

# Dialogue on Diarrhoea

ISSUE No. 34

SEPTEMBER  
1988



The international newsletter on the control of diarrhoeal diseases

In this issue *DD* presents an overview of the CDD activities of WHO, USAID and UNICEF, including highlights of progress so far and priorities for future strategies.

## WHO

Ten years ago the World Health Organization began to collaborate with developing countries in the implementation of national diarrhoeal disease control programmes.

Following its establishment in 1978, the WHO Diarrhoeal Disease Control (CDD) Programme has been providing technical support and funding for countries implementing national CDD programmes. Although four million children still die from diarrhoeal diseases every year, the intensified efforts of national health personnel, WHO and other agencies have led to real progress in recent years both in national CDD programmes and in research. Since 1980, CDD programmes have been established in 96 countries, which comprise 98 per cent of the total population of the developing world. Another 16 countries are planning to implement programmes.



*Cont. page 2*



## USAID

The control of diarrhoeal diseases (CDD) is a major priority for the United States Agency for International Development (AID)'s child survival programmes. AID provides financial support and technical assistance to developing countries and national CDD programmes. Within the countries where AID is supporting programme activities the agency has set the following goals:

- to reduce infant mortality (number of deaths per thousand live births up to age 12 months) to 75 per thousand live births, and to lower child (aged under five) mortality to ten per thousand before the end of the century;
- to make ORT available to virtually every child who needs it, by 1990;
- to ensure the effective use of ORT in 45 per cent of diarrhoea episodes.

AID is pursuing these goals in 62 countries with a portfolio of over 300 projects and sub-projects.

*Cont. page 2*

## UNICEF

The 1988 State of the World's Children Report estimates that, during the last ten years, knowledge of ORT has been made available to one quarter of the developing world's parents. Nonetheless, two and a half million children still die each year from dehydration, with even larger numbers left malnourished by frequent diarrhoea episodes. Although progress has been made, much still remains to be done and UNICEF continues to see oral rehydration therapy as a priority throughout the developing world. This brief review summarises the broad trends in UNICEF's range of activities and probable directions for the future.

### Production and distribution of ORS

UNICEF has provided direct assistance to over half of the fifty-five countries now locally producing ORS. In some this has taken the form of equipment



*Cont. page 2*

## In this issue:

- Agency reports from WHO, USAID and UNICEF
- Key issues in ORT

## AHRTAG

Appropriate Health Resources &  
Technologies Action Group Ltd

# CDD review: agency reports

## WHO . . .

Training is a major activity, with emphasis on courses in supervisory skills for mid-level health workers and training in programme management for senior level staff. Training in technical aspects, especially case management, has also received priority, as well as the development of manuals and guidelines for general distribution, and training packages for diarrhoea training units, medical schools and training institutions for paramedical staff.

### Access to ORS

By the end of 1986, it is estimated that 59 per cent of the developing world population had access to Oral Rehydration Salts (ORS) — an increase of 16 per cent over 1985. In 1986, 300 million ORS packets were distributed, of which two-thirds had been produced in 55 developing countries, and an estimated 23 per cent of children under five with diarrhoea received ORS or a recommended home solution. This rate of use may have prevented some 700,000 deaths from diarrhoea in 1986.

WHO is now urging programmes to focus their efforts on activities which will lead to **correct** case management. Top priorities are: managerial and clinical training of staff at all levels, including both government and private health providers; communication activities that are carefully planned and carried out at appropriate stages in national programmes; and the solving of problems that hamper programme progress.

### Research

Since 1984 a considerably expanded programme of biomedical and epidemiological research has been in operation, managed by three Scientific Working Groups. The total number of projects supported by the Programme between 1980 and 1987 was 452, and progress has been made in a number of priority areas. Studies have confirmed that rice-based ORS can lessen the volume and duration of diarrhoea and new projects have been initiated to examine its benefits in young or malnourished infants and to determine whether a packaged product can be prepared. ORS containing L-alanine appears to have similar benefits in cholera and is now being evaluated in acute, non-cholera diarrhoea. Evidence is also now available that confirms beyond any doubt that early feeding during diar-

*Cont. page 8*

## USAID . . .

Success will only be achieved when the following are both met and *sustained*:

- a satisfactory primary health care system;
- widespread and effective distribution of ORS packets through the health care and drug distribution system;
- involvement of both private and public sectors;
- effective outreach and communication.

