

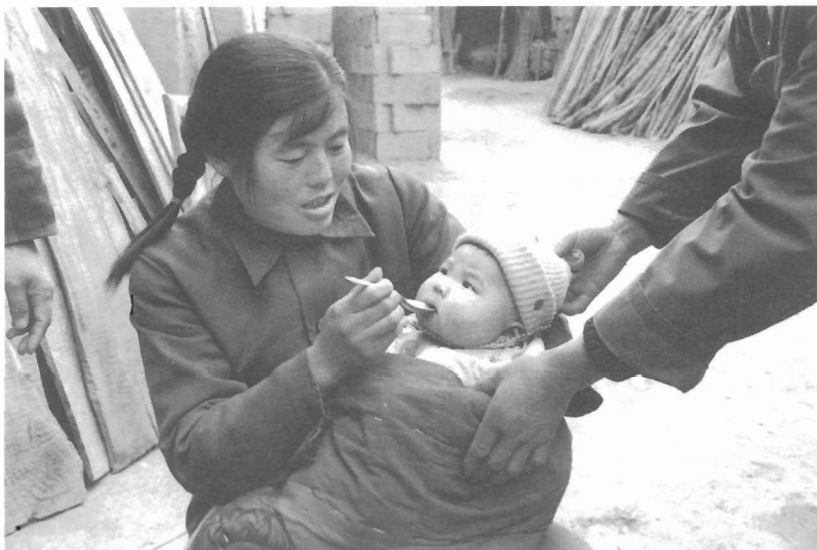
Oral Rehydration Therapy

Elixir of life

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Text by Alexia Lewnes



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ORT is inexpensive, requires no sophisticated equipment or supplies and can be started by parents at the first sign of diarrhoea. Here, a woman spoonfeeds her baby oral rehydration salts (ORS) outside her house in Xi Wa village in Shaanxi Province, China.

ORAL REHYDRATION THERAPY: *ELIXIR OF LIFE*

Ten years ago, diarrhoea was the biggest killer of the world's children, claiming almost 4 million lives each year. Most died of dehydration — the loss of large quantities of water and salt from the body. As many as 90 per cent of these children could have been saved with oral rehydration therapy (ORT).

Today, more than 1.5 million lives are being saved each year, some 4,500 every day — thanks to a decade of promotion of ORT. In 1995, some form of ORT was known and used by around 80 per cent of all families in the developing world.

The most remarkable advances are sometimes the simplest. ORT consists of administering by mouth, frequently, small quantities of fluid, often a solution of sugar and salt. The liquid must be of sufficient volume to replace the fluid loss, and it should be administered along with normal feeding, including breastfeeding for infants. In most cases, ORT can rehydrate a child within three to seven hours from the onset of therapy.

ORT is not really new. As early as 1500 BC, Sushutra, an Ayurvedic pioneer in Indian traditional medicine, prescribed a mixture of tepid water, rock salt and molasses for cholera victims. Since then, rice soups, chicken soups, teas and coconut water have been used around the world to treat sick children.

It was not until this century that ORT was tested and ancient wisdom became the basis for this modern therapy. Just over 25 years ago, medical researchers proved that a simple mixture of glucose, salt and clean water was the best way to counter the deadly effects of diarrhoeal dehydration. They recognized that when the ingredients were correctly proportioned, the formulation allowed rapid absorption of fluids and electrolytes by the intestines. It was such an ingenious solution to an age-old problem that the leading British medical journal, *The Lancet*, called ORT “potentially the most important medical advance of the century.”

No other single medical breakthrough of the 20th century has the potential to prevent so many deaths, over such a short period of time and at so little cost. Intravenous therapy (IV), previously the standard method of treating dehydration cases, is necessary in only a few cases. It is expensive — about 20 times more costly than ORT, requires equipment and saline that may not always be available and trained staff to insert an IV needle and to regulate the drip. Needles, if not



UNICEF/3673/Sprague

A doctor in a Mexican government health post advises on the preparation of ORS. Nearly 1.5 million mothers and community members learned about diarrhoeal diseases and ORT during Mexico's first Oral Rehydration Week in May 1993.

ORT: A solution for survival

ORT, defined as an increased intake of acceptable fluids, along with continued normal feeding — including breastfeeding — addresses the prevention and management of dehydration caused by diarrhoea, promptly, at home.

A solution of oral rehydration salts (ORS) is the best way to rehydrate a child suffering from diarrhoea, because the precise formulation allows rapid absorption of fluids and electrolytes by the intestines. Alternative fluids can also be given, including food-based fluids such as soups, yoghurt drinks, coconut water, watery rice porridge, maize, millet or roots. Even plain water is useful provided food

is given. Food enables the body to absorb the necessary fluid for rehydration. It prevents malnutrition, a contributing cause to the high number of deaths associated with diarrhoea and helps already malnourished children recover more quickly.

The 3 Fs are a convenient guide to ORT: **F**luids (increase fluids as soon as diarrhoea starts); **F**eeding (continue feeding during diarrhoea); **F**urther help (take the child to a health care provider if danger signs are present, including the child not being able to drink or breastfeed or drinking poorly, becoming more ill, developing a fever, or having bloody stools).

sterilized, also pose an added risk for infection. Finally, IVs are always uncomfortable and frequently painful.

ORT, by contrast, is cheap (about \$0.10 per packet of oral rehydration salts or ORS) and requires no sophisticated equipment or supplies. The child's thirst is the driving mechanism -- when hydration is complete, the child stops drinking, taking in just the right amount of salt that is needed. Most important, the technique is so simple that parents learn to administer it themselves.

Today, more than 120 countries around the world have committed themselves to promoting ORT. Drawing from experiences in more than 20 of these countries, this monograph describes the elements that have contributed to a dramatic increase in ORT use -- one of the greatest breakthroughs in child health this century. "The case studies reflect people's genius in adapting these basic principles to their own circumstances," says Dr. Nyi Nyi, former Special Adviser to the Executive Director of UNICEF.

This monograph highlights and analyses country activities undertaken primarily since 1990 as part of national efforts to accelerate ORT promotion to achieve the mid-decade goal of 80 per cent ORT use. It is neither an evaluation of national control of diarrhoeal disease (CDD) programmes, nor does it detail programme elements such as training, ORS production or evaluations and surveys. Rather, it demonstrates how information can be shared among policy makers, programme managers, community leaders and family members to help create behaviour change and how health systems can become more responsive to community needs.

It also shows how commitment and ingenuity can link national policy with individual action to create a global movement in child survival -- a movement being fuelled by governments, international organizations, doctors, nurses, pharmacists and community health workers. Communities help through their volunteers, community health workers, traditional healers and birth attendants. And most of all, through families -- mothers, fathers, grandparents, brothers and sisters, aunts and uncles.

Finally, these country experiences provide concrete examples of how the 1989 Convention on the Rights of the Child can become actualized. By showing how a single health intervention opens new doors that encourage parents to adopt other important health measures to improve their own lives and those of their children, this monograph offers evidence of how the rights expressed in article 6 of the Convention -- the rights to survival and development -- can become a reality. It documents a transformation taking place that is not only saving lives but is also generating a broad-based sensitivity to and awareness of children's rights, most especially their right to survival and good health -- a right that is fundamental not only to children's, but also to all society's welfare and development.

I. REAL PROGRESS

One cannot underestimate the impact of worldwide efforts to promote ORT over the past 15 years. From almost zero per cent use in 1980, ORT is now being used in around 80 per cent of cases of diarrhoea in young children. As a result, diarrhoea is no longer the leading cause of death among under-fives as it has been for centuries.

→ Now more than two thirds of all families use some form of ORT in the developing world.

→ Today, more than 120 countries have diarrhoeal disease control programmes, compared with 8 in 1980.

→ The production of oral rehydration salts has increased from 51 million packets in 1979 to nearly 800 million packets in 1994, with two thirds of the world's supply produced by developing countries.

II. AN UPHILL BATTLE

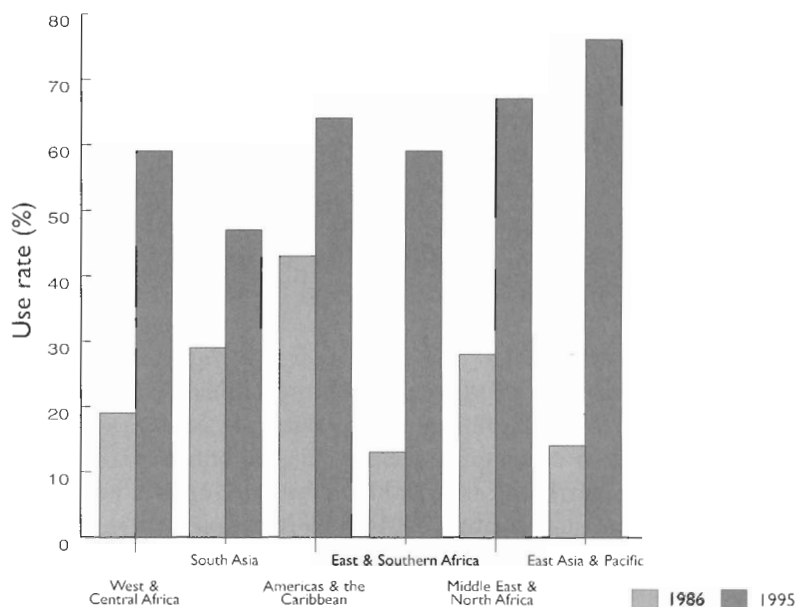
It would appear that such a simple solution for a common problem would catch on easily, but convincing people to trust and use ORT has been a slow and difficult process. In spite of the progress made, diarrhoea still accounts for approximately 25 per cent of all deaths among children under five globally. "ORT should be administered for diarrhoea like aspirin for a headache," says Dr. Monica Sharma of UNICEF. "But while individual countries have reached this point or are on their way to this goal, we still need to see this adopted as a family habit on a global scale."

