (1977) and (ii) Expert Committee on Drug Dependence Services (1986) under the Chairmanship of Dr Devender Mohan, Prof. and Head of Psychiatry, All India Institute of Medical Science, New Delhi. The first Committee studied the current status of drug abuse in India and suggested a number of measures to overcome the problem including the setting up of a

model centre for the study, and treatment of addiction in the country. The Gopalan Committee report remained a referral document on drug abuse affairs for years together. The recommendations and suggestive measures could not be implemented upto 1986.

Development of facilities

The Ministry of Health and Family Welfare, set up in June 1988 a thirty-bedded Drug Dependence Treatment Centre at Deen Dayal Upadhaya Hospital at Hari Nagar, New Delhi. This was one of the major strides achieved for drug abuse prevention. The laboratory of this centre is well equipped with modern scientific equipments and is providing treatment both in-patient and out-patient including counselling and rehabilitation facilities. Simultaneously it is imparting manpower training for drug abuse prevention.

Other major hospitals located in the Union Territory of Delhi, followed suit with the establishment of De-addiction Clinics. In addition to it, a number of Non-Governmental Organisations (N.G.Os), registered under, the Ministry of Social Welfare, Government of India, are providing services in different parts of the country. Some of these organisations are extending camp services to the affected people.

Enforcement agencies

To meet the growing threat of drug abuse to the country, and to curb trafficking of drugs at national and international scene; the Government

of India brought into existence a special Bureau known as Narcotic Control Bureau (N.C.B.) in March 1986 to keep a close watch on the movement of narcotic and synthetic drugs in five metropolitan cities with their zonal offices located at Bombay (Maharashtra), Calcutta (West Bengal), Delhi, Madras (Tamil Nadu) and Varanasi (U.P.).

Besides, a special cell of customs and Central Excise Collectroates was constituted under the Central Board of Revenue. Some of the active forces as Border Security Forces (B.S.F.) and C.R.P.F. have also the power to seize the illicit drugs. The mounting pressure on drug trafficking at different Indian borders have necessitated such a move on the part of Government to ask for active help from these Forces.

Heroin trafficking from Indo-Burma border has shown the growing trend. But on the other hand the role of enforcement agencies for prevention of trafficking are well documented in terms of number of seizures of heroin as:

Year	Percentage of Seizures
1983	71%
1984	57%
1985	72%
1986	100%

Prohibition of crops

This approach is followed to control the drug menace through

(contd. on page 173)

WHO DECLARES GLOBAL DRUG ABUSE EMERGENCY

New Programme Announced

On 26th June 1990, INTERNATIONAL DAY against DRUG ABUSE and ILLICIT TRAFFICKING, the World Health Organization (WHO) announced the formation of a new *Programme on Substance Abuse*, to fight what in a large number of countries represents the most serious peacetime threat to well-being in this century.

The Director-General of WHO, Dr Hiroshi Nakajima, also announced the appointment of Mr Hans Emblad of Sweden as Director of the new Programme with effect from 1 September 1990. Mr Emblad is currently the Deputy Director of the WHO Global Programme on AIDS (GPA). In a statement concerning this appointment, the Spokeswoman of the Director-General said that Dr Nakajima was very pleased to name Mr Emblad as the leader of the new Programme, as he brings to his new position long experience of international programmes for combating drug abuse.

Under the new Programme a global survey of the drug abuse situation will be initiated; leadership will be provided in the related efforts of other programmes within WHO, including those of its six Regional Offices; the programmes of the ministries of health of WHO's 166 Member States will be supported; and collaboration will be intensified with other organizations and bodies of the United Nations system and nongovernmental organizations throughout the world concerned with substance abuse.

WHO estimates that the adverse effects on health of drug and alcohol abuse are increasing throughout the world. There has been an especially sharp escalation of cocaine and heroin abuse, whilst the abuse of other psychoactive drugs, such as tranquilizers, depressants and stimulants has also increased dramatically. Many of these drugs are used in combination with alcohol, which is itself a major contributor to diseases affecting the health of people in both developed and developing countries.

"Large parts of the world's inner cities are being converted into zones of despair, terror and squalor", Dr Nakajima said. "Each day there are thousands of new addicts. With every hour, more and more young people

are affected. By sharing injection needles, millions are being exposed to the threat of infection with the virus that causes AIDS. We are seeing with horror more and more infants born addicted to drugs".

"Yet the situation is not hopeless," added the Director-General, "and there is good evidence that trends in substance abuse can be arrested and even reversed by timely action".

Among the activities called for by resolution WHA-43.11 adopted by the Forty-third World Health Assembly in May 1990, which are to be carried out by the new WHO Programme in collaboration with Member States, are moves to:

- * intensify efforts to prevent the spread of substance abuse in individuals, families, communities and countries;
- * improve the effectiveness of existing treatment programmes, and develop new approaches to treatment where needed;
- * integrate health components into development programmes set up to reduce the supply of narcotic drugs;
- * participate in efforts to control the supply of licit psychoactive substances.

As part of its efforts to step up the global struggle against drug abuse, WHO is to create a network of centres around the world to monitor the scope and impact of the global drug epidemic. WHO will also coordinate research and development activities, and identify global needs.

"We must spare no effort in the fight against this worsening scourge, for we are facing a tidal wave of human suffering, loss of life, and economic disaster", Dr Nakajima said. "But we must also do this within the basic framework of WHO's mandate, protecting human rights, sustaining economic and social development and respecting the sovereignty of Member States".

—W.H.O.



LOOK YOUNGER —LIVE LONGER

SMT. BINOO SEHGAL

Now, put this magazine down for a moment. Say to yourself, 'I—this person sitting here in this chair—I can live to be one hundred years old.' Say it aloud. Listen to your words. Repeat them.

This idea may be new to you. It is a new kind of thinking. Take your time with it. Accept the idea of living to be one hundred. In imagination, extend your life forward, far into the future. Figure out what the calendar year will be when you are one hundred. Think what the world will probably be like, what new, interesting, unheard of things probably will be happening. Say to yourself, 'I shall be alive then. I can be alive in the year.....'.

Suppose you are twenty five. Here-
tofore you have been saying to your-
self, 'I am twenty five.' But now that
you have been told that you will
live to be one hundred, you are say-

ing to yourself, 'I am only twenty five'. Like this you begin to feel young.

It is an established fact that all living creatures can live seven to fourteen times as long as the time required to attain maturity. Man attains maturity at the age of twenty; therefore he should live one hundred and forty years.

According to Dr. Alexander A. Bogomolets of Russia: "A man of sixty or seventy is still young. He has lived only half his natural life. Old age can be treated just as any other illness because what we are accustomed to regard as normal old age is actually an abnormal, premature phenomenon."

Scientists have proved that life can be prolonged indefinitely. The Russian Professor Kuliabko removed a human heart from a soldier

killed in a battle, and restored its action twenty-four hours after it had ceased beating. Another scientist, Briukhonenko, restored life in dead dogs by artificially renewing their blood circulation.

The stuff of which we are made is potentially immortal. Many scientists have proved this. Dr Alexis Carrel experimented with a piece of heart tissue cut from a chicken and put into an ideal nutritive medium. This piece of chicken heart lived indefinitely, as long as the 'broth' in which the tissue lived contained all the necessary nutrients, and as long as wastes were eliminated.