Oral rehydration therapy (ORT), a cornerstone of AID's policy, is being balanced with other primary health care interventions including:

- immunisation — particularly against measles;
- nutrition — especially breastfeeding promotion, improved weaning practices, continued feeding during diarrhoea and increased feeding after diarrhoea, vitamin A supplementation where appropriate, growth monitoring and targeted supplementary feeding of children under three years of age and pregnant women where there is risk of malnutrition;
- prevention of diarrhoeal diseases — particularly in the areas of water and sanitation, personal hygiene, education and development of new vaccines for cholera, rotavirus, shigella, typhoid and other enteric organisms.

The agency recognises that a strong basic health care infrastructure is critical for linking ORT with other primary health care interventions and provides programme support to strengthen health care through training and supervision, ensure adequate supplies of ORS, and provide guidance in reporting, finance and evaluation. AID supported projects are examining strategies to assure a long term financial commitment to CDD and other child survival activities.

### Training, supplies and communication

Training is a key component of AID's policy. Agency supported programmes are paying increasing attention to promoting ORT and other case management skills among government and private health professionals. One project, Technology for Primary Health Care (PRITECH), is working with the World Health Organization

*Cont. page 8*

## UNICEF . . .

and setting up production facilities, in others of joint technical assistance with WHO in areas such as quality control, packet design and standardised instructions. In several parts of Latin America and Asia, local production is now well-established, often replacing imports entirely. In a few African countries (e.g. Burundi and Madagascar) local production facilities are getting underway.

UNICEF is also assisting governments with ORS distribution, using special distribution schemes set up for this purpose or, more often, including ORS in existing delivery networks (e.g. for vaccines or essential drugs) to ensure that adequate supplies reach all parts of the national health care systems.

### Promotion of ORT

Almost every UNICEF field office is involved in some way in the promotion of oral rehydration therapy as the preferred treatment for diarrhoea and dehydration. The nature and scope of UNICEF assistance depends on government priorities and resources, but a few general trends are clear. First, effective case management of diarrhoea is promoted within the health care system, including correct diagnosis of dehydration, proper advice on continued feeding, use of ORS, and administration of intravenous therapy and antibiotics when necessary. Techniques to promote correct treatment include the establishment of diarrhoea training/demonstration units (DTUs) in major health facilities, training of regional managers and supervisors throughout the country and setting up of ORT 'corners' in more peripheral health facilities. UNICEF also assists in conducting training sessions, including sufficient demonstrations and hands-on experience. Too often mothers receive little or no advice on how to administer ORT, or — more importantly — how to help prevent diarrhoea episodes. ORT corners help ensure that adequate attention is given to mothers needs and concerns.

During the last few years, UNICEF has become more involved in the promotion of effective home therapy for diarrhoea. This includes assisting governments in choosing appropriate home-available fluids, educating

*Cont. page 8*

## Impact on health

**The incidence and pattern of infant and child illness and death are closely linked to fertility levels and in particular to the length of time between births. Janet Nassim and Fred Sai report.**

The World Fertility Survey carried out from the mid-1970s to the early 1980s showed that, in every country surveyed, the spacing of births had important consequences for infant and child mortality. Estimates for all countries combined indicate that infant mortality among children born within two years of an older brother or sister is 60 to 70 per cent higher than among children born two years or more later. The health of the older child is also at risk. Another birth within 12 months increases the older child's risk of dying between the ages of one and five by 77 per cent. All in all, the dangers are such that it is estimated that about one in seven of the 14 million annual deaths in under fives are associated with poor birth spacing. As many as one in five infant deaths could be averted by longer birth intervals.

### Risk factors

While we do not know the exact reasons for the association between rapid succession of births and increased mortality, certain factors are generally agreed to be important.

- **Breastfeeding and weaning** — the child born at the beginning of a short birth interval may no longer be breastfed when the new baby arrives. In many countries a new pregnancy is also the most common reason for weaning a child. Stopping breastfeeding too soon and early weaning both put a young child at risk. Breastfeeding provides complete nutrition for the baby in the first four to six months of life, gives protection against diseases and does not expose the child to the risks of bottle feeds prepared in unhygienic conditions. The incidence and severity of diarrhoea and respiratory diseases have been found to be much higher among bottle-fed babies and babies weaned too early than among breastfed babies. Protection given by breastfeeding against infections is apparent even in the second and third years of life where malnutrition

is common. Breastfeeding has a natural contraceptive effect and in many societies it is the main factor regulating fertility. So early cessation of breastfeeding may be the *cause* of a close-following pregnancy as well as a result.