In two regions in particular, sub-Saharan Africa and South Asia, diarrhoea remains a major cause of under-five child mortality. Those regions lose more than twice the number of productive life years to premature death and disability than the world average. Sub-Saharan Africa, with 18 per cent of the world's under-five population, accounts for 35 per cent of under-five mortality. Similarly, South Asia accounts for 29 per cent of the under-five population and 37.4 per cent of under-five deaths. Unless major interventions are put in place, all of sub-Saharan Africa and parts of South Asia will not be able to meet the year 2000 goal of reduction of child mortality (that is, reduce by one third, between 1990 and the year 2000, infant and under-five child mortality or to 50 and 70 per 1,000 live births respectively, whichever is lower).

A solution, not a cure

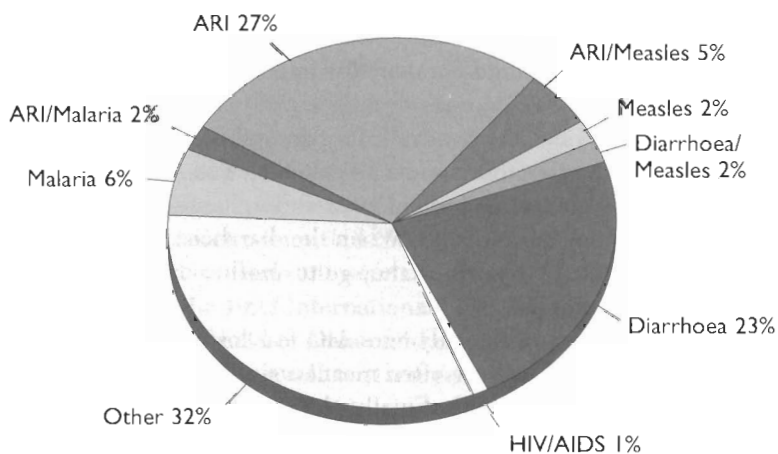
Adopting ORT requires changing habits and centuries-old beliefs. In some countries, purgatives, such as castor oil, enemas, blood-letting and the chants of a ritual healer have been and often still are trusted as cures for diarrhoea. The prevalent belief about withholding food and liquids from children with diarrhoea has proven especially difficult to dispel.

Fig. 1
ORT use by regions, 1986 to 1995*



* 1995 bars reflect averages of latest data on ORS and/or recommended home fluid use available in 1995.
The global ORT use rate for 1995 alone was around 80 per cent.

Fig. 2
Distribution of under-five deaths, developing countries, 1993



Clearly, one of the major hurdles to widespread ORT acceptance and use is a lack of understanding about diarrhoeal diseases and the limitations of ORT. To trust ORT, parents have to first understand that the danger is not from diarrhoea but from dehydration. At the same time, ORT is not a 'cure' for diarrhoea. While it prevents dehydration, it does not stop the diarrhoea — parents' chief concern.

Finally, according to the World Health Organization (WHO), children under five in developing countries experience an average of three diarrhoeal episodes each year. Although it is one of the world's major child killers, because it is such a common event and in most cases not fatal, it is difficult to create a sense of urgency about treating diarrhoea with ORT.

Too simple, too cheap

Convincing parents to trust ORT is only half the battle. Resistance to ORT also occurs in the medical community. Many physicians and medical establishments continue to hospitalize children unnecessarily and use IV therapy for diarrhoea cases, looking down on ORT as a 'home remedy' and second-class treatment. Most medical practitioners also still overestimate the efficacy of antibiotics and overlook their potentially harmful effects.

Financial interests also perpetuate other methods of treating diarrhoea. Since it is usually diarrhoea that first brings children into contact with doctors and the health system in developing countries, ORT administered at home denies paediatricians and many hospitals a substantial part of their income. In China, IV therapy costs much more than treating a child with ORS — 300 yuan compared with 9 yuan (about \$1).

Even in developed countries, where a vast majority of people have access to safe water and proper sanitation, diarrhoea is big business. In the United States, for example, 10 per cent of in-patient hospitalizations in paediatric wards and 10 per cent of out-patient visits are due to diarrhoea. A 1992 study among babies treated for severe diarrhoea at the Chicago Children's Memorial Hospital showed that IV treatment costs an average of \$3,000 per infant compared with \$273 for treatment exclusively with ORT.

Physicians also yield to pressure from parents who want the diarrhoea to stop. "I've had mothers refuse to come back to my office after I've given them ORS to treat their child's diarrhoea," says a paediatrician in private practice in Morocco. "When the diarrhoea doesn't stop, they look for something stronger, so they go to another doctor who will give them what they want."

Yet physicians are not the only ones who fear losing income. For pharmacists, widespread ORT use often means a significant loss of sales of antibiotics and antidiarrhoeals. Finally, the multinational pharmaceutical industry has found it more profitable to push antidiarrhoeals that are unnecessary and potentially harmful for under-five-year-olds

Defining oral rehydration therapy (ORT)

Since 1993, ORT has been defined as drinking increased acceptable fluids (including plain fluids available in the home, food-based fluids and sugar and salt solution) and continued feeding. Not only critical for its role in rehydration, continued feeding is also important for the child's nutritional well-being.

Prior to 1993, ORT was defined as the administration of oral rehydration salts (ORS) and/or recommended home fluids. The quantity of fluids offered was not assessed.

Since data is not available in many countries using the post-1993 definition, the ORT use rates included in this monograph all use the pre-1993 definition.

than to actively promote far cheaper and more effective ORT. WHO estimated in 1993 that global sales of over-the-counter antidiarrhoeals exceeded \$1 billion.

III. POLITICAL COMMITMENT FOR CHANGE

At the 1990 World Summit for Children, the first of the major summit meetings on development issues in the 1990s, world leaders agreed on a series of measurable goals for improving the lives of children, to be achieved by the end of the decade. In total, 27 goals were agreed upon and endorsed by over 150 Presidents and Prime Ministers — among them “to reduce by 50 per cent deaths due to diarrhoea in children under the age of five years and a 25 per cent reduction in the diarrhoea incidence rate.” Ten mid-decade goals, to be achieved by the end of 1995, were later highlighted. For ORT, the goal was “the achievement of 80 per cent ORT use as part of the effort to control diarrhoeal diseases.”

Since 1990, national commitments to ORT have grown as mounting evidence demonstrates that such a simple, low-cost intervention can dramatically reduce child mortality. At the ministerial meeting of the South Asian Association for Regional Cooperation (SAARC) on children held in Colombo in 1992, senior government officials from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka cited CDD as a key objective, using home-based interventions supported by the health system. At a ministerial meeting in Mexico that same year, 19 Latin American countries committed their health systems to a revival of CDD. Child survival and CDD were also a major focus of the countries represented at the 1992 International Conference on Assistance to African Children, held in Dakar and convened by the Organization of African Unity (OAU), as well as at a meeting of East Asian countries in Bangkok.

In recent years, a number of Heads of State and senior government officials have played an important role in bringing national atten-

The International Centre for Diarrhoeal Disease Research, Bangladesh: Home of ORS

For centuries, diarrhoea has affected children, and for centuries, many were given teas, soups and other home fluids.

Yet it was not until 1968, when the first clinical trial of ORS was completed at the Cholera Research Laboratory in Dhaka, that the scientific basis for ORT was discovered. The development of a demonstrably effective formula for ORS represented a medical breakthrough that revolutionized primary health care and the treatment of diarrhoea worldwide. Subsequent research and clinical trials have demonstrated that 95 per cent of diarrhoea cases can be successfully treated with ORS alone.

The miracle of ORT became clear during the Bangladesh war of liberation in 1971 when cholera death rates were slashed from 50 per cent to 3 per cent among thousands of Bangladeshis taking refuge in neighbouring India.

In 1978, the Cholera Research Laboratory became the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B). Since then, the Centre's training courses have formed the basis of control of diarrhoeal disease (CDD) programmes in Bangladesh and worldwide. Its Epidemic Control Preparedness Programme also works with the Government to strengthen national capabilities to respond to the recurrent epidemics that plague Bangladesh. The Centre continues to conduct research on cereal-based ORS, shown in 1981 to reduce stool output in cholera

cases, and carry out new trials to improve ORS.

Today, largely due to the Centre's research, clinical management and training, Bangladesh has a greater awareness of ORT than any other country in the world, and a lower diarrhoeal disease case-fatality rate than most developing countries. ORS is estimated to be preventing the deaths of 100,000 Bangladeshi children each year.