Live long without growing old

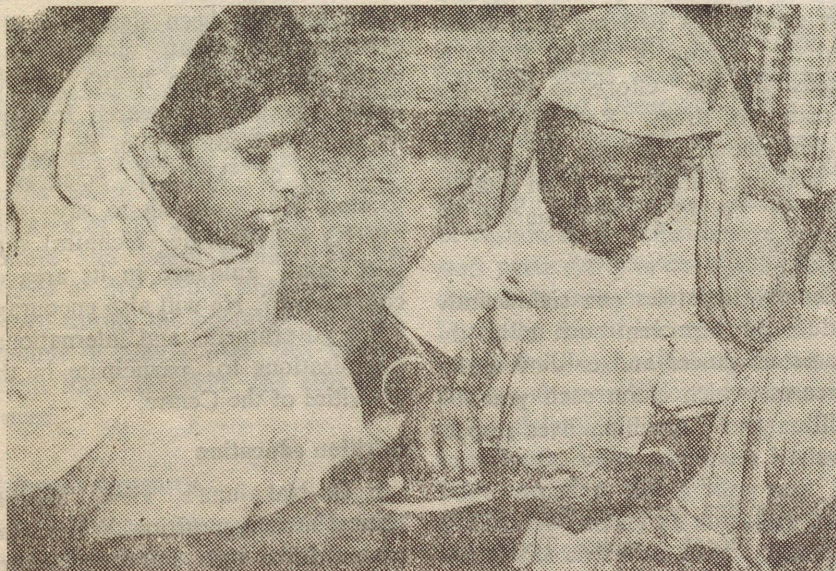
But how to live long without growing old? From the dawn of recorded history, mankind has sought the fountain of youth. Some scientists believe that one is as young as one's

It is an established fact that all living creatures can live seven to fourteen times as long as the time required to attain maturity. Man attains maturity at the age of twenty; therefore he should live one hundred and forty years.

glands; others believe that one is as young as one's colon. Metchnikoff's secret of youthfulness was to wage war on toxic bacilli in the colon by marshalling against them armies of beneficent bacilli contained in *yoghurt*. According to an English Doctor William Osler, one is as young as one's arteries. Said Bogomolets, one is as young as one's connective tissues. He made world wide headlines by perfecting A.C.S. (antirecticular cytotoxic serum) and stating that with regular injections of A.C.S. plus reasonable care, we can all live to be one hundred and forty years. A French Doctor Saint Pierre believed that one is as young as one's blood. In Paris today, people go to him who, out of fresh young human blood, makes a serum and injects it into the bodies of ageing men and women.

But Gayelord Hauser believed that one is as young as one looks, feels, thinks, hopes, believes and acts. And all these depend on three things:

One is as young as one looks, feels, thinks, hopes, believes and acts.



- Good food;
- A strong, vibrant body;
- An adventurous spirit.

In short, he believes that one is as young as one's diet. Dr Henry C. Sherman of Columbia University, who is considered one of the world's outstanding authorities on nutrition, stated that given the right selection of foods, *i.e.*, good nutritive diet, human life can be greatly extended and the later years can be lived in much fuller measure of usefulness.

What is meant by **good nutrition**? First, it is the adequate nutrition giving the individual cells of the body not only the quantity but also the quality of nourishment they require. Over-nutrition through excess calories stored as fat, can contribute materially to physical deterioration and the ageing process. Even when the body is functioning adequately, it should have regular check-ups, preferably always at the same place where its history is known.

One by one, the so-called infectious diseases of old age are being controlled. Diabetes gives way to insulin and diet. Heart disease, hardening of the arteries, arthritis strikes, high blood pressure, etc., all are giving ground before science. With our growing knowledge of prevention and the immense progress the science of nutrition is making, the world is entering into a new *Look Younger, Live Longer Era.* Δ

MAKING LIFE LONGER

The Kirov Military Medical Academy and the National Cardiological Centre of the USSR Academy of Medical Sciences have developed drugs named Epitalamin and Timogen A.

Derived from the epithysis of calves' brain, they can regulate the functions of the neuroendocrine system, increase resistance to stress, and stimulate the immune function of cells, notably, in cancer cases. Experiments on animals have shown that Epitalamin can increase their life span by 30-40 per cent and reduce the incidence of provoked tumour formation. Clinical tests of Epitalamin have proved it particularly effective in the treatment of middle-aged women with hormone system disorders. This drug is the only one of its kind in the world.

Timogen A is based on protein derived from calves' thymus gland and is used to treat diseases that weaken immune reaction, such as acute and chronic inflammatory processes and viral infections, and post-operative conditions.

Timogen A and Epitalamin can also be used in the treatment of AIDS.

— Soviet Features

HEALTH FOR ALL

— Where are we today?

DR Hiroshi Nakajima, Director-General of the World Health Organization (WHO), addressing the Second Regular Session of the United Nations' Economic and Social Council held in Geneva (4-27 July 1990), drew the attention of the Council to "the powerful linkages between health and development". He pointed out that "like the world economic situation, the world health situation is improving generally, but the disparity remains great between developed and developing countries and even between population groups in some countries". In his view, "the high rate of avoidable maternal mortality in many developing countries, and the difference in life expectancy between the rich and the poor, are unacceptable". There is no doubt that within the context of the world economic situation, the debt crisis and related adjustment policies have direct bearing on people's health.

Where are we today?

So, where does the international community stand in terms of achieving the goal of Health for All by the Year 2000? Despite the gloomy economic predicament, even the lesser developed countries have managed to chalk up a few successes during the last decade. According to Dr Nakajima, "global trends in such critical indicators as infant mortality and life expectancy at birth are improving. During the past decade, three to four years have been added to life expectancy, which globally is now about 61.5 years.

Now, on average, the number of children who die in infancy is 15 per thousand in the developed countries and 79 per thousand in the developing world. Today some 60% of the children in developing countries who reach their first birthday have been immunized against the major childhood diseases, compared with fewer than 5% in 1974". It is very encouraging to see that even within the low socio-economic bracket truly impressive results can be achieved. But, worldwide, there are still too many challenges and constraints facing the global community.

AIDS—A most serious threat

The Director-General singled out AIDS as "a most serious threat to human existence". Out of presently 8 million virus-infected people, "more than half...will develop AIDS within ten years, and most will die". There is a direct, proved beyond any doubt, link between drug abuse and the spread of AIDS. WHO is intensifying its efforts to stem the demand for drugs. Recently a new programme dealing with the control of substance abuse has been established at WHO's headquarters in Geneva.

Healthy life-styles can significantly reduce and prevent such killer diseases as cancer and cardiovascular diseases, which claim each year 4.8 million and 12 million lives respectively.

Malaria has been staging a comeback in recent years. Today, its presence in some hundred countries

puts at risk about 40% of the world population.

Environment and health

In global terms, the linkage between environment and health remains of paramount universal importance. Concerning Chernobyl, the USSR authorities have re-evaluated the situation after the nuclear power reactor accident on 26 April 1986. The resulting contamination has affected parts of the three neighbouring republics in the Soviet Union creating serious health and development problems. According to the Director-General, "this is also an issue of worldwide concern... We must seize the opportunity to learn from Chernobyl, and we must make the knowledge acquired widely available for the benefit of all people". Dr Nakajima told the Council that a memorandum of understanding with the Soviet authorities has been signed for the establishment of an international centre for radiation health at Obninsk, where the Research Institute of Medical Radiology of the USSR Academy of Medical Sciences is located. He went on to say that "WHO will provide technical support and guidance in its area of competence". He will also encourage other governments and international organizations to participate in the activities of the Centre.