- **Low birth weight** — one of the major advantages leading to increased survival for the child born *after* an interval of two years is the reduced risk of low birth weight. Evidence from both developed and developing countries suggest that the average birth weight of infants born after only a short interval is significantly lower than that of better spaced infants. Low birth weight is a major contributing factor in infant deaths. Low birth weight babies begin life malnourished and are, from the start, at increased risk from the diarrhoeal and respiratory diseases that are the main killers of children in developing countries.



UNICEF photo by Vivianne Holbrooke

**Longer intervals between births can reduce infant and child mortality and improve women's health.**

### Family health

The effects of longer child spacing on reduced mortality are not, however, solely due to breastfeeding, weaning and birthweight. There are several other explanations of why longer intervals between births lead to an improvement in child health. Too rapid a pace of childbearing directly affects the health of an infant and its mother, by leaving insufficient time between pregnancies for her to recover physically.

If the mother is too tired or unable to care for two or more young children, this may lead to deprivation for one or both of them. Close child spacing may result in competition between children for food, clothing and the mother's time and attention. A pregnant mother might also go without much needed food herself in order to make sure there is enough for her young children. In addition, the risk of infection passing between children is much greater when there are two or three in a family under five years of age.

Parents must be given the opportunity, through access to family planning services, to space the birth of their children more widely. This is an important step that parents themselves can take to improve the health of their families, even where good health care services, which can help to reduce the risks of close spacing, are available. Health and nutrition programmes working together with family planning programmes can help high risk families. The promotion and support of breastfeeding should be an integral part of such services. Increased female education is a long term measure that both increases the practice of family planning, and improves the health of women and their children. In their biological and social roles as mothers and carers, women determine their children's health, and therefore, attention to the needs, roles and status of women is vital.

---

**Janet Nassim and Fred T Sai, Population and Human Resources Department, World Bank, 1818 H Street NW, Washington D.C. 20433, USA.**

---

*This article reflects the views of the authors, and should not be taken as a statement of the official policy of the Bank.*

## Indonesia

In Indonesia it has been estimated that 50 million episodes of diarrhoea occur and many children under the age of five die from dehydrating diarrhoea every year. Although the causes of diarrhoea are already well understood and the knowledge and skills to treat the disease exist, there are often factors preventing transfer of this knowledge to the community. There may be a 'socio-cultural gap' between the medical profession and the community, as well as a lack of understanding about ORT among health professionals themselves. Communication about diarrhoea control is difficult and health messages are not always understood correctly by the community. In order to develop effective home management of diarrhoea, a better understanding of community beliefs and existing management practices, and their effect on ORT implementation, is needed\*.

We looked at these problems in two villages in a coastal area of Java, both of which have a relatively high incidence of diarrhoeal disease. One village is covered by the (Intensive) Diarrhoea Control Programme, and the other by a less intensive nutrition programme.

### Ideas about diarrhoea

Mothers in the two selected villages had very similar ideas about diarrhoea. They classified diarrhoea among children into six types, based on the signs and symptoms and the perceived cause and severity. This is both very different from the single term 'diarrhoea' as used by health professionals, and more complicated.

### Home management

Home management of diarrhoea

depends on what type it is perceived to be. For types 1 to 3, most mothers prefer to use traditional herbs, administered either by rubbing onto the skin or orally. They seek modern medical treatment only if the traditional herbs do not work after one or two days. Wherever possible, mothers choose injections for types 4 and 5, but if they can't get injections, they give oral medicines bought locally. The incidence of type 6, 'lestanganen' is very low, but only a certain ritual ceremony performed by a traditional healer is thought to be able to treat it.

The mothers in both villages had similar practices in feeding their children during diarrhoea. They still breastfeed, more frequently when the babies are very irritable. They give most foods to older children, usually softened; and they all avoid certain 'hot' foods. Most mothers give more fluid to a sick child.