Abroad, the Centre's teams have helped respond to epidemics in Cambodia, Ecuador, Indonesia, Peru, Yemen, and most recently among Rwandan refugees in Zaire, where they helped reduce mortality rates in Goma camps from 48 per cent to less than 1 per cent.

Now, over 25 years after its development, ORS forms the backbone of all countries' CDD programmes and is saving over 1 million lives and billions of dollars every year. In the United States alone, where 220,000 children are hospitalized and given IV fluids for diarrhoeal disease each year, ORS could save \$500 million annually. Similar savings could be made in Europe as well.

The Centre that gave the world ORS continues today to be what Brian Atwood, Administrator of the US Agency for International Development (USAID), described as "the most prestigious and knowledgeable organization in the world" on diarrhoeal disease research, clinical management and training.

— *International Centre for Diarrhoeal Disease Research, Bangladesh*

tion to ORT. Country experience has demonstrated that when national leadership is committed, CDD programmes, even those with limited financial resources, can produce significant results in a fairly short period of time.

→ In Morocco, King Hassan II expressed his personal commitment in 1992 to stopping the high death rate from diarrhoea and set into motion a national campaign against diarrhoeal diseases. In just three years, ORT use in Morocco rose from 13 per cent in 1991 to 60 per cent by the end of 1994.

→ In 1994, when cholera ripped through 14 provinces in the Philippines, President Fidel V. Ramos launched a special CDD campaign, and, in a dramatic gesture that captured the hearts of the people, administered ORS to a four-year-old suffering from dehydration. The promotion of ORS by the Philippines' highest official gave instant credibility to ORT in communities across the country, and ORT use leapt from 55 per cent in 1994 to 80 per cent in 1995.

→ In Mexico, former President Carlos Salinas de Gortari launched a \$20 million national programme to make ORT a family habit in the country. National women's organizations have trained more than 1 million women to be community health promoters for ORT. White flags identify the homes of these promoters who have ORS available and whose mission is to educate every family in their community about this life-saving technique. Simultaneously, the Government has strengthened the health infrastructure to improve case management and taken steps to improve access to safe water and proper sanitation.

→ In 1994, Prime Minister Khalida Zia of Bangladesh presided over a highly publicized commemoration of the anniversary of ORT's discovery. Today, the country has one of the most successful CDD programmes in the world, and ORT use is up to 96 per cent.

Lessons learned

Political commitment

Country experience has demonstrated that political commitment can have an impact on increasing ORT use when national leaders:

- state publicly their commitment to ORT
- establish tangible and time-bound goals and targets
- work closely with governors and mayors, communicating and coordinating activities in order to make national policy effective at subnational level
- allocate resources for programme activities
- personally keep track of programme activities and results
- encourage intersectoral collaboration.

IV. GENERATING COMMITMENT AT THE LOCAL LEVEL

In recent years, many governments have decentralized elements of administration, politics and finance, stimulating greater public participation in all areas. While, in theory, decentralization offers local governments a new role in social affairs, enabling them to make their own choices and plan according to their needs, in reality, responsibilities are

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often transferred without sufficient resources and local governments fall far short of fulfilling their role in delivering services to their people. When local leadership is committed, however, decentralization, even with limited financial resources, can dramatically improve case management in health services, increase ORT use and save lives.

→ Ceara, one of the poorest states in the north-east of Brazil, is among the most celebrated examples of how serious political commitment at the local level together with community participation can have a dramatic impact on child health in a short period of time. In just three years, from 1986 to 1989, Ceara, with a population of more than 6 million people, reduced child deaths from diarrhoeal diseases by one half. There was also a significant reduction in malnutrition and a dramatic increase in the number of children vaccinated.

The quiet revolution began with the election of Tasso Jereissati as governor in 1987. He began by strengthening the state's health infrastructure by renovating 136 hospitals and local infirmaries. Equipment and supplies were provided to 24 new paediatric units to improve case management for diarrhoeal diseases. He also appealed to the church, non-governmental organizations (NGOs), the mass media and the business community (breastfeeding messages even appeared on bank statements) to provide all families with basic health information.

That same year, 6,000 people in neighbourhoods across the state were recruited to work as health agents. Trained with basic health information, they were paid approximately \$70 per month by the state to make weekly visits to parents to ensure that parents received basic health education and learned about ORT. Today, 9,000 community health agents work in all 184 municipalities throughout the state. Child deaths from diarrhoeal diseases continue to drop.

→ In the Philippines, the governor of the province of La Union, a rice- and tobacco-growing region in northern Luzon, has also made health issues a local priority. The province has trained its 3,800 *barangay* health workers (volunteers working at the community level) in ORT and has integrated the control of diarrhoeal diseases and promotion of ORT into the now locally run hospitals. To improve household sanitation, the local government has distributed 10,000 toilets, while communities have provided cement and labour to install them into homes. The province is also improving safe water sources by developing local springs and deep-well projects.

→ In Ethiopia, the health bureau in the southern town of Dilla has engaged the community in making ORT a local priority.

Imams (Muslim religious leaders) periodically warn about the dangers of dehydration and diarrhoeal diseases during midday prayers and have established a makeshift outreach centre at the Dilla mosque where health workers vaccinate children against preventable diseases every week and also demonstrate how to prepare ORS.

The Evangelical Church purchased a motorcycle to reach its eight

rural outreach sites for immunization and ORT and is providing vaccinations and distributing ORS on a regular basis.

ORS is available throughout the community and has become a trusted treatment for diarrhoeal diseases. And while it is available free of charge in health centres, people have even begun to buy it at the market.

Today, ORT is becoming the treatment of choice among health professionals not only in Dilla but also throughout the Gedeo zone — one of 52 zones in the country. During the month of October 1995, only 10 per cent of diarrhoea cases seen in the zone's 15 health stations, 15 health centres and one hospital received antibiotics, the rest were treated with ORS.

→ In Egypt, each of the country's 27 governorates is responsible for implementing and monitoring the mid-decade goal on ORT. Proper case management and institutional support for treating diarrhoea have been emphasized, particularly in districts with high child mortality rates.

V. LAYING A STRONG FOUNDATION

Winning approval of physicians and pharmacists

Before the public will trust ORT, the therapy needs to become an integral part of a country's public health care system, which means that all public health facilities must be equipped to treat diarrhoeal diseases correctly, with adequate supplies of ORS and health workers properly trained in appropriate case management. "It is essential to convince health workers to the degree that they would prescribe ORS for their own children," says Dr. Abderrahmane Zahi, Secretary-General of the Ministry of Public Health in Morocco. "You can't convince others until you are convinced yourself."

Since people trust their advice, physicians are one of the most important groups to be convinced of ORT efficacy. Yet, physicians can also be the most difficult, as they are often trained to rely on sophisticated technology rather than on simple solutions. One study in Egypt in 1993, for example, revealed that while 90 per cent of mothers knew about ORS, when they went to physicians and health workers to seek

Lessons learned

Decentralization

Decentralization can effectively increase ORT use when:

→ local leaders, including governors, mayors and other senior officials outside the health sector, are committed

→ all members of the community are mobilized, and the health infrastructure is simultaneously equipped to support community action

→ regions have adequate managerial and planning capacity to support local strategies

→ ORT is supported by a wide spectrum of interventions including immunization, promotion of breastfeeding, improved access to clean water and adequate sanitation facilities

→ district plans are comprehensive and address all of the following elements: planning, human resources, communication, logistics and supplies, monitoring, social mobilization and financing
→ district plans are specific enough to ensure tangible outcomes.

Al-Haouz: Health care on the move

Only 35 kilometres, yet worlds away, from the bustling city of Marrakesh, the people of Al-Haouz, a mountainous region in Morocco, have launched their own campaign to reduce the death toll from diarrhoeal diseases.

Here, safe water and sanitation facilities are scarce, and more than 75 per cent of the province's 410,000 people live further than five kilometres from one of the region's 13 health centres. One third of all the people live in enclaves dotted throughout the mountainous terrain, accessible only by mule or on foot. At the same time, more than half of the population understand only the Berber language and remain untouched by the few media messages to which they are exposed.

In 1993, with limited resources and a combined staff of 131 doctors and nurses, the province designed its own plan of action to address these challenges. "We adopted a strategy that uses mobile teams and focuses on door-to-door communication to strengthen the public health system," says Dr. Ahmed Ljazzouli, Medical Director of the province.

Cars, jeeps and mules are used to transport health workers — including at least one nurse — to difficult-to-reach settlements where they provide treatment and basic health information. In those areas where diarrhoea is endemic, 'micro-meetings' are held in mosques and other public places to make additional health education available. Activities are reinforced during the summer months when diarrhoeal diseases are at their peak.

Maps are used to keep track of high-risk areas, and household surveys are conducted annually,

enabling health workers to monitor the results of their work as well as develop and refine local strategies. The province has also strengthened the public health system by training health workers and ensuring adequate supplies of ORS. "Improving the actions of health personnel is central to the strategy," says Dr. Ljazzouli. "They are the ones who must teach parents what to do."

Despite the odds, Al-Haouz is gradually winning its battle. From 1992 to 1994, the number of diarrhoeal cases seen in health centres tripled, a sign that families are beginning to recognize the dangers of diarrhoea. In the same period, the number of serious dehydration cases decreased dramatically, indicating that case management had improved both at health centres and at home.