Nutrition education

In Dr Nakajima's view, "another critical area is nutrition. Widespread malnutrition and improper nutritional practices are evident, even in

areas where food is plentiful". Priority should be given to "the education of people in sound dietary habits, and to infant and young child feeding and nutrition".

Finally, WHO's Director-General voiced grave concern with regard to "a steady decrease in real government expenditure on health in many developing countries. Accompanied by the lack of economic

growth, rising unemployment, diminishing expenditures on health-related sectors, such as education, water supply, and sanitation, and the natural disasters that beset certain countries and regions, this means that millions of people remain critically vulnerable at the start of the new decade. In fact some have already lost part of their hard-won social gains".

He called on the Economic and Social Council to "respond to this situation boldly. We must come to regard the health of people as the *sine qua non* of development, and therefore we must invest in human health. We cannot allow governments' economic debts to become debts in human lives. People play the central role in development".

(contd. from page 168)

prohibition of the illicit cultivation of opium and cannabis. A few ventures were undertaken by the Narcotic Control Bureau (N.C.B.) and Narcotic Commissioner, Gwalior. The operation was carried out in the month of April 1989 in the mountain areas of North-West of Uttar Pradesh and destroyed acres of poppy crops.

The Yield from the area was 60,000 kg. of quality opium and the production of heroin out of it would be 1000-1200 Kgs. The total 200 acres covered under this operation were spread over 15 villages. This area was acting as transit point for Golden Crescent and Golden Triangle.

Another operation was carried out in the month of February 1989, by the Anti-Smuggling and Narcotics Cell of the Custom Board and destroyed the cannabis plants yielding Ganja worth Rs. 35.5 crores over the area of 285 acres on the hills of Kerala and Tamil Nadu. The 3.4 tonnes of dry Ganja were also destroyed during the operation. A huge amount of Ganja over 27.5 tonnes worth Rs. 2.16 lakhs was also destroyed.

Stringent measures

The Narcotic Drugs and Psychotropic Substances Act, 1985 was being implemented as an immediate

measure to make strict provisions for the control and regulation of operations relating to Narcotic drugs and psychotropic substances and for matters connected therewith. Secondly, the Central Government has taken measures for preventing and combating abuse of illicit trafficking in narcotic drugs, etc.

The Narcotic Drugs and Psychotropic Substances (Amendment) Act, 1988 provides death penalty on second confiscation in respect of drug offences. Drug trafficking offences have been made cognizable and non-bailable. It also provides for forfeiture of property of drug offenders.

Foreign help

India is a signatory to the UN convention against illicit-traffic of narcotic drugs and psychotropic substances of December 1988. The convention ushered into an era of co-operation. It further provided mandatory sanction for punishment of certain drug offenders in transit state particularly in developing countries. India sought foreign help from European countries and U.S.A. to tackle the drug trafficking and drug abuse and stressed for regional meet on participation and co-operation with South Asian countries. UN and USA extended 200 million and 50 million US dollars as monetary help to India to check on drug trafficking, strengthen the enforcement agencies,

drug abuse awareness to create more drug treatment and rehabilitation facilities.

Two intervention studies were carried out in 1986. The first one was done on behalf of Indian Council of Medical Research—a study on the effects of intervention programme on Non-Medical use of drugs in the community. The basic objective of the study was to intervene in the habits of alcohol and tobacco use in slum areas and among industrial workers. The package consisted of slide projector, and question answer sessions. This study gave some encouraging results.

Another study was conducted on behalf of Tata Institute of Fundamental Research. The Study was done in Gujarat, Kerala and Andhra Pradesh. Health education package consisted of films, posters, newspaper articles, slide and radio programmes, etc. This study also brought fair change among the user's habits.

The five regional workshops were also held at Bombay (Maharashtra), Gauhati (Assam), Hyderabad (Andhra Pradesh), Delhi, Madras (Tamil Nadu) to deliberate the regional drug abuse problems and consolidate accepted measures at the national level to overcome the growing problems and prevent further deterioration. Δ

EXPERIENCES WITH COMMUNITY PARTICIPATION IN HEALTH CARE

DR RAMESH M. CHATURVEDI

DR S. KARTIKEYAN

Of late, a lot of emphasis has been laid on the need for community participation in health programmes in order to achieve the goal of Health For All by 2000 A. D. Owing to a variety of factors like lack of health consciousness, low socio-economic status, illiteracy, poor sanitation and unsafe water, the health status of the average slum dwellers leaves much to be desired. It has been the endeavour of the governmental, municipal and voluntary agencies to improve the situation in the slums.

The authors in this article share their experiences as health professionals in Malvani, a slum area in the western suburbs of Greater Bombay, populated by about 70,000 inhabitants belonging to the lower socio-economic strata of the society.

A preliminary survey carried out to unravel the details about the prevalent problems in Malvani revealed that the primary immunization coverage was a bare 40 per cent. The incidence of diseases in the under five children accounted for: scabies 5%, helminthiasis 20% and nutritional deficiency diseases 40%.

In fact, the water supply was adequate and minimal sanitary facilities did exist, but due to lack of civic sense among the slum dwellers, these facilities provided by the Municipal authorities were either misused or damaged.

Enquiries with the water supply department revealed that the pressure of water supply in Malvani was much higher than that in the neighbouring areas. However, the taps installed by the Municipal Corporation were stolen by the slum dwell-

ers. Some taps were leaky while water was allowed to run waste from other taps till the Municipal supply was switched off; the water supply being intermittent in Bombay.

In many of the sanitary blocks, constructed by the Municipal Corporation, the doors were stolen and sold off. A few sanitary blocks were being used for storing locally distilled illicit liquor. Many closets got clogged as women threw sanitary pads in them. It is not uncommon to see children defaecating just outside sanitary blocks; even if these were fully functional.

Community involved

Thus it was decided that the community people should solve problems of their own making. Two representatives from each plot (one plot contains approximately 150 houses) were selected to act as a link bet-

ween the health centre and the community. One representative was responsible for water supply and sanitation, who was provided with necessary guidance as to whom to approach in case of a problem. The second representative was responsible for organizing the other health activities in their respective plots. An outdoor clinic was already functioning in the area for minor medical care. The programmes for mass field immunization were drafted and one copy each of the same was handed over to the concerned representatives for organization of the immunisation programme and its publicity.

The initial response was encouraging but soon the decay set in. The community representatives started accompanying patients to the health centre and persuaded doctors to give VIP treatment to such

patients. Few among them even resorted to extortion of money from such patients for their services and alleged that doctors took a share of the money for their special services.

Watch-dog committees

However, some sincere community representatives formed watch-dog committees which were responsible for sanitation in the respective plots. The committees provided bins near the latrines where used sanitary pads were to be dumped; to be disposed of later. Such sanitary blocks were well maintained.

Political affiliations

After about six months, these representatives affiliated themselves with some political organisations and started devoting more time to political activities. Some of them contested the civic elections. In their election campaigns they claimed all credit for the services rendered to the community by the health care personnel and tried to project themselves as *messiahs* of the slum dwellers.