### Oral rehydration therapy

In the diarrhoea control (CDD) programme village, the Health Centre staff have given village leaders two days' training to detect and report diarrhoea, distribute Oralyte, and to promote better personal hygiene and environmental sanitation.

In the other village, ORT is integrated with the nutrition programme. A one hour session on ORT was included during nutrition care training.

### Problems

Despite the efforts of both programmes, understanding about ORT among some village leaders and nutrition workers is still limited, and suggests that ORT training needs to include practical hands on experience. Al-

though available in both village Health Centres, Oralyte is not often given or mentioned during consultation. Also Oralyte or sugar-salt solution are sometimes presented just as a first aid treatment at home, before the family can get the 'correct' remedies. The concept of dehydration is not always explained. Various anti-diarrhoeal drugs, which are promoted through advertising in the mass media, are available from local vendors.

Although most mothers in the CCD programme village remembered Oralyte, not all of them could explain its benefits or prepare it correctly. In the control village, some mothers remembered sugar-salt solution and were able to explain its benefits and prepare it. Few mothers in either village always gave ORT to their children when they had diarrhoea.

### Recommendations

Based on the findings of the study, several recommendations were made to improve the efficacy of the programme.

1. Changing the perception of health personnel that ORT is not only a first aid treatment but the most important measure to take to prevent death from dehydration due to diarrhoea.
2. Control of diarrhoeal drug marketing should be improved, ensuring the dissemination of clear and accurate information about the use of these drugs.
3. The Indonesian term *diare* or *mencret* should be replaced in any communication about diarrhoea, with a more general term (possibly *berak cair atau lembek*).
4. The dissemination of information about ORT should be based on a social marketing strategy, designed with reference to local attitudes, beliefs and practices.
5. The choice of ORS used should be based on available supplies (if factory made Oralyte is used), and ease of understanding by the community.

**Satoto, N. Sriyuningsih, M. Mu Sawa, Medical School, University of Diponegoro, Semarang, Java, Indonesia.**

\* The Indonesian Ministry of Health, recognising this, has been working, in collaboration with HealthCom (an AID supported project), to investigate beliefs about diarrhoea and the terminology used, and to overcome the problems described in this article, through strategies designed to increase the effectiveness of the CDD and nutrition programmes. These strategies include the recommendations listed at the end of this article.

Type, name(s)	symptoms	perceived cause/severity
1. muruh, umpruk	bubbly and watery stool	not severe, no cause identified
2. kontab	more severe	minor physical imbalance, e.g. fatigue
3. mencret, mancur mangsur, nggebros	'pushing out' watery stool	very severe physical imbalance
4. desentri, berak dabar	blood in stool	very severe
5. kolera, muntaber, muntah berak	frequent watery stools, vomiting	very severe
6. lastanganen	no vomiting, onset at night	supernatural, very severe

## Papua New Guinea

Diarrhoea is second only to pneumonia as a cause of hospital admission and mortality in Papua New Guinea (PNG). The two illnesses frequently overlap in the vicious circle of disease, undernutrition and further disease. Recently measles has complicated the picture, becoming a major health problem among infants in highland areas. Yet mortality from diarrhoea in children under five years is relatively low compared to many other countries.

### Why is diarrhoea mortality relatively low?

We can only speculate as to the reasons for the low diarrhoea morbidity and mortality rates in PNG. However:

- Virtually all children are breastfed. Even when a mother dies, the foster mother will breastfeed if lactation can be induced. (Introduction of lactation in a mother who has not recently given birth is a well recognised possibility. This will be considered in a later issue of *DD*.) In 1977 an Act of Parliament was passed to make infant feeding bottles available only on prescription. This has succeeded in making bottle-feeding less practicable.
- In the highlands there is an abundance of free flowing rivers with little evidence of pollution.
- Adults understand the polluting effects of faeces and do not defaecate near water sources. Sanitation facilities such as pit latrines are, however, uncommon.
- Food is not stored for long periods.
- PNG has a relative abundance of food; malnutrition is associated with recurrent disease rather than endemic starvation.
- It is the usual practice to continue breastfeeding during episodes of diarrhoea.
- Oral rehydration has been introduced, and ineffective treatments such as kaolin and sulfadimidine have been abandoned.