To extend the programme's reach even further, the province has trained and recruited the assistance of local midwives and the 20 members of the local chapter of the National Federation of Moroccan Scouts.

The local Scouts in particular have been especially enthusiastic about participating in the crusade. Last summer, one of the groups packed ORS supplies and educational materials on the backs of mules and headed into the mountains to launch a six-day campaign against diarrhoeal diseases.

Seventeen-year-old Mustapha Payne Al-Hayat was among the Scouts who travelled 38 kilometres through the rocky terrain, reaching 23 small communities to deliver his message. "We were surprised that many people had ORS in their homes and had been visited already by a health professional," he says. "They understood the basics. We just reinforced what they already knew."

treatment for their children stricken with diarrhoea, only 12 per cent were given ORS.

When they are convinced, however, physicians can be the most powerful advocates of ORT. Around the world, it is the tireless efforts of physicians that have paved the way for widespread ORT acceptance among other medical professionals and the community.

→ In Pakistan, members of the Pakistan Paediatrics Association and the Pakistan Medical Association have promoted ORT during their monthly and annual meetings. Locally, the Medical Association in Peshawar organized a meeting of more than 200 general practitioners and *hakeems* (physicians who practise alternative or traditional medicine), to encourage them to motivate the public about prevention and the correct management of diarrhoea. The Pakistan Medical Association in Punjab issued a special supplement of the weekly *Medical Herald*, which was distributed to more than 5,000 general practitioners across the country, informing them about recent trends in the management of diarrhoea.

→ Before the CDD project began in Indonesia, physicians uniformly used antibiotics and antidiarrhoeals to stop diarrhoea. Dehydration was generally treated with IVs. Training of medical school students, in-service physicians and nurses became a priority when the CDD programme was launched and soon spread to a wide spectrum of people that included schoolteachers, pharmacists, social workers, laboratory specialists, ORS depot holders and statistics specialists. By 1989, 76 per cent of physicians were prescribing ORS for all diarrhoea cases.

Convincing physicians is only half the battle. In most countries, local pharmacies, often more numerous and accessible than health facilities, are a common source of advice on health matters. Recognizing this influence, an increasing number of countries, including Bolivia, Ethiopia, Iraq, Morocco, Pakistan and the Philippines, are recruiting local pharmacists' associations and educating pharmacists and drug salespeople through seminars and workshops on ORT, ORS availability and distribution, and the rational use of drugs.

Seeing is believing

It takes little more than seeing a child resurrected from near-death to convince both the medical community and parents of the effectiveness of ORT. Within hours of receiving ORT, a dehydrated child — listless and with sunken eyes — is revived and literally brought back to life. "Once people see this transformation before their very eyes, they are not only convinced, they are converted," remarked a physician in Ethiopia.

Hands-on practical training is the cornerstone of modern diarrhoeal management training programmes. WHO confirms that many of the more than 420 Diarrhoeal Training Units (DTUs) in 85 countries

continue to play an important role in promoting effective and correct diarrhoea case management. Studies in Africa and Asia have shown that the establishment of a DTU in a hospital can significantly reduce case fatality rates. At Mama Yemo Hospital in Kinshasa (Zaire), for instance, there was a 69 per cent decline in diarrhoea deaths after a DTU had been set up. At Kamuzu General Hospital in Malawi, in-patient diarrhoea case fatality fell by 38 per cent. At the National Children's Hospital in Manila (Philippines), the diarrhoea case fatality rate in the hospital was reduced by 50 per cent after a DTU was established.

It is in DTUs that physicians, nurses, health assistants and other health personnel, through practical training, learn how to rehydrate a child and consequently learn to trust ORT. Training of trainers' courses are conducted at national DTUs, and these trainers in turn conduct courses for health workers in all types of health facilities. On the basis of reports received from countries by the WHO CDD Programme, it was estimated that at the end of 1994 about 500,000 health workers around the world had received training in standard diarrhoea case management.

To ensure that new physicians and other health personnel have faith in ORT, an increasing number of countries are incorporating modern diarrhoea case management, including ORT and continued feeding, rational use of drugs, communication of essential messages and prevention into their undergraduate medical and paramedical school curricula. Students not only study the theory behind ORT, but they also take responsibility for rehydrating children themselves.

In addition to DTUs, as part of the process of standardizing the treatment of diarrhoeal diseases, hundreds of thousands of ORT 'corners' have been established in major hospitals, health centres and rural clinics around the world — designated areas equipped with ORS packets, demonstration tools, wall charts for diagnosis and information, education and communication materials. These ORT corners not only support health personnel efforts to promote ORT but they have also been powerful educational tools, by which parents are taught about the danger signs of dehydration, the proper preparation and administration of ORS, and preventative measures to reduce the incidence of diarrhoea.

Country adaptations

National CDD policies and strategies reflect the ingenuity used in adapting to local circumstances in order to meet national goals. For example, when ORS is not widely available, some countries have promoted a home-made sugar and salt solution (SSS). While most countries abandoned SSS promotion in the mid-1980s when WHO raised concerns that parents could not be taught to prepare SSS correctly, others have proven that with proper social mobilization, communication and media support, parents can learn to prepare SSS at home.

Indian physicians learn to trust ORS

Ten years ago, fewer than 10 per cent of medical professionals in India used ORS. Most physicians regarded it as a first-aid technique to be used by para-professionals, far from a "real medicine." Today, ORS is regularly prescribed and has become the standard treatment for diarrhoeal diseases among physicians.

The dramatic turn-around began a few years ago when the Indian Medical Association (IMA), in collaboration with UNICEF, committed to training its 80,000 member doctors in the proper management of diarrhoea, which at the time, accounted for more than 1 million child deaths each year.

A videotape, in which the IMA president and other notable medical leaders endorsed ORT, was produced. High-quality clinical photographs and a series of interactive exercises fully explained the unfamiliar therapy to physicians.

One hundred and fifty paediatricians were trained in one of four national diarrhoea training units over a long weekend to see for themselves the dramatic effects of ORT and to learn the best way to teach mothers how to use it. These physicians then returned to their state chapters to organize nearly 1,000 meetings of IMA members.

Nearly 40,000 participating doctors were trained during a one-year period. A survey of 5 per cent of trained physicians demonstrated a dramatic shift in prescribing patterns: over two thirds were using ORS regularly, and the use of potentially harmful and useless drugs for diarrhoea was reduced.

To give further credibility to ORT, the IMA Journal published a number of articles describing the effectiveness of proper case management of diarrhoea. In addition, the *Indian Journal of Public Health* devoted an entire issue to ORT, demonstrating through data from numerous centres the reduction in hospitalization rates for simple dehydration, cost savings and improved survival. The medical group also successfully lobbied the Government and

obtained a ban on antidiarrhoeal drugs and unsuitable antibiotic combinations recommended for treatment of diarrhoea. These have since been taken off the market.

Today, the ORS market in India is large and growing, producing more than 100 million packets per year, a figure that is expected to double over the next few years. Firms compete to sell ORS, several in partnership with local IMA branches, and have established special brands promoted by the medical profession. IMA-brand ORS is sold by physicians in their practices at the lowest possible price, providing savings for patients and generating small, but significant, revenues for the continuing medical educational activities carried out by local IMA branches.

IMA also launches annual public information campaigns just before the rainy season, when diarrhoeal diseases peak, urging all families to keep ORS on hand and to provide fluids and food to all children with diarrhoea. In addition, the campaigns stress the importance of safe water, family hygiene and proper sanitation.

Diarrhoea now accounts for 8 per cent of child deaths, down from nearly 30 per cent 10 years ago. It once accounted for one third of all paediatric hospitalizations, whereas today, as an increasing number of mothers are taught in out-patient facilities with oral rehydration units to rehydrate their own children and manage their illness at home, most paediatric hospitals have closed their diarrhoea wards.

The experience in ORT has convinced IMA, now with more than 100,000 member physicians in private practice, that it can effectively influence public health throughout this vast country. The group has since supported national immunization activities, family planning, promotion of breastfeeding and educating the public about AIDS.

— Jon Rohde, former UNICEF Representative in India

→ After a massive social mobilization campaign (from October 1989 to April 1992) to teach parents to prepare *soro caseiro* — a home-made SSS — in Brazil, a 1992 region-wide survey revealed that ORT use had doubled in three years, increasing from 24 per cent in 1989 to 48 per cent in 1991. There was an increase in the use of all types of oral rehydration solutions, but the use of home-made SSS prepared with two-ended plastic measuring spoons that had been distributed during the campaign increased fourfold. Since 1990, more than 48 million specially

WHO strengthens case management

Evidence shows that standard case management — with increased fluids and continued feeding — can prevent up to 95 per cent of all deaths due to acute watery diarrhoea. Add to this the combination of dietary management, iv therapy and antibiotic use where appropriate, and 100 per cent of deaths due to acute watery diarrhoea, 80 per cent of deaths due to dysentery and 80 per cent of deaths due to persistent diarrhoea can be prevented. When correctly applied, standard case management can prevent 90 per cent of all diarrhoea-related deaths — as many as 2.7 million per year.