By the end of one year, the health staff had developed enough rapport with the community and so in a few plots it was decided to do away with some of these representatives even though they later tried to create nuisance by using their political clout. However, our relations with the other community leaders remained cordial and they were very cooperative with the health care personnel.

Community health volunteers

The other alternative to involve community members in health care was to appoint community health volunteers (CHV). They were selected from the community in such a way that they represented all religious and cultural groups and were paid a stipend of Rs. 100 per

month by the Municipal Corporation. Their appointment did improve the performance of our health team, but the CHVs were unhappy over the paltry stipend of Rs. 100 p.m. They complained that they could earn much more money by working as house-maids without the responsibilities of a CHV. Out of 14 CHVs, six dropped out in the very first month following their appointment while the remaining eight continued in service, hoping for better prospects in the future.

We realized that programmes, in which person-to-person contact was established, were very successful, like the family planning programme where the husbands (decision makers

in the family) were involved in the antenatal care programme.

However, some slum dwellers mistook the zeal of the health care personnel and the CHVs. They thought that the health care personnel had their own selfish motives when they came to work in the slums.

It can be concluded that no amount of health education or missionary zeal can help unless people realize that the proffered facilities are in the interest of their own health. Once they are convinced about the objective of the programme, a lot can be achieved in community participation. Δ

DISEASES OF LIFESTYLE

The "Inter-Health" programme, recently launched by WHO, sounds a warning against the threat posed by noncommunicable diseases—the diseases of lifestyle—and urges nations to act against them.

"We estimate that, in developed countries, 75 per cent of any adult population is at risk of one or more of the noncommunicable diseases," declared Dr Evgueni Chigan, Director of WHO's Division of Noncommunicable Diseases and Health Technology, at the launch of the programme. As for the developing world, as longevity increases and as communicable diseases are conquered, it is inevitable that noncommunicable diseases will become a new problem.

According to WHO, noncommunicable diseases are the cause of 70 to 80 per cent of deaths in developed countries and of 40 to 50 per cent in developing countries. Virtually all these diseases are caused by choice of lifestyle—notably by too much fatty foods, salt, and alcohol; by tobacco; by a lack of exercise; and by polluted air.

Improper diet, for instance, carries the risk of stroke, heart disease, hypertension, colorectal and stomach cancers, diabetes, osteoporosis (a bone disease), malnutrition, obesity and gastric ulcers. Tobacco use carries the risk of heart ailments, lung and mouth cancers and serious respiratory diseases.

The aim of WHO's Inter-Health programme is to promote healthy living, as well as to advance the cause of tobacco free societies. Lifestyles are no longer purely conditioned by climate or by culture. As Dr Chigan said, they are "influenced by newspapers, magazines, radio, films and television. Lifestyles are imitated as fast as the written and electronic media transmit ideas from country to country." Δ

—WORLD HEALTH

AIDS :

— STRETCHING THE SAFETY NET

The Government is sparing no efforts to stop AIDS from spreading further. The National AIDS Control Programme consists of three major components—surveillance, health and community education and ensuring safety of blood and blood products. Fortyone surveillance centres in different parts of the country and four referral centres have been established with the specific objective of screening persons belonging to high-risk groups.

DESPITE stiff resistance, the dreaded disease Acquired Immunodeficiency Syndrome (AIDS) is slowly spreading its tentacles all over the world. After being detected first in 1981 in the United States of America, the disease today has emerged as one of the major dangers that threaten mankind. The statistics are frightening. As on October, 1989, 1,82,463 cases have been reported to the World Health Organization (WHO) from 152 countries. However, the WHO estimates that about 3,75,000 cases have been diagnosed upto 1989. The number of people infected with HIV virus as on today is about 5 to 10 million.

Current short term predictions estimate a global cumulative total of over one million AIDS cases by 1991 and another five million new cases would be added by the turn of the century. The number of people infected by the virus would also go up by three to four times. Another alarming fact is that Asia may experience an abnormal ten-fold increase of AIDS cases in the same period due to various reasons.

Relentless fight against AIDS

However the fight against AIDS is carried out relentlessly by medi-

cal scientists the world over. And most scientists believe that any significant breakthrough including developing a vaccine is not possible before the mid-nineties. Till then, the only hope is a continued strong and coordinated global programme which may prevent almost half of the new HIV infections in this decade.

Myths and misconceptions

The various myths and misconceptions about the disease are also proving to be barriers to its prevention and control by keeping people away from taking necessary precautions. In a recent survey conducted in India, it was found out that though 90 per cent of the adult urban population was aware of the disease, only 40 per cent realised the gravity of it and the future implications.

In India, 40 persons—which include 12 foreigners—have so far developed the disease. As on October 1989, 1650 persons have been found to have HIV infection.

AIDS Control Programme

The Government is sparing no efforts to stop this dreadful disease from spreading further. The Natio-

nal AIDS Control Programme consists of three major components—surveillance, health and community education and ensuring safety of blood and blood products. Fortyone surveillance centres in different parts of the country and four referral centres at Christian Medical College, Vellore, All India Institute of Medical Sciences, New Delhi, National Institute of Communicable Diseases, Delhi and National Institute of Virology, Pune have been established with the specific objective of screening persons belonging to high risk groups. Surveillance helps to understand the mode of transmission of the disease in different parts of the country to assess the status of HIV infection and its distribution within selected population and monitor changes in prevalence of HIV infection in selected groups.

Blood and blood products

Another important component of the programme is testing of blood donors to eliminate the possibility of transmission of AIDS through blood. At present, all the surveillance centres are being utilised to test blood donors for HIV. The Indian Council of Medical Research (ICMR) has also established 28 exclusive zonal blood testing centres in