### How is diarrhoea managed?

PNG has several urban and semi-rural hospitals staffed by doctors and nurses. Most illnesses are managed in Health

Centres in major rural settlements staffed by a Health Extension Officer (who receives four years of training) and nurses. Many small villages have Aid Posts staffed by an orderly with one to two year's training. Every health worker is trained to manage illnesses including diarrhoea according to simple but effective Standard Treatment Protocols.

If a child with diarrhoea is not dehydrated, it is sent home with the parents who are given advice about continuing breastfeeding and feeding with extra fluids. Diarrhoea with any signs of dehydration is managed by admitting the child to a health centre or hospital where WHO/UNICEF oral rehydration salts (ORS) solution is given by a parent. Nasogastric ORS solution is given (using the tubes of intravenous [IV] infusion sets) for those who cannot drink, or are seriously ill. Children in shock (pulse over 160 with cold hands and feet), or who have abdominal distension or frequent vomiting, are given half strength Darrow's solution intravenously. In some areas, urban doctors make regular visits to rural health centres to encourage health workers to follow these Standard Treatments.

### Problems

- There is still a tendency among some health workers in hospitals to over-use IV rehydration because it is easier than having to explain to parents the principles of using ORS solution. This sets a bad example to all trainees.
- Home made sugar-salt solutions are regarded by some as being dangerous. At least two children in PNG have died from incorrectly made home salt-sugar solutions. (Too much salt can be dangerous for young children, especially infants).
- Although the national CDD programme is active, more progress needs to be made in taking the oral rehydration message into the community and home. There is recent evidence that mothers are reluctant to use home made rehydration solutions. This may be related in part to cultural views about diarrhoea.

### The future

There are several reasons to suggest that morbidity and mortality from diarrhoea in PNG will be further reduced in

the future. Firstly, through prevention. Earlier vaccination against measles (EZ vaccine at four to six months of age) and vaccines against rotavirus are eagerly awaited. Better education of today's children promises tomorrow's improvements in water supply, sanitation and weaning practices. Secondly, as health workers gain knowledge about oral rehydration, more mothers will be taught the technique and use it



Photo by Michael Harari

Virtually all mothers in Papua New Guinea breastfeed their babies.

at home. However, PNG still needs doctors and other health teachers to set a better example to the health workers they train.

The next edition of the Standard Treatment Protocols will advocate that children with diarrhoea who are managed at home should be given a solution made by adding one level teaspoon of sugar and a pinch of salt to a cup of clean water provided that the parents are taught by a health worker and demonstrate their ability to do this. Health workers are increasingly learning to make a solution with six level teaspoons of sugar, half a level teaspoon of salt and one litre of water (beer bottles widely available in PNG contain 333ml/one third of a litre) if ORS sachets are unavailable.

Dr Paulas Ripa, Madang Hospital, P.O. Box 2030, Yomba, Madang Province, Papua New Guinea and Dr Michael Harari, Addenbrooke's Hospital, Department of Paediatrics, Cambridge CB2 2QQ, UK.

# Key issues in ORT

Diarrhoeal disease control programmes are underway in many countries. For this analysis, the stages of a programme are divided into three parts: **initiation**, involving policy making, creating a staff team or teams, and planning; **programme implementation**, including training, co-ordinating supplies and management; and **consolidation**, requiring continuing education, decentralisation, integration and costs recovery. Many programmes are currently in transition from stage 2 to stage 3. Problems identified through monitoring and evaluation of the programme implementation stage, and arising from the need to ensure programme sustainability, raise a number of key issues. Advances on the technical and research fronts raise some other issues. The consolidation stage has its own requirements. The following outlines these issues and possible strategies to increase the effectiveness of CDD activities.

## Issues arising from monitoring programme implementation

Monitoring and evaluation, for example through supervision, health facility surveys, and household surveys, highlight weak areas of programme activity which require attention.