Standardizing case management for diarrhoeal diseases within the health system is essential if ORT is to be completely adopted by the public. Training of health personnel, including in clinical practice, is an integral part of a broad set of activities that promote standard case management in health facilities. To date, over 4,000 WHO-supported in-service courses in clinical management of diarrhoea have been held worldwide, and 35 countries have ongoing efforts to strengthen teaching in medical and paramedical schools. Health facility surveys show that in facilities with trained personnel, up to 70 per cent of diarrhoea cases are correctly assessed, up to 84 per cent are correctly rehydrated, and up to 83 per cent are correctly treated for dysentery. These figures be-come

especially important in the light of household surveys and focused ethnographic studies that reveal and confirm the extent to which families rely on health facilities as their principal sources of health care and advice.

While training is the cornerstone for promoting standard case management in health facilities, complementary activities, including ensuring a continued supply of ORS and appropriate antibiotics, are needed. In the 10-year period from 1983 to 1993, access to ORS packets had increased globally from 24 per cent to 75 per cent. The packets are primarily distributed through the public health system, although a growing number are available through commercial suppliers.

In order to maintain the current levels of success and progress towards the end-of-decade goals, ORT must be promoted on multiple fronts. High-quality services in health facilities, therefore, must be complemented with education and communication interventions that change behaviours at the household level. But in this context, it must be recognized that people have sought and will continue to seek help for their children from medical and health systems and thus these remain pillars of a national CDD programme.

— *Division of Diarrhoeal and Acute Respiratory Diseases, WHO (1996)*

manufactured plastic measuring spoons have been distributed in homes across the country to enable **parents** to prepare *soro caseiro* correctly.

⇒ In Bangladesh, largely through the efforts of the Bangladesh Rural Advancement Committee, a national NGO, over 12 million mothers have been taught how to prepare *lobon-gur* solution --- using three fingers for a pinch of salt (*lobon*) and a 'fistful' of molasses or unrefined brown sugar (*gur*).

A number of countries, including Egypt, Ethiopia and Ghana, have developed a measuring system using local soft drink or beer bottles to facilitate ORS preparation at home. The bottles found in most homes make it easy for parents to know how much water is needed to mix with the ORS packets.

VI. COMMUNICATING THE ORT MESSAGE

Families are the first line of defence against the threat of diarrhoeal dehydration. The mother in particular is usually the first person in the home to seek advice when her child has diarrhoea. She is also the one who either administers treatment, withholds breastmilk or food, or continues feeding the child. Yet since her behaviour is often influenced by those around her, the knowledge, attitudes and skills of all family members are crucial factors in determining whether ORT is used at all or whether it is used effectively. The key, therefore, lies in communicating the ORT message in such a way that parents understand it, are willing to use it and are also willing to prepare and administer it safely and effectively at home.

The process is both challenging and complex. ORT does not stop diarrhoea and contradicts a number of age-old beliefs — most especially the practice of withholding liquids and food. Diarrhoea is so common and so often not fatal that it is difficult to get parents to see it as a threat. Immunization, which requires only that parents bring their children for multiple injections, is much easier to demystify. ORT, by contrast, requires parents to abandon most of their existing attitudes towards diarrhoea and methods of treating it and to acquire new knowledge and skills, which they have to use repeatedly over a number of years.

Lessons learned

Laying a strong foundation

To make ORT an integral part of a country's health care system:

- ⇒ all public health facilities must be equipped with adequate supplies of ORS and health workers properly trained in case management
- ⇒ health workers, especially physicians, must be convinced of ORT through hands-on practical training
- ⇒ medical and paramedical schools must incorporate modern diarrhoea case management including clinical practice into their curricula
- ⇒ DTUs must be established in major medical establishments and ORT in all health facilities to train health workers, treat children and educate parents
- ⇒ countries must take regulatory action to restrict the use of antidiarrhoeals in the case management of children with diarrhoea.

Saying 'no' to antidiarrhoeals

Drug companies continue to promote several types of drugs to treat diarrhoeal diseases, even though WHO has determined that these drugs are ineffective and can be dangerous for under-five-year-olds. WHO estimates that more than \$1 billion are spent every year in developing and industrialized countries on such medicines.

In January 1993, Public Citizen, a US watchdog group, petitioned the US Food and Drug Administration (FDA) to ban or relabel products containing the five anti-diarrhoeal drugs most commonly administered to children in the US and elsewhere, because of the risks associated with them, including bowel paralysis and dehydration. While FDA is still lagging

in making reforms, dozens of countries, including Brazil, India, Indonesia, Mexico, Pakistan and Thailand, have reviewed their drug policies in recent years and taken regulatory action to restrict the use of antidiarrhoeals in the case management of children with diarrhoea.

Through research, education, action campaigns, advocacy and dialogue, Health Action International, an informal network of over 150 consumer, health development action and other public interest groups involved in health issues in 70 countries around the world, actively promotes a more rational use of drugs and has raised global awareness about the dangers of antidiarrhoeals.

It calls for the promotion of not just a simple packet of ORS, but of a new attitude towards major childhood diseases and a new pattern of behaviour in response. The many traditional and modern methods for diarrhoeal management, promoted for decades, are powerful forces, and brief promotional campaigns are simply insufficient to turn the tide against them.

Country experiences have shown that the most effective way to create awareness, the first step along the path of changing behaviours and attitudes, is to develop a communication strategy that is based on a community's knowledge, attitudes and practices and respects cultural preferences. The strategy and messages must provide people with convenient and practical solutions that meet their needs.

An integrated communication approach is essential to campaign success. This should use all possible communication channels — mass media, traditional and folk media and interpersonal channels — to reach people with messages in a different form, but on the same subject, so that the messages are mutually reinforcing.

Women hearing health messages on the radio will also hear the same advice from a health worker, receive printed information from their children's school, participate in a community health fair and see related posters. Mass media are used to provide widespread coverage of key messages such as 'dehydration kills', 'increase fluids and continue feeding when diarrhoea strikes', and they learn to recognize the signs that mean referral to a health centre is necessary. The media also pro-

vide regular reminders of the importance of correct preparation, and advice on how to administer the solution and feed the child. Print materials are used for more detailed instructions. Interpersonal channels, through physicians, health workers and other respected community members, reinforce new skills and provide overall credibility for the new technology.

ORT through television and radio

In many countries, especially where illiteracy rates are high, television and radio, when used as part of a larger communication campaign, have successfully increased overall awareness about the dangers of diarrhoeal diseases and the effectiveness of ORT. Celebrities and other well-known personalities are often enlisted to convey the messages, making an unfamiliar therapy acceptable and credible.

→ In India, a television campaign designed to modernize the image of ORT targeted both physicians as well as parents. Explaining that modern doctors used ORT, the spots announced, "If your doctor is modern, then he should be using it too."

→ In Mexico, the medical community responded rapidly when a televised public service announcement revealed that a vast majority of children who had died from diarrhoeal dehydration had been visited by a private doctor. A few weeks later, physicians rushed to find out more about ORT and correct case management and quickly began promoting it to their patients. Today, Mexico boasts an 81 per cent ORT use rate across the country.

→ In Ecuador, television was used to educate people quickly about cholera after an epidemic hit Peru and threatened the rest of the continent in 1991. Ten television spots using puppets were prepared in Spanish and in Quechua and were broadcast by television stations free of charge 575 times in May that year and 514 times in June, flooding the population with messages. Child viewers memorized the words and music of the spots, and became important social mobilizers in the campaign. While all of South America was affected by the cholera epidemic, the death toll in Ecuador was extremely low.

→ A highly successful television campaign in Egypt increased knowledge of

Lessons learned

Communication

To make ORT a family habit communication campaigns must:

- be ongoing and sustained for many years since diarrhoea will always be a problem
- develop a communication strategy that is based on research about local knowledge attitudes and behaviours and rely on communication experts to design and test concepts
- use multiple media to reinforce the same messages
- be timed when diarrhoeal diseases are at their height and parents are most responsive to the messages
- be synchronized with social mobilization efforts to ensure maximum impact
- be implemented simultaneously with steady infrastructure-building, including improving case management and ORS supplies.

ORS among parents from 17 per cent in 1980 to 98 per cent in 1988. Studies also showed that between 66 and 80 per cent used ORS during the campaign, compared with only 12 per cent before. A well-known Egyptian actress, Karima Mokhtar, was featured in the spots, which were broadcast during prime time to ensure the widest possible audience. Acting as a wise neighbour, nurse or grandmother, she gave advice to mothers whose children were suffering from diarrhoea. Karima Mokhtar's acting and the well-crafted scripts had mothers across Egypt demanding ORS. In fact, many mothers still refer to ORS as 'Karima's solution'.

→ In the Sudan, television messages are targeted to grandmothers, highly respected elders who are often the key decision makers in the family. Messages take the form of a popular classical song and are broadcast in Sudanese Arabic throughout the day and after the evening news.

→ In Honduras, people learned to trust ORT by listening to the warm voice of Dr. Salustiano, a fictional character created to promote ORT. The 'doctor' promoted locally produced ORS on radio as a modern and scientific treatment for dehydration, making himself and ORT known to listeners across the country.

→ In Malawi, a popular radio drama features Mrs. Wrong and Mrs. Right. The programme highlights their practices concerning diarrhoeal management in an effective combination of information and entertainment.

→ In Nigeria, a half-hour weekly health news radio programme called *Let Them Live* provides badly needed information on ORT and other health issues in five languages: Ibo, Izon, Efik, Ibibio and Tiv, in addition to English and pidgin English.