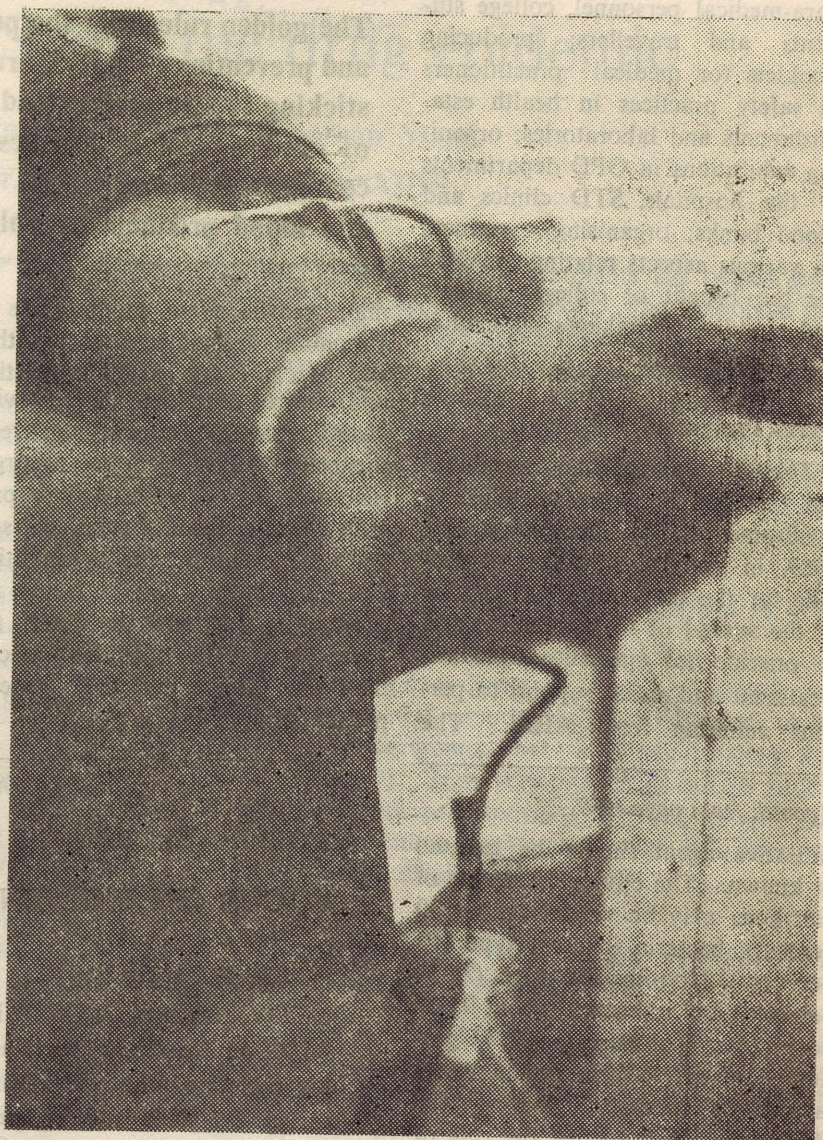
the metropolitan cities of Bombay, Calcutta, Delhi and Madras to test the blood donors by establishing linkages with the blood banks. An additional 37 zonal blood testing centres will be established soon. These centres will be located in all major cities (population exceeding five lakhs) in the country.

All the 18 units which manufacture blood products in the country have been instructed to strictly follow the guidelines issued by the Government which include testing each blood donor for HIV infection and testing every batch of imported blood products for HIV antibodies.

Medium term plan

A medium term plan for the prevention and control of AIDS has been formulated for a period of three years commencing from 1990 to 1993 with an expenditure of Rs. 38 crore. The long term objective is to ensure early detection of suspected AIDS cases, institute effective steps for prevention of transmission of HIV through blood and blood products and reduce impact of HIV infection by providing medicare and counselling services in areas where persons belonging to high risk groups are concentrated.

For efficient clinical management of HIV infected persons and AIDS cases, facilities have been developed at 10 medical colleges in the country. They are K.G.M.C. Lucknow; A.I.I.M.S., New Delhi; S.M.S. Medical College, Jaipur; Institute of Medical Sciences, Srinagar; Medical College, Trivandrum; Medical College, Calcutta; Osmania Medical College, Hyderabad; S.C.B. Medical College, Cuttack; Madras Medical College, Madras and J.J. Hospital, Bombay. The Government of India in collaboration with the W.H.O. has so far organised 11 training courses for physicians and nurses in the clinical management of AIDS



One of the important components of the programme is testing of blood donors to eliminate the possibility of transmission of AIDS through blood.

cases in different parts of the country. The medical officers so far trained include 220 doctors and 110 nurses.

Educational materials

Publicity materials for information of the general public are developed by the Central Health Education Bureau (CHEB). Advertisements in newspapers, hoardings, printed materials (posters and folders),

cinema slides etc., are being used to disseminate information.

The CHEB will also be developing, testing and producing health education material as well as messages for creating awareness about HIV infection especially among persons belonging to high risk groups such as prostitutes, patients attending STD clinics, jail inmates, professional blood donors, medical/

para-medical personnel, college students and travellers; producing booklets for medical practitioners in safety practices in health establishments and laboratories; organising exhibitions in OPD departments of the hospitals, STD clinics and blood banks; organising seminars on various aspects relating to AIDS for the benefit of college students and establishing linkages with adult education centres.

AIDS Prevention Bill

The Government had introduced the Acquired Immunodeficiency Syndrome (AIDS) Prevention Bill, 1989, in the Rajya Sabha, to provide for the prevention and control of the spread of HIV infection and to provide for specialised medical treatment and social support to persons suffering from AIDS. The

(contd. from page 158)

causative agent should be isolated or known. The etiological agents of diarrhoea may be viruses (about 20 per cent), bacteria invasive type (10 per cent), Non-invasive type (25-30 per cent) and unknown (about 25-30 per cent). The last group is gradually on the decline due to better laboratory methods. Among the above etiological agents, the role of drugs can be justified only in invasive bacteria. Drugs have no justification in diarrhoea due to viruses, non-invasive bacteria (which release toxin) and in those of unknown etiology.

Diarrhoeal diseases constitute an important health problem in all developing countries. Various methods of management are available but reliance should mainly be on technology which is safe, cheap, universally available and easily administered especially in relation to the mother. In this context home available fluids are the most feasible. △

The golden rules that the public should follow for the control and prevention of AIDS are safe sex practices which means sticking to one partner and using condom, avoiding sharing of needles, tooth brushes, razors or anything that gets contaminated with blood and ensuring safety of blood and blood products by voluntary replacement donation.

main provisions of the bill are to appoint a designated health authority to carry out AIDS prevention and control activities and provide health education, counselling, treatment to infected persons, to organise reporting of cases and to provide for the establishment of surveillance centres in consultation with the State Governments for conducting surveys to detect the presence of HIV infection among high risk groups and the general population.

Ultimately, the success of the AIDS control programme depends on the public and their awareness of it. The golden rules that the public should follow are safe sex practices which means sticking to one partner and using condoms, avoiding sharing of needles, tooth brushes, razors or anything that gets contaminated with blood and ensuring safety of blood and blood products by voluntary replacement donation.

—P.I.B.

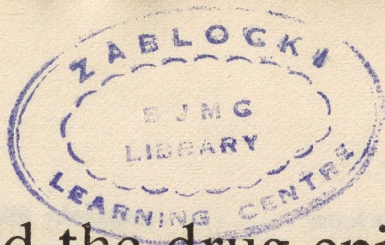
WORLD AIDS DAY — 1 DECEMBER

FOCUS ON WOMEN AND AIDS

World AIDS Day—1 December—this year will focus attention on “Women and AIDS.” It will underline the increasing impact of AIDS on women, as well as the crucial role women play in preventing infection with the human immunodeficiency virus (HIV) and in caring for HIV-infected people and people with AIDS. The Day will also highlight the broader framework of women, health and development, particularly at the country level.

Announcing this special theme, WHO's Director-General, Dr Hiroshi Nakajima, stressed the need for women to participate actively in primary health care; all too often the high illiteracy rate among women is a major obstacle. “Women”, he said, “are the key to achieving Health for all.”

World AIDS Day 1990 will particularly highlight the link between the status of women within the family and society, and their vulnerability to infection and its consequences. It will also draw attention to the special concerns related to HIV/AIDS and pregnancy, childbirth and raising children. △



HIV/AIDS and the drug epidemic

—An Interview with Dr Jonathan Mann,
Director, Global Programme on AIDS

1. How extensive is infection with HIV and AIDS among drug users?

The United Nations has estimated that there may be as many as five million injecting drug users in the world today, of whom the majority are not HIV-infected and remain vulnerable to HIV infection. Intravenous drug users represent a large proportion of reported AIDS cases on the East Coast of the United States and in southern Europe, especially in Spain and Italy. In Asia, extensive spread of HIV infection among drug users has also been documented in Thailand, and HIV infection has been found among intravenous drug users in Rangoon, Myanmar. Thus, the global epidemic of drug use threatens to expose new populations to explosive HIV spread.