- **One training course or session for health workers is not enough to attain good diarrhoea treatment practices**

Strategies:

- focus on pre-service training
- search for low cost methods of re-training and continuing education

- **Mothers' knowledge and practice need constant reinforcement**

Strategies:

- study and monitor exact causes of problems
- reinforce and vary messages, but avoid confusion
- focus on face-to-face education by health staff and other community educators

- **Health staff are often poor educators of mothers**

Strategies:

- clarify messages for mothers
- give periodic training on health education techniques
- implement task/time analysis to ensure that education activities are realistic and feasible
- focus on individual patient contact improvement

- **Sustained community involvement is often a weak link**

Strategies:

- clarify tasks required from different people and groups
- intensify work with existing groups and networks (often non-health)
- promote decentralised decision-making on community involvement strategies

- **Monitoring will be weak where there is poor or too little supervision and where information and reporting systems are weak**

Strategies:

- integrate ORT with PHC supervision
- provide qualified personnel or train personnel for supervisory tasks
- carry out surveys to compensate for poor information systems
- implement inexpensive evaluation techniques

- **ORS distribution/access is only as good as that of other essential drugs**

Strategies:

- use the example of ORS to push for wider reform and use information on current management practices for ORS (stock control, for example) to influence decision makers
- make ORS widely available through commercial channels

## Issues arising from the need for programme sustainability

In order to sustain good treatment practices by health staff, appropriate home treatment by mothers and easy access to ORS:

- **Regional and district teams must have responsibility for decentralised implementation and follow up**

Strategies:

- improve district/regional planning capacities
- clarify staff roles and responsibilities
- decentralise budget management

- **Integrate ORT activities into general PHC functions without losing the selective intervention focus**

Strategies:

- include ORT in the general information system
- include ORT training with other training efforts
- experiment with integrated supervision visits
- integrate ORS into improved drug supply systems
- add ORT to other patient contact points (such as EPI or growth monitoring)

- **ORS should be widely available through commercial channels**

Strategies:

- encourage ORS pricing and marketing studies
- consider declassification of ORS as a drug, to further increase sales outlets
- encourage ORS (and other essential drugs) sales through community pharmacists, co-operatives, school pharmacies, etc

- **Focus must be placed on cost containment and recovery**

## Issues arising from technical advances

- **Feeding**

Feeding during and after diarrhoea may reduce the length of the diarrhoea episode and stool output. Correct feeding also prevents the nutritional ill-effects of frequent episodes of diarrhoea.

Strategies:

- search for and identify suitable foods to give during diarrhoea
- focus on dietary advice for mothers of young children
- use patient contact to assess and record nutritional status

- **ORT solutions**

Strategies:

- search for alternative home fluids which may be easier to make (for example cereal-based solutions)
- study in more detail mothers' difficulties in mixing ORS and SSS, to improve educational messages
- research on increasing ORS acceptability (colouring, flavouring, packaging, price elasticity)

- **Dysentery**

Correct diagnosis and treatment of dysentery is crucial since at least 30 to 40 per cent of bloody diarrhoea is due to *Shigella*.

Strategies:

- identification and recording of bloody diarrhoea, develop and standardise methods for diagnosis and treatment of dysentery
- research to establish the importance of *Shigella* and other causes of dysentery in different regions

- **Prevention**

Prevention of diarrhoea should be emphasised, particularly where a reasonable level of correct case management has been successfully introduced.

Strategy:

- identify country-specific priority interventions

**Dr Suzanne Prysor-Jones, Regional Representative, PRITECH, B.P. 3746, Dakar, Senegal.**

## ORS packets: a practical manual

An ORS Volume and Labelling Manual has recently been written to help CDD programme managers make policy decisions on ORS use and promotion strategies. The manual, developed by staff from USAID's Project SUPPORT with assistance from USAID's HealthCom project, was designed as a companion publication to the WHO manual on ORS production. It addresses two specific issues: the selection of an appropriate ORS packet volume size and the development process for designing ORS packet labels. In addition, it includes a useful section on ORS marketing issues.

Topics covered in the volume size section include advantages and disadvantages of the one litre and other sizes, multiple volume sizes, considerations for choosing or changing volume sizes, and the provision of standard containers for measuring water. The section on packet labels discusses label information, target audiences, mixing and use instructions, and the illustration of user messages.

The last section reviews the key questions that programme managers should ask. Two appendices provide readers with a list of ORS message pre-testing resources and a sample protocol and data sheet used for packet testing.

It is anticipated that copies will be available in December 1988 from Project SUPPORT, Programme for Appropriate Technology in Health, 4, Nickerson St, Seattle, Washington 98109-1699 USA.