Education through interpersonal communication

While the media offer the quickest and easiest way to reach people on a massive scale, the most effective way to change behaviour is to combine media activities with personal contact. Interpersonal contact always enhances confidence and clarifies doubts. When parents learn about ORT through health workers or volunteers in their homes or in schools or churches, they are able to ask questions, with privacy, in a comfortable environment.

Home visits by volunteers of the Catholic Church and community health agents have played an especially important role in educating Brazilians about ORT. In a *favela* (slum) in the southern city of Curitiba (Brazil), Sandra, mother of three, says that she did not understand how to prepare *soro caseiro* when she first saw it on television. "I was afraid to make *soro caseiro* until someone came to my house and showed me how," she says. "Now, I use it all the time." Her neighbour Ana, on the other hand, says that seeing it on television convinced her it was effective. "I knew about it, but when I saw it on television, I trusted it even more."

Interpersonal communication is at the heart of Morocco's overall communication strategy. "Television sounds the alarm," says Nasser Laraki, president of a private communication agency working with the Ministry of Public Health in Morocco. "But face-to-face contact drives the message home." At health facilities, health workers incorporate messages to control diarrhoeal diseases year-round into all maternal and child health care activities. At souks and local *moussems* (religious celebrations), governmental and non-governmental community-based groups distribute educational materials on diarrhoeal diseases and their prevention and demonstrate the preparation of ORS. Finally, since 1992, 12,000 health teams, 3,000 young women from the Ministry of Youth and Sports and 250 female agricultural workers as well as thousands of Moroccan Scouts have travelled door-to-door and reached more than 1 million mothers with children under five each year.

A village learns about ORT

On a September evening, about 60 women, most with children perched on their knees, sit on benches under a large tree at a primary school in a suburb of Ouagadougou (Burkina Faso). Others trickle in, looking for seats. Facing them are six more women, the neighbourhood facilitators, trained by the NGO Femmes et Santé.

The official theme of the evening is diarrhoea and ORT. Unofficially, it is communication, getting these mothers to talk about a sometimes embarrassing illness that too often kills children. By discussing ORT, the women learn to understand the dangers of dehydration, the importance of rehydration, and how to prepare and administer ORS.

A facilitator asks the mothers to describe diarrhoea. Embarrassed at first, volunteers look at the floor while whispering answers. A new question is asked. What should be done in case of diarrhoea? A few mothers speak. Correcting some answers and completing others, the facilitator makes it clear that breast-feeding should be continued for young children, that water intake should be increased, that the child should be well fed and given ORS.

More women arrive, and the crowd swells. One of the facilitators summarizes all that has been said by using a set of drawings on a piece of cloth. "What should be done if the child's condition does not improve?" she asks.

With the shyest of tongues loosened by now, the mothers answer simultaneously: "Seek help quickly at the dispensary." Dehydration puts the child at risk, stresses the facilitator. The theoretical part of the session is over. The facilitators look for a volunteer to demonstrate the preparation of ORS.

Standing behind a table, the woman mixes the powdered contents of an ORS packet in water, emphasizing the importance of cleanliness. One should wash hands and all the utensils and materials for the preparation with soap. The full content of the ORS packet, she explains, must be poured into 1 litre of pure water and slowly stirred with a spoon or a ladle. The water for mixing should come from a borehole or a tap. Otherwise, it must be boiled and allowed to cool. As a final lesson, the facilitators recruit children to drink the solution — sip by sip, which is important for keeping it down.

Using Nigeria's local traditions to promote ORT

A visitor to the huge, sprawling city of Ibadan in south-western Nigeria finds women of the Yoruba ethnic group — known for their love of music — spontaneously breaking into a dance as they sing about *omi iye*, the 'life-saving waters' of ORT. Word of this therapy has been spread in ORT 'corners' and kiosks set up with the support of the Nigerian Junior Chamber in market places, pharmacies and clinics throughout the city.

Mrs. Folasade Adeosun, an indefatigable 70-year-old market trader and volunteer health worker, explains how she tailors her ORT messages to attract both Christians and Muslims. Mrs. Adeosun uses the phrase *omi iye*, that suggests the waters of baptism, with Christians. She switches to the expression *omigbemiro*, or 'health-giving waters', when talking with Muslim clients. Since alcohol is strictly forbidden by Islam, she avoids any reference to beer when describing the green bottles used to measure the right amount of clean water for mixing ORS. For centuries, the 'waters of life', in the form of the river goddess

Oshun, have been sacred to the Yoruba, giving Mrs. Adeosun's lesson added appeal.

Armed with a metal toolbox containing ORS sachets, Mrs. Adeosun relies on tradition to reach parents. She promotes healthful practices to prevent dehydration, such as using the cereal-based home fluids that mothers frequently give to their children.

At the same time, Mrs. Adeosun discourages cultural practices that are harmful. She dissuades mothers from the traditional Yoruba notion that they should withhold food from children with diarrhoea, or from the belief that diarrhoea is harmless and caused by teething. While warning mothers that burnt alligator pepper and other concoctions dispensed by medicine men do not substitute for increasing fluids, Mrs. Adeosun also counsels that feeding-bottles filled with infant formula are unhygienic and far less nutritious than mother's milk. Finally, when severely ill patients come to her seeking treatment, she immediately refers them to the Aleshinloye Market Dispensary just around the corner.

Traditional and folk media

A country's richest resources are often its local traditions, customs and beliefs. Some of the most effective communication campaigns, therefore, have capitalized on local culture and have used non-traditional channels to educate society about ORT.

→ In Nigeria, theatre troupes translate public health messages into a variety of performance styles to reach the many indigenous communities. In Kano, for example, Hausa-Fulani *koroso* music performed with flutes, rattles and 'talking' drums accompanies dance dramas that inculcate the benefits of ORT. The Koroso Drama Troupe, created in 1972 as part of a national arts festival, present humorous parables about hygiene and sanitation.

→ In early 1996, the young and adult performers of Ethiopia's Children and Youth Theatre travelled across the country to warn communities about the dangers of diarrhoeal diseases through drama, music, poetry and song. Meanwhile, between circus acts, the young

performers (including children) of Circus Ethiopia, one of the country's most remarkable performance groups, with brightly painted faces and colourful costumes, enact brief and lively skits about the dangers of diarrhoeal diseases and the importance of ORT.

→ Baul singers in Bangladesh, traditional itinerant musicians, travel from village to village singing songs about ORT and disseminating a number of other important health messages.

→ In Honduras, a *fotonovela* (picture magazine) teaches children about ORT. The messages are put into the character of 10-year-old Pedro, who, seeing that his younger sister has diarrhoea, tells his mother about dehydration. As a result, their mother consults the health guardian, who sends her to the health centre where the little girl is rehydrated by the nursing auxiliary.

→ In Viet Nam, public address systems — popular communication tools in operation throughout the country for many years — are frequently used by health workers to transmit messages about ORT. Pre-recorded messages are broadcast through these systems, set up in public areas, at various times of day, at high volume, to anyone within hearing range.

Steady media coverage

By disseminating messages year-round, the print and broadcast media provide a constant reminder of ORT, and, in a number of countries, journalists have brought not just ORT but children's issues in general to centre stage. They are not only imparting information on specific health issues, but are generating an overall awareness about child rights.

→ The Media Advocacy Group for the Advancement of Women and Children (Magawoch) was formed in Malawi to assist journalists, broadcasters and media managers in educating the public about child survival, protection and development issues. Messages on diarrhoea appear in print and broadcast media, during seasons when diarrhoeal diseases are at their height. Magawoch expects to provide journalists regularly with information on diarrhoea and ORT, to intensify campaigns during the rainy season and promote hygienic practices all year round. The group will encourage the media to travel to local communities, to expose and address specific cultural beliefs surrounding diarrhoea.

→ In some of the most remote regions in Brazil, more than 1,600 local radio broadcasters have attended 20-hour training workshops on children's rights, designed to help them develop programming that will educate their listeners about basic maternal and child health issues. Print journalists have also seized on child rights as a topic, and hundreds of articles on children appear monthly in newspapers and magazines across the country throughout the year. The Children's Rights Press Agency (ANDI) has played a particularly important role in informing the press about child-related events and issues and collecting and distributing press coverage on children's rights.

Summer ORT Weeks intensify year-round efforts

National ORT Days and ORT Weeks, often held before or during the summer or rainy season when diarrhoeal diseases are at their height, have reinforced year-round efforts in rural villages and urban neighbourhoods in countries all over the world. Besides promoting ORT use, the Weeks have increased awareness about the dangers of diarrhoeal diseases among decision makers at national and local levels. These efforts have strengthened commitment to ORT among health professionals and improved access to ORS through massive distribution of ORS packets. They have also highlighted the media's role in making the public aware of health issues in general and the World Summit goals in particular. Finally, they have provided opportunities to mobilize a number of different groups to work as partners in achieving a common social objective.

The most successful weeks are those that are well planned and have defined in advance measurable objectives, such as the number of people to reach or the number of packets to distribute. Today, around 40 countries regularly conduct ORT Weeks during the peak diarrhoea season.