2. What is the major mode of transmission of HIV among drug users?

Those who share needles without properly sterilizing them are at high risk of becoming infected with HIV. Drug users who become infected also infect others, not only through sharing of needles and syringes, but through sex and through transmission from mother to foetus or newborn child.

3. What sort of activities has the Global Programme on AIDS (GPA) undertaken to meet this challenge?

GPA has reviewed current research and has developed a WHO multi-center study on drug injecting and risk of HIV infection. In these efforts, WHO is collaborating closely with the United Nations Office in Vienna. We have also organized a series of meetings to develop a global policy and work with country programmes. We are now evaluating the effectiveness of some of the innovative approaches being carried out to prevent HIV infection among drug users. Some examples of these programmes include needle exchange, programmes for the distribution of bleach for cleaning needles and syringes, and other efforts to increase the availability of clean needles and syringes.

4. How can education and the media help slow or prevent transmission of HIV among drug users?

We know that educational and information programmes can work. For example, we have seen evidence

in New York City where the media has helped get a prevention message to drug users. The stereotype that drug users "don't care about their health" is not true. They have shown that they can be reached by information and they have the capacity to change their behaviour. But it's clear that we are going to need more than a media campaign or educational programmes. We must think of targeted programmes and support to reach this hard-to-reach group.

5. How important is the health component of drug prevention programmes?

Drug prevention programmes based exclusively on coercive or punitive approaches simply cannot be as effective as programmes that take into account the health dimension. It is very important not to forget or lose the health perspective in thinking about drug use. Drug prevention programmes must take into account the health dimensions.

6. What is the biggest danger in the development of the AIDS epidemic among drug users?

The danger is in the presence of a large group of drug users in different countries who remain susceptible to HIV infection. The majority of drug users are still HIV negative, so we need to protect them. Also, the worldwide epidemic of injecting drug use is continuing to worsen. The increasing use of injectable cocaine, for example, may be important in some areas of the world. Crack cocaine and "sex for drugs" is also associated with the transmission of HIV.

7. Looking to the future, can you tell us where you see the AIDS epidemic going among drug users? What should the WHO response be to this challenge?

The general point is that drug use is one of the important routes of HIV transmission. Our role is going to be to help stimulate and reinforce the health approach to drug use prevention, treatment and rehabilitation. We believe very strongly that drug use can be prevented and treated. The concern about AIDS and drug users can help generate the needed social and political commitment to deal more effectively with the serious global problem of drug use. Δ

WORLD NO-TOBACCO DAY—31 MAY OBSERVED

TOBACCO AFFECTS EVERYONE

--Say Experts

TOBACCO smoking or chewing has become an addiction with people. And the ill-effects have become an epidemic in India, said Prof. G. K. Vishwakarma, Director General of Health Services. Out of estimated 800 million people in India, about 337 million people above the age of 10 years consume tobacco in one form or the other. An estimated 10 lakh persons die prematurely every year due to diseases related to tobacco consumption, he added.

Prof. Vishwakarma was inaugurating the symposium on 'Tobacco or Health' organised by the Central Health Education Bureau (C.H.E.B.) as part of the activities for observance of the World No-Tobacco Day on 31 May, 1990 at the India International Centre, New Delhi. The No-Tobacco Day has been observed by all member countries of W.H.O. for the last three years. This year, the theme was—**"Childhood and youth without tobacco"**.

Emphasising that the ill-effects of tobacco use hardly spare any part of the body, Prof. Vishwakarma called for a multi-pronged, multi-sectoral concerted attack against the problem of tobacco use. Special stress needs to be paid on preven-

tion of starting of smoking, he said. **One-third of all cancer cases from Tobacco use in India.**

Dr. Usha K. Luthra, Additional Director General of the Indian Council of Medical Research (ICMR) New Delhi, in her talk mentioned that cancers of the oral cavity and voice-box, heart attack, stroke, paralysis, chronic cough and asthma are some of the consequences of tobacco use. Woman tobacco users may deliver low-birth-weight babies or may even have still-births, she said. They may suffer from cancer of the uterine cervix.

Dr. Luthra outlined the various studies conducted by I.C.M.R., and said, "Estimates show that one-third of all cancers in India are related to tobacco use and this proportion increases to 50% in males. The new cancer cases would increase by 31% by 2001 A.D., if the prevalence of tobacco use does not change". As health education has a great potential for reducing tobacco consumption, the Government of India has included primary prevention of tobacco related cancers as one of the main objectives of the National Cancer Control Programme (1984), she added.

Towards realisation of the dream of a **"Tobacco-Free Society"** she

exhorted the people to brace a generation of tobacco-free youth. "If we succeed in impressing upon the young minds to desist from usage of tobacco, they can be the best leaders in anti-tobacco campaign", said Dr. Luthra.

She was of the firm view that it is time we realised the net loss inflicted on society by tobacco use in terms of man-hours lost, health care required etc. far outweigh the gain accrued to the exchequer from the tobacco industry. On a conservative estimate, the annual net economic loss to the nation on this account would be Rs. 650 crores, she said.

Dr. Luthra added that the community education programmes by I.C.M.R. have shown encouraging results in effecting a decline in the use of tobacco. A study conducted by the Tata Institute of Fundamental Research proved that 9 to 17% of the people stopped using tobacco while another 20 to 49% reduced its consumption on being educated about the ill-effects of tobacco on health. This educational effort was organised at Srikakulam (Andhra Pradesh), Bhavnagar (Gujarat) and Ernakulam (Kerala). Another educational programme is in progress at four centres in Bangalore, Goa, Agra and Trivandrum.

Making special mention of the encouraging results obtained in another anti-tobacco community education programme of ICMR being run in Bangalore, Goa, Agra and Trivandrum, Dr. Luthra said that people were successfully persuaded to either stop or reduce the consumption of tobacco through health education. Research has shown that daily intake of one *Katori* of *subzi* by tobacco users reduces the ill-effects of tobacco, she said.

Lung Cancer more in smokers

Dr. D. D. Kulapathi, who heads the Department of Medicine of Maulana Azad Medical College, New Delhi, said that smoking causes chronic bronchitis and chronic obstructive lung disease apart from affecting the lips, tongue, mouth, throat, pharynx, cervix, urinary bladder etc. In India, cancer of lungs is 8.6 times more amongst smokers than among non-smokers, he said. *Bidi* smoking carries a higher lung cancer risk than cigarette smoking owing to the large amount of tar.

Smoking incapacitates

Col. K. L. Chopra, Chairman of the Heart Care Foundation of India said smoking incapacitates a person in more ways than one. It reduces fertility in both men and women. It leads to arteriosclerosis (hardening of the arteries) and narrowing of the arteries of the penis causing impotence. Still-births are more among women who smoke.

Heavy smokers have more of carboxy-haemoglobin in their blood. Severe exercise by such persons cause 'Sudden Death', Col. Chopra said.

'Smoking is a gateway to drugs' he added, cautioning the parents and teachers to set a model for our young population.