## Funds for small-scale health education projects

In June 1987 the Commonwealth Secretariat organised a regional workshop in Nairobi on 'Production, Dissemination and use of Community Health Materials, especially for Women' in collaboration with UNICEF, AMREF and the Kenyan Ministry of Health. The workshop began with a review of exist-

ing materials, then examined mechanisms for their development and use in the field by different sectors. The use of print and radio, and of traditional forms of communication such as song and drama were also explored. Following this workshop the Commonwealth Secretariat has made available limited funds for innovative, action-oriented, small-scale projects in the health education field. The maximum amount available for each project is £6,000, and funds are only available to people working in the Commonwealth countries of East, Central and Southern Africa. Those wishing to apply for funds should send a detailed proposal to: **Miss Jane Cole, Project Officer, Health Programme, Commonwealth Secretariat, Marlborough House, Pall Mall, London SW1Y 5HX, UK, by 30 November 1988.**

## ICORT III: 'ORT in the 1990's' — ensuring sustainability

Six hundred invited participants are expected to attend the Third International Conference on Oral Rehydration Therapy (ICORT III) in Washington D.C., USA, during December 14-16. The conference is being held to identify strategies for sustaining worldwide use of ORT in the 1990's, progressing from the theme of previous ICORT meetings which focused on increasing awareness of ORT. The conference is sponsored by USAID in co-operation with UNICEF, WHO, UNDP and the World Bank. Attendance is by invitation only. *DD* will report back to readers on ICORT III in early 1989.

## Local use of DD

We know that many readers translate parts of the newsletter into different languages for teaching and wider distribution. Please send us copies of any translated or extracted material so that we know which parts of *DD* you find most useful, and have more information about local uses of *DD*.

## Question and answer

Our hospital conducts village health education programmes about the use of home-made rehydration solutions. Many of the villages do not have one litre bottles, although they do have 720cc-750cc bottles, and also 200cc cups. They don't have standard size spoons, but some have 'tablespoons' and some have 'teaspoons'. Would you please send us a recipe for making a rice-based oral rehydration solution: using the finger pinch method for both the 720cc-750cc bottle and the 200cc cup; and if you think it advisable, using spoons for measuring? A new training class for village health workers has just started, so we would appreciate a speedy response so we can begin teaching them the correct method.

**Marcia Harris, RN, Tom Dooley Heritage Inc., Box 6, Huoi Khrai, Mae Sai, Chiang Rai 57220, Thailand.**

**Dr A Majid Molla, Professor and Chairman, Department of Paediatrics, The Aga Khan University, Stadium Road, P O Box 3500, Karachi 74800, Pakistan, replies:**

- take two fistfuls of dry rice flour;
- add one litre of water (750cc plus 200cc approximately, using the bottle and cup to measure the water volume);
- boil and stir until the first bubbles appear (about seven minutes) and remove from the fire in the next two minutes;
- cool for a few minutes;
- add two, three-finger pinches of table salt;
- mix well before giving to the patient.

### Notes:

- too thick a solution is difficult for the patient to drink;
- prepared solution can be kept for eight hours in the hot season and twelve hours in a cooler season;
- after this time throw away any unused solution and wash and dry the container, otherwise the rice will ferment and become sour;
- for a half litre preparation, use half a litre of water (750cc minus one 200cc cup), one fistful of rice flour and one pinch of salt;
- if rice flour is not available, cooked plain rice (as available in Thailand) can be used, but it will need a longer cooking time, and more water;
- using spoons is not advisable for measuring salt, since they vary greatly in size.

# CDD review: agency reports

## WHO . . .

rhoea without caloric restriction results in better weight gain, despite the fact that it may cause a modest increase in stool output.

Important progress has been made in the development of a rotavirus vaccine containing rhesus-human reassortant viruses for each of the four main human serotypes; this vaccine is being evaluated in one or two doses in six countries in 1988. New, improved vaccines against cholera, typhoid fever and shigellosis are on the horizon and will probably undergo in vivo testing within the next year.

### Preventive strategies

In 1987 studies were initiated to assess the effect of specific changes in breastfeeding or weaning practices on diarrhoea morbidity and growth, and to evaluate the efficacy of certain hygiene interventions (e.g., promotion of hand-washing) in reducing diarrhoea transmission. High priority is being given to such research, as it will provide useful information for national CDD programmes as they give more attention to the implementation of preventive strategies, with the goal of achieving a 20 per cent reduction in diarrhoea morbidity world-wide by 1995.