→ In May 1993, during Mexico's first Oral Rehydration Week, nearly 1.5 million mothers and community members learned through more than 14,000 educational stands how to recognize the signs and symptoms of diarrhoeal diseases. Seven million ORS packets were distributed, along with instructions for preparation. Teachers taught nearly 15 million preschool and primary school children about hygiene and correct food handling and discussed with them the advantages of ORT.

→ Seventeen states participated in the Sudan's first ORT Week, held in September 1994. A marathon organized by the Red Cross and Youth Organization and attended by senior level government officials launched the opening ceremonies in Khartoum. Theatrical pieces, songs and exhibitions were staged throughout the Week, to complement a barrage of radio and television programmes, newspaper articles, and door-to-door outreach programmes. Nine temporary ORT corners were established in NGO clinics in camps for displaced persons, and two DTUs were opened in teaching hospitals. The success of the Sudan's first ORT Week prompted 19 states to participate in the 1995 events.

→ During Pakistan's first ORT Week, in 1995, 312,000 posters on diarrhoea prevention, the treatment of cholera and ORS use were printed and distributed to district health officers and displayed in prominent public places. As many as 1,376,600 brochures on correct case management for diarrhoeal diseases and 32,000 booklets on the prevention of diarrhoea were distributed across the country. Through more than 800 meetings, 320 seminars, 1,000 orientation sessions and 21,000 ORS preparation demonstrations, over 18 million people were

trained in ORT use and preventive practices for diarrhoea at various locations across the country.

→ Since July 1994, Iraq has assigned the 15th of every month to ORT. The days are celebrated in all governorates, during which the staff of health centres organize activities to promote ORT, proper home management, continued breastfeeding and improvement of food hygiene for mothers. Members of the General Federation of Iraqi Women reinforce these efforts through home visits where they demonstrate the use and preparation of ORT and distribute ORS.

Value of ORT in times of crisis and emergencies

ORT's practical effectiveness was first demonstrated in 1971, when ORS was distributed during a cholera epidemic that broke out in refugee camps during the conflict that led to Bangladeshi independence. Of 3,700 patients treated during an eight-week period, only 3.6 per cent died, and of these, half died before rehydration could be started. The death rate for cholera at that time was about 30 per cent. Since then, although periodic epidemics of acute diarrhoeal diseases have recurred, ORT use has stemmed the loss of life, offering irrefutable evidence to both the medical community and the public of ORT effectiveness.

→ When more than a quarter of a million Peruvians came down with acute diarrhoeal diseases during a cholera epidemic in 1991, fewer than 1 per cent died. A mass media campaign alerted people about basic hygiene measures to stem the spread of the epidemic, a network of several thousand community women already trained in ORT use with UNICEF support was reactivated by ORT mobilizers, and 3 million packets of ORS were distributed nationwide. The result was a case fatality ratio described as the lowest in history. By contrast, almost half of 19 African countries affected by cholera in 1991 — where there was neither mass mobilization for ORT, nor a health sector ready to provide proper case management — reported deaths of 8 per cent or more.

→ In Ethiopia, ORT has in recent years been integrated into the country's emergency programme activities. During diarrhoeal disease epidemics, tents are set up in affected areas not only for treatment but also to educate the community on how to prepare ORS. Communities gather in meeting halls or schools, where a health team sent from the Ministry of Health uses videos, posters and brochures to inform

Lessons learned

ORT Weeks

To maximize their impact, ORT Weeks:

- need to be supported with steady infrastructure-building year-round
- should be launched just before diarrhoeal diseases are at their height and parents are most receptive to the messages
- should set specific and measurable goals so that strategies can be planned accordingly
- should disseminate few but specific messages for maximum impact
- can be used as an opportunity to educate the public about other supporting health interventions, such as breastfeeding and vitamin A.



UNICEF/94-0273/Press

ORT has proven itself in cholera epidemics, as it did in Peru in 1991 and during the Rwandan crisis in 1994. A UNICEF health worker, assisted by a refugee volunteer, gives ORS to a dehydrated Rwandan child in the Ndoshu camp for unaccompanied children near Goma (Zaire).

people about the dangers of diarrhoea and its correct management.

→ When periodic cholera epidemics threaten north-eastern Brazil, every member of society is mobilized to prevent the spread of disease as well as to teach people about ORT. Airlines and buses advise passengers to seek immediate attention if they exhibit symptoms, announcements are made on television and radio, and posters and pamphlets are distributed across the country.

→ When cholera devastated Rwandan refugee camps in Zaire in 1994, ORS played a critical role in reducing the death toll. Relief workers arriving at the scene with ORS were able to slash mortality rates in Goma camps from 48 per cent to less than 1 per cent.

VII. TURNING ORT PROMOTION INTO A SOCIAL MOVEMENT

It has become increasingly clear over this past decade that only when ORT is no longer seen as a medical intervention but is brought into the community can ORT messages become rooted in community consciousness and sustained over the long term. The most successful ORT programmes therefore, are those that have generated public interest around ORT on a massive scale and turned ORT into a social movement — a movement that has involved a wide range of sectors of society.

A number of partnerships have formed between government, NGOs and the private sector at both international and local levels to facilitate this shift towards community responsibility. These efforts

have educated millions about ORT, ORS preparation and administration, and have dramatically increased access to ORS. In essence, they have brought ORT to the family, where it is needed. At the same time, these efforts have also highlighted other child welfare, protection and development issues, thereby reinvigorating society's collective responsibility to its children.

With increased information and education has also come increased community involvement. Community members are transforming their homes into oral rehydration units and ORS depots. Neighbours are educating neighbours about ORT and providing parents, grandparents, brothers and sisters, aunts and uncles with the necessary skills to take control of their own health. The process has enabled the community to assume a major role in identifying its own needs and in planning and contributing to appropriate actions. It has strengthened both family and community self-confidence as they become active participants in the care of their own health and that of their children.

ORT education and promotion therefore, is an entry point that opens doors for other health interventions. Once they begin to understand and use ORT, parents learn to adopt other important measures for diarrhoeal disease control, including breastfeeding, preparation of hygienic foods, using clean water and latrines, washing hands and bringing infants for immunization. All these measures increase parents' confidence that their children will survive and encourage them to take further steps to improve their quality of life.

VIII. CREATING PARTNERSHIPS

International alliances

In May 1994, the World Organization of the Scout Movement (WOSM), representing 25 million Scouts, signed an agreement with UNICEF to work towards achieving the mid-decade goal of 80 per cent ORT use rate by 1995. By the end of 1995, the Scouts were promoting ORT in more than 20 countries around the world.

Despite their youth, the Scouts, with 25 million members in 160 countries, have formidable potential as promoters. As members of the communities they serve, they know which families lack water or have small children; they speak the local language and they are very well organized.

As part of the global ORT campaign, WOSM and UNICEF collaborated to produce a manual in English, French and Spanish to teach the Scouts about ORT. Strongly committed to community service, the Scouts have been effective educators around the world:

➔ Moroccan Scouts were among the first to take up ORT, presenting a declaration of commitment to the Princess of Morocco at a meeting on the Convention on the Rights of the Child in 1994. In 1995,

during June and July, the peak diarrhoea season, they contacted 13,000 families with ORT information. One troop packed ORS supplies on the backs of mules and took a six-day trek to reach families. Girl Guides participated in ORT rallies, walks and other special events. Of this group, more than 48,000 Scouts were trained in correct case management for diarrhoeal diseases and, through home visits, have educated hundreds of thousands of families in 20 districts about ORT.

➔ Papua New Guinea's Scouts patrol remote villages to spread the word about ORT. The Scout Association's ORT campaign received national attention and was extensively covered on television and radio.

➔ In Nigeria, more than 48,000 Scouts have been trained in ORT promotion. With their new skills, they plan to organize a school ORT quiz, establish kiosks in rural areas and mobilize teachers and market women.

➔ In Bangladesh, half a million members of the Bangladesh Scouts have initiated a programme called the PORT Project (Promotion of ORT in the community). Each Scout over the age of 11 'adopts' ten families (younger Scouts adopt five families) in his locality and trains them in ORT. After six months of monitoring, the Scout hangs his name on a big tree by the village road designated as the ORT Tree. Armed with 'The Scout manual for saving children's lives through ORT', an action guide supporting UNICEF's Meena communication initiative (designed to improve the status of girls in the developing world), the troops are fanning out across the villages and delivering their message. Restricted at first to a few villages, the Scouts' ORT project was expected to spread across the country.

Junior Chamber International (JCI), the worldwide organization of young people in business, also committed at its 1993 World Congress to actively support the mid-decade ORT goal. The group resolved to launch a global communication and advocacy mission to make knowledge of ORT "the marketing mission of our times."

➔ In the Philippines, JCI started a campaign called Project CDD during which various local chapters provide information about ORT and distribute ORS in their communities. Female members have been especially enthusiastic and have formed a group to promote ORT as an exclusive activity.

➔ In Nigeria, some 5,000 JCI members in 68 chapters across the country donate their time and expertise to build public awareness of ORT as a simple, cost-effective method of combating diarrhoeal dehydration. Across the country, Nigerian JCI architects, physicians and self-employed entrepreneurs have offered their marketing and communication expertise to promote ORT. By the end of 1995, 800,000 members had been trained to be trainers to teach parents, NGO members, village health personnel, local government officials, religious and traditional leaders about ORT. The group also publishes an ORT newsletter to keep members abreast of their efforts and achievements across the country.