Plea for health education

Dr. Helmet Sell, Regional Adviser of the World Health Organization said that any prohibitive action by the Government is perceived by the people as punitive rather than preventive. He made a plea that for social legislation to be effective, it should be complemented by a strong health education programme.

The best way to stop smoking is 'not to start smoking', so says a folder on 'Tobacco and your Health' specially published by Central Health Education Bureau on the occasion and distributed among the gathering. The folder in Hindi and English highlights how tobacco is dangerous to health, the diseases related to tobacco use and how

smokers can harm even non-smokers, apart from messages for smokers.

Measures to discourage tobacco use

Proposing a vote of thanks, Dr. (Mrs.) N.A. Nath, Director, CHEB, mentioned the measures being taken to discourage tobacco use. The Director General of Health Services has written to all the Secretaries to ban smoking in Government Offices. Railway authorities have also been approached to prohibit sale of tobacco products on platforms and for having smoke-free zones in the train compartments, she said.

A Health Exhibition depicting the harmful effects of tobacco use through a variety of visuals was also organised on the occasion. △

ANTI-SMOKING LEGISLATION IN INDIA

In India, the proposal for anti-smoking legislation is under active consideration of the Ministry of Health and Family Welfare in consultation with the Ministry of Industry, Finance, Information and Broadcasting, Law etc. One of the items in the proposal is prohibition of advertisements of cigarettes in Radio and Television. The proposed legislation also includes an item for projection of slides for depicting the harmful effects of cigarette smoking before every show in Cinema halls and also on Television. Voluntary Health Institutions are also involved in Health Education Programmes for prevention and early detection of cancer, where the ill effects of smoking are also highlighted.

The other salient features of the proposed legislation include expanding the existing statutory warning on cigarette packets to add telling slogans like "Smoking can lead to Oral Cancer", "Smoking can cause heart problems", "Smoking may reduce your life span" and "Smoking can aggravate respiratory problems", displaying the statutory warning prominently on the cigarette packets, prohibition of advertisements on cigarettes, existing regulations concerning non-smoking in public places of entertainment and transport to be rigidly enforced and to be extended to other areas such as Government offices, hospitals and health care establishments, educational institutions and airports. △

—P. I. B.

WORLD POPULATION DAY—11 JULY 1990

Following was the text of the message of Dr Nafis Sadik, Executive Director, United Nations Population Fund (UNFPA) on the occasion of World Population Day, 11 July 1990:

JULY 11 is observed as the World Population Day, its aim is to focus public attention on the urgency and importance of population issues particularly in the context of overall development plans and programmes and the need to find solutions to pressing population problems throughout the world. In 1989, the thirty-sixth session of the Governing Council of the United Nations Population Fund (UNFPA) recommended that 11 July be observed annually by the international community as World Population Day. It is an outgrowth of the "Day of Five Billion" (celebrated on 11 July 1987).

World Population Day offers a unique opportunity to remind ourselves that population is a glo-

bal issue. The growth and movement of population affect first and foremost the nations of Africa, Asia and Latin America, where nearly all population growth takes place. But population issues also have a major impact on the world economy, migration patterns and the environment.

"A growing population means a greater need for land, food and work. When it is out of balance with resources, it may place an unduly heavy burden on the ability of countries to meet the need for schools, health care, housing and other services.

"Governments in developing countries increasingly believe that rapid population growth and its uneven distribution hold back

development efforts. Population issues affect the life of every one of us, whatever country we live in, and whatever its rate of population growth or level of development.

"Slower, more balanced population growth is in the interest of us all. It is also within the power of all of us to decide. National decisions can help to inform personal decisions in this regard—the decision for greater investment in education, especially for women and girls, health care, employment and family planning.

"World Population Day reminds all of us that the future depends on a balance between numbers on one hand and resources on the other."

8.5 BILLION WORLD POPULATION FORESEEN

IN a study published on 27th June, the United Nations Population Division, in its 1990 revision of population and demographic figures estimates that there are currently 5.3 million persons on earth, and at the rate things are going, nearly 100 million more will be added during 1990. By the year 2025, the total population will be 8.5 billion, an increase of 60 per cent in just 39 years.

This biennial revision shows that the world population is growing at the rate of at some 1.7 per cent each year, but by the years 2020 to 2025, average annual population growth may decrease for one per cent.

Population growth levels and trends differ markedly between the more developed and less developed regions of the world, according to the Population Division. In the last

40 years, the population of the more developed regions increased by 45 per cent, compared to an increase of 143 per cent in the least developed regions.

Projections show that during the next 35 years, the population of the industrialised regions will increase by an additional 12 per cent while the population of many third world countries will increase by 75 per cent.

POPULATION AWARDS FOR 1990

ALFRÉD Sauvy, a noted French demographer, and the Mauritius National Family Health and Population Council have won the 1990 United Nations Population Award.

Presented annually by the United Nations, the Award is given to individuals and institutions which have made outstanding contributions to increasing the awareness of population problems and to their solutions.

Mr. Sauvy was chosen by the committee because of his work focusing on the complex relationships between population, economics and social dynamics. A professor at the College de France and a former member of United Nations Population Commission, Mr. Sauvy has authored more than 40 books and numerous scientific articles.

The Mauritius National Family Health and Population Council was

chosen for the immensely successful efforts of its family-planning programme. Since 1972, the work of the Council has led to a decline in the birth rate of Mauritius, an increase in the percentage of couples using contraception and a drop in infant mortality rates.

Each winner will receive a diploma, a gold medal and \$ 12,500.

—U. N. News letter

Swasth Hind

(Contd. from page 164)

evaluation of the programme and building of disease surveillance systems;

- (v) Building up of an effective Management Information System at the Central level, both for performance reporting and management of materials;
- (vi) Development of a communication strategy for generating demand for vaccination services in selected areas where most required;
- (vii) Close monitoring of adverse reactions; and
- (viii) Field testing of samples of Oral Polio Vaccine for cold chain monitoring.

Disease surveillance

The impact of the Immunization Programme is necessarily to be measured in terms of reduction in the morbidity of these diseases. The surveillance systems to monitor disease incidence are being strengthened. All medical colleges in the country are being engaged in evaluating the Programme in their field practice areas. They are also being developed as sentinel centres for disease surveillance. The present trends which are noticeable from the available information are very encouraging. It has been noticed that the number of poliomyelitis cases being reported has significantly declined. As far as other vaccine preventable diseases are concerned, the declining trends in the case of pertussis and diphtheria are noticeably significant. The disease incidence data for the last three years, given below, supports this.

Potency testing

Field samples of the Polio vaccine (most sensitive of all vaccines to temperature changes) are taken on a regular basis to assess the quality of the cold chain through which the vaccines reach the beneficiaries. The test results for the last three years have indicated steady improvement in the efficacy of the vaccines being used.

Financial outlay

A sum of Rs. 240 crores for the Immunization Programme in the

Reported Cases

Disease	1987	1988	1989
Diphtheria	12,924	14,011	8,459
Pertussis	1,63,787	1,43,569	1,23,926
Tetanus (All)	31,854	32,729	24,753
Tetanus (Neo-Natal)	—	—	9,603
Poliomyelitis	28,250	21,146	10,336
Measles	2,33,981	1,43,542	1,44,395

country was approved in the Seventh Plan period. This included Rs. 53.55 crores for the strengthening the cold chain infrastructure and Rs. 125.12 crores for the supply of vaccines, syringes, needles and other consumables.