The activities of the CDD Programme were reviewed in detail by the World Health Assembly in 1982 and 1987 and received its whole-hearted support. Member States were urged to intensify their diarrhoeal disease control activities as part of primary health care, and WHO was requested to increase its collaboration with countries in strengthening national programmes in order to ensure that its global objectives are reached. These specify that by 1995, 95 per cent of children will have access to ORS and 70 per cent will receive correct treatment for diarrhoea; under such conditions, it can be expected that in 1995 at least 3.4 million childhood deaths due to diarrhoea will be prevented.

**CDD Programme, WHO, 1211 Geneva 27, Switzerland**

## USAID . . .

(WHO) to develop a package of training materials for use in medical school curricula. Through national programmes, AID aims to reach nurses, pharmacists, community health workers, traditional midwives and other traditional health personnel, as well as physicians.

To ensure adequate ORS supplies, another AID-financed project, SUPPORT, complements public sector activities of governments and international agencies such as WHO and UNICEF, by providing technical and financial assistance to the private sector to initiate or upgrade local ORS production, promotion and distribution. The project also supports quality control efforts to ensure that locally produced ORS packets are safe and effective. In addition, it provides marketing and distribution support to ensure that sales and distribution of ORS can keep up with production.

Over the last decade, AID has invested significantly in research and development to find ways for communication to strengthen proven health care delivery. The AID-sponsored communication project, HealthCom, has achieved a number of impressive outcomes in various countries around the world and currently works in 13 countries, focusing on ways to increase sustainability of communication activities.

### Future commitments

AID is committed to supporting diarrhoeal diseases control activities as a critical component of its child survival strategy and is meeting the challenge to plan for the future while sustaining past accomplishments. AID is also committed to developing new technologies that will make programmes more effective and new ways to reach the 40 per cent of the developing world's population that will live in cities by the year 2000.

**Office of Health, USAID, Washington, D.C. 20523, USA.**

## UNICEF . . .

health workers on these choices and communicating clear, carefully-designed messages to mothers on how, why and when to administer them. Many governments are just beginning to focus on this question, having concentrated previously on improving case management within the health system.

### Beyond ORT: moving towards prevention

Increasingly UNICEF is assisting governments to focus on reduction of diarrhoea morbidity, through strategies that will prevent diarrhoea from occurring. These include improved water supplies, better personal and domestic hygiene, breastfeeding, proper weaning practices, use of latrines, measles immunisation, and often involve the co-operation of ministries and institutions outside the health sector. As UNICEF usually works with several different ministries in any given country, it is often in a unique position to coordinate and encourage this broader approach.

In the Philippines, for example, UNICEF is closely involved in the promotion of breastfeeding as a preventive measure for diarrhoea. In Bangladesh, diarrhoea prevention messages are being integrated into an on-going water and sanitation programme and the Ministries of Health and Education are discussing the joint publication of information materials in this area. Prevention is also the major focus of UNICEF assistance in Egypt, and is growing increasingly important in Pakistan, China, Sri Lanka and India, as well as in several Latin American countries.

**UNICEF, 3 United Nations Plaza, New York, NY 10017, USA.**

## In the next issue . . .

*DD 35* will discuss invasive and secretory diarrhoeas, and laboratory diagnostic techniques.

**Scientific editors:** Dr Katherine Elliott (U.K.) and Dr William Cutting (U.K.)

**Editor:** Kathy Attawell

**Editorial advisers:** Professor J. Assi Adou (Ivory Coast), Professor A.G. Billoo (Pakistan), Dr David Candy (U.K.), Dr Richard Feachem (U.K.), Dr Shanti Ghosh (India), Dr Michael Gracey (Australia), Dr N. Hirschhorn (U.S.A.), Dr Claudio Lanata (Peru), Dr Leonardo Mata (Costa Rica), Dr Jon Rohde (U.S.A.), Dr Mike Rowland (U.K.), Ms E.O. Sullesta (Philippines), Dr Andrew Tomkins (U.K.), Dr Paul Vesin (France), Dr M.K. Were (Kenya).

With support from **AID (USA), UNICEF, WHO, ODA (U.K.)**

## Dialogue on Diarrhoea



Dialogue on Diarrhoea is published by AHRTAG at 1 London Bridge Street, London SE1 9SG. Tel. 01-378 1403.