External assistance

External assistance for the Universal Immunization Programme is received through UNICEF to mobilise the resources from the various donor agencies. The donors include CIDA, SIDA, USAID, NORAD and Japan. In addition, a part of the general resources of the UNICEF are also committed for the programme. So far the UNICEF has provided assistance of about Rs. 191.74 crores. This assistance is spent towards import of vaccine

and cold chain equipment and towards the cost of training of the field level officers, operational expenses for vaccination sessions and salaries of additional staff.

The programme is now poised to achieve the targets set for the year 1990 except in certain parts in the country which are expected to reach the targeted levels, i.e. protect all pregnant women with tetanus toxide and at least 85 per cent of the infants with DPT, OPV, BCG and Measles, by 1991. The thrust in the 8th Plan period would be to sustain the increased levels of coverage and move in the direction of achieving the ultimate objective of the eradication of these vaccine preventable diseases.

—P.I.B.

(contd. from page 167)

The sheet anchor of the control and prevention of periodontal diseases in Indian communities is oral health education. It is most effective when integrated with general health promotional effort using mass media and group and individual counselling methods.

Groups likely to benefit most from such education and attention will be school children because of being the largest population group and, being in their formative years, they are also more receptive to imbibing education to effect a healthy attitude as well as influence family attitudes. Other target groups include adults belonging to low socio-economic classes, those with less formal education, those afflicted with unhealthy habits like tobacco chewing, smoking, paan/supari chewing, etc. Major

contents of oral health education should be the correct methods of oral cleansing keeping locally popular agents/methods in mind.

The other important aspect is provision of prophylactic/restorative dental therapy. This entails heavy inputs in terms of manpower, money and other resources and must, therefore, follow the dictates of availability and potential of existing resources. Voluntary agencies can, to a great extent contribute usefully towards enhancement of existing resources. The local training institutions can use circumscribed communities for field practice of dental auxiliaries as well as family health advisory services. Impact of such efforts should be evaluated after a period, to restructure/reinforce the efforts and mobilise public will towards better oral health. Δ

W.H.O. UPDATES GLOBAL IMMUNIZATION FIGURES

THE World Health Organization (WHO) announced on 27 July 1990 that over 70% of the world's children under one year of age are now covered by immunization against vaccine-preventable diseases. The figures were released by the WHO Expanded Programme on Immunization (EPI) which was created in 1974 to reduce childhood morbidity and mortality through immunization.

In mid-1990, immunization coverage for the world reached 74% for a third dose of polio vaccine for children under one year of age. Other global immunization figures released today by WHO are 72% third dose coverage for diphtheria, pertussis and tetanus (DPT), 81% coverage for the BCG vaccine used against tuberculosis, and 68% coverage for the measles vaccine.

However, coverage of pregnant women with a second or booster dose of tetanus toxoid has only crept up to 27%.

The Expanded Programme on Immunization said it was encouraged by the immunization coverage achieved so far. The goal of EPI is to reach at least 80% of the world's children with all the EPI vaccines by

the end of 1990. EPI said it believed WHO is nearing that goal.

The impact of the Expanded Programme has been impressive. EPI said that every minute, the lives of almost 5 children are being saved from the diseases of measles, whooping cough and tetanus of the newborn—a total of 2.6 million averted deaths each year. It has been estimated that over 480,000 cases of polio are being prevented each year with current levels of coverage of polio vaccine.

This result is due primarily to the efforts of the 166 Member States of WHO, along with WHO offices and the United Nations Children's Fund (UNICEF). The Expanded Programme on Immunization receives support from governments, the World Bank, the United Nations Development Programme (UNDP), the Rockefeller Foundation, Rotary International, the Save the Children Fund and other organizations.

With such achievements, the world now stands poised to eradicate polio by the year 2000, reduce measles cases by 90% and eliminate neonatal tetanus by 1995. To achieve these goals, even higher coverage has to be attained and sustained. △

YOUR CHILD'S EYES IS YOUR CHILD SQUINTING?

- * Squint or crossed eye is a condition when both the eyes are not properly directed while looking at an object.
- * Squint is sometimes considered a sign of luck and usually ignored. It should not be ignored because it can cause gross visual (sight) disability.
- * Most often squint develops in infancy or childhood. Persistent squint affects vision (sight) in one eye and may lead to partial blindness, if not treated in time.
- * When a mother notices squint in the child, an eye specialist should be consulted immediately.
- * Some squint can be treated adequately with glasses alone, surgery or both, or through exercise of eye muscles.
- * Squint surgery is safe and it should be done at an early stage.
- * In long standing squint the deformity can be corrected to improve appearance. However this does not help in improving the vision. (sight).

*National Society for the Prevention of Blindness-India,
Dr. R. P. Centre,
AIIMS, New Delhi-110 029.*

BOOK REVIEW

Prevention in Childhood and Youth of Adult Cardiovascular Diseases: Time for Action—Report Series, No. 792, 1990, 105 pages (available in English; French and Spanish in preparation) ISBN 92 4 120792 2 SW. fr. 12.-/US \$9-60 Order no. 1100792.

This report sets out the scientific rationale for an approach to the prevention of coronary heart disease that starts in childhood. Throughout the report, an effort is made to translate scientific knowledge about the causes of cardiovascular diseases into clear lines of preventive action, applicable in early life, that can be followed by parents, schools, physicians, public health authorities, and governments.

The book has two main parts. The first identifies risk factors for each of the main groups of cardiovascular diseases, including atherosclerotic cardiovascular diseases, hypertensive diseases, rheumatic fever and rheumatic heart disease, congenital heart disease, cardiomyopathies, and pulmonary heart disease. Evidence from a wide range of sources, including inter-country comparisons, is assessed in order to determine both the extent to which these risks are present in childhood and youth and the potential for their prevention. Details range from advice on the primary and secondary prophylaxis of rheumatic fever to facts about the role of passive smoking in the development of chronic obstructive pulmonary disease.

Drawing upon decades of experimental, clinical, and epidemiological research, the report presents convincing evidence that the processes leading to cardiovascular disease start in childhood, that causative factors are directly linked to culturally-determined risks, and that correction or avoidance of these risks needs to be an integral component of childhood preventive care.

Since severe atherosclerosis underlies most cases of coronary heart disease, the most extensive section concentrates on the potential of interventions, introduced in childhood and youth, to protect populations from the current epidemic of atherosclerotic disease. Particular attention is given to the strength of evidence linking dietary patterns, cigarette smoking, and a sedentary lifestyle to the early onset of processes leading to cardiovascular disease. Readers are reminded that atherosclerotic and hypertensive diseases begin in childhood, that the habits favouring this development are established in early life, and that the "rich" dietary patterns common in this century are the primary and essential factors that contribute decisively to the epidemic of coronary heart disease.

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Having established a rationale for early prevention, the second half of the book offers guidelines for the immediate introduction of vigorous preventive measures. Separate sections explain the need to treat "sick" populations as well as individuals at high risk, define the powerful role of schools in preventive programmes, establish criteria for successful health education and promotion, and extract a number of practical lessons from recent studies of childhood interventions. The report concludes with a discussion of areas where further research can contribute to the refinement of preventive strategies in childhood and youth. Δ

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