USAID pioneers social marketing to support ORT

Over the past 20 years, USAID has proven that good health can be promoted just as effectively as toothpaste, perfume or automobiles. While the emphasis on commercial selling is the product, the emphasis in social marketing is on a beneficial cause — in this case, on learning a new way to treat and prevent diarrhoeal dehydration.

Social marketing takes a consumer-based approach to solving child-survival problems, based on understanding the consumer's needs and offering solutions appropriate to those needs. This simple marketing tenet, a key to saving thousands of children's lives from diarrhoea, has since been applied to many other child survival programmes, including those dealing with immunization, acute respiratory infections and malaria control.

The effectiveness of social marketing was first demonstrated through two USAID pilot projects in Honduras and the Gambia where social marketing helped to dramatically increase the use of locally produced ORS packets: Litrosol, in Honduras, and homemade sugar-salt solution in the Gambia. USAID also supported Egypt's highly successful Control of Diarrhoeal Disease (CDD) programme, where the promotion of ORT contributed to a significant reduction in infant mortality from diarrhoea between 1980 and 1991. Throughout the 1980s, USAID expanded its support of ORT social marketing, providing assistance to national CDD programmes in more than 20 countries.

In recent years, USAID has refined the social marketing model for ORS to reduce dependence on donor support and ensure long-term sustainability, by promoting non-subsidized ORS production and sales by the commercial private sector.

→ In Pakistan, a USAID-supported government and private sector joint effort expanded production and distribution of local ORS. Technical officers provided marketing workshops, assisted in marketing research and promotional activities, and provided assistance in technical areas and new product development. An easing of

government regulations enabled retail stores to supplant pharmacies as the main distributors of ORS. As a result of these actions, commercial firms became the predominant distribution channel for ORS, and in the end, devoted more production capacity to ORS and initiated complementary activities which further expanded access to ORS.

→ In Kenya, USAID and UNICEF developed incentives to convince Sterling Health (now SK-Beecham Consumer Health Care), the pharmaceutical market leader with the strongest direct distribution system, to launch an ORS product. Sterling launched OKOA-ORS in October 1993, using its sales force and vast distribution network. One year later, according to an independent audit, OKOA-ORS was available in 32 per cent of the rural shops of Kenya, which means that a large part of Kenyan population that did not have access to this life-saving product now does have access.

→ In Bolivia, USAID, the Pan American Health Organization (PAHO) and UNICEF are providing technical expertise and funding for the first two years of a programme that encourages the private pharmaceutical sector to develop new markets for ORS. By the third year, the private sector will assume full responsibility for manufacturing and distributing ORS and will coordinate promotional activities with the Ministry of Health. This programme will expand the availability of ORS to rural Bolivia through local market networks.

USAID stands committed to public health strategies to further reduce deaths due to diarrhoea. "We are proud to be a leader in oral rehydration therapy and in a wide range of programmes that help children lead healthier, more productive, more meaningful lives," said USAID Administrator J. Brian Atwood. "We have learned what works and what doesn't and we feel that sharing our knowledge is both an obligation and an opportunity."

— Office of Health and Nutrition, USAID

Private sector

→ In Brazil, the National Advertising Council, a coalition of private advertising agencies, media and video production houses, has successfully 'sold' the concept of ORT to the public through the national media. Since 1987, the group has produced videos on ORT, radio spots and has arranged for free broadcast in the national media.

Other private enterprises have also donated services and products and promoted *soro caseiro* on more than 110 million sugar bags, 40 million salt packages and 20 million supermarket bags. In 1992 and 1993, the National Association of Toy Manufacturers coordinated a campaign among private companies to recycle their leftover plastic. The campaign produced 1 million measuring spoons that were donated to UNICEF.

Unexpected partnerships have been formed as well. In 1993, the Brazilian air force mobilized its forces to join the effort and transported millions of spoons and ORS packets to the difficult-to-reach Amazon region.

→ In Bolivia, by the *Suero de la Vida* initiative, an alliance between the public and private sector was formed to dramatically increase access and use of ORS throughout the country. The partners include the Secretariat of Health, two major private pharmaceutical companies, the National Association of Pharmacy Owners, UNICEF, USAID and PAHO/WHO. As members of the alliance, the private companies agreed to distribute ORS on a massive scale, to promote ORS/ORT to physicians, pharmacists and nurses, to reduce ORS costs, and to carry out an intensive communication campaign in collaboration with the public sector. The pharmacy owners' association, which represents all Bolivian pharmacists, agreed to reduce pharmacy profit margins in order to lower consumer costs. The Government has already deregulated the sale of ORS, enabling it to be sold outside pharmacies, and it is intensifying education for health professionals as well as participating in a communication campaign. UNICEF/USAID/PAHO are financing a major campaign using multiple media to mobilize grass-roots networks.

→ In the Sudan, where an underdeveloped transportation and communication system has made it difficult to distribute ORS, a private sector drug company is working with the Government to increase access to the packets. Through its existing distribution system, the company is supplying ORS to pharmacies and stores, using its networks of

Lessons learned

Partnerships

Creating alliances among different organizations can be most effective when:

- ORT promotion is linked to the larger goal of child survival
- broad goals are actualized through specific activities
- ORT promotion is positioned to fit within a partner's own mandate
- partners have identified measurable goals that enable them to see the results of their efforts
- activities are launched at scale. Large-scale impact can only be achieved through large-scale initiatives.

sales representatives to promote ORS to pharmacists and doctors and running in-store promotions.

→ Most of Malawi's business community are members of the Initiative for Mobilization of Private Action (IMPACT), established in 1995. The initiative encourages partnerships among its members and with other organizations that will enrich the lives of Malawian children.

→ In Bangladesh, a new partnership between the Grameen Bank, the Social Marketing Company (SMC), the country's major distributor of ORS in Bangladesh, and UNICEF expects to dramatically increase people's access to ORS. Under the agreement, finalized in March 1995, Grameen members will be able to become depot-holders who will not only sell ORS, but also demonstrate the correct mixing procedures and offer advice on ORT to caretakers. This will improve families' access to ORS in villages across the country, especially during times of emergency. The scheme provides an excellent business opportunity to the

Children become society's concern: The Child Hope campaign

For the past 10 years, Brazil's TV Globo's Criança Esperança — Child Hope — campaign has not only raised millions of dollars for children but, what is more important, has also increased public awareness about child rights. "When we began, our goal was to make children an issue in Brazilian society," says Luiz Lobo, Director of Social Projects at Rede Globo, Brazil's largest television station. "But we quickly realized we could also raise funds." Since the campaign began in 1986, more than \$20 million has been raised to finance efforts to protect children's rights. Most of the funds allocated to health issues have been used to support the work of the Child Pastorate (a programme of the Catholic Church that educates families about child health issues) to develop educational and information materials and to purchase measuring spoons.

Each year, the 15-day campaign is launched on the national news, followed by a nationally televised entertainment variety show that showcases Brazil's most celebrated singers and actors. In the next two

weeks, projects for children and child rights and protection issues are featured on the news, in documentaries, on talk shows and entertainment programmes. New themes are chosen each year, although breastfeeding, ORT and child mortality are always highlighted. Throughout the campaign, celebrities and soap opera stars deliver important health and child rights messages in 30-second public service announcements. A telephone number to receive donations is shown periodically on the television screen.

While the funds raised have increased considerably over the years, Mr. Lobo says, "We're not as concerned about the money. People are committed to these issues and are getting involved. That's more important."

During the rest of the year, TV Globo also includes ORT and breastfeeding messages in many of its most popular soap operas. Says Mr. Lobo, "At least two or three times each year on these shows, a child gets diarrhoea, and we have a relative or neighbour explain how to prepare soro caseiro."

country's 2,046,000 members, spread across 35,000 villages, by enabling them to buy ORS at a subsidized rate from SMC and to make a profit. "The Grameen member is at the heart of the rural community, probably living in an area where no shop within miles stocks ORS," said Saleh Ahmed Chowdhury, the Rajshahi area manager of SMC.

IX. COMMUNITIES TAKING RESPONSIBILITY FOR THEIR OWN HEALTH

Community health agents

In countries around the world, health authorities are recognizing the important role community health agents can play in teaching parents about ORT. Trained by the Ministry of Health and operating in the communities where they live, community health agents, front-line soldiers in the war against diarrhoeal diseases, serve as a critical link between the community and the health services. They emphasize prevention but they also bring the population to the formal health services when necessary, which is especially important in areas where people have limited access to health facilities. They treat minor ailments, provide health education, encourage safe water and sanitation projects and refer serious cases to the nearest clinic or hospital. In some countries, they are paid a minimum salary, in others, they volunteer their services.

Community health agents have been extremely effective in teaching parents about ORT for a number of reasons. They communicate with their neighbours easily in familiar, non-technical terms and, because they are acquainted with traditional health practices, they are better able than physicians to dispel common myths that may lead to ineffective or even dangerous behaviours. Most especially, however, community health agents have a personal stake in improving the health of families they know. The agents want to solve the problems of the community because these are their problems as well.

→ A 1994 evaluation of the community health agent programme in eight north-eastern states in Brazil found that 84 per cent of children under five who had experienced diarrhoea during a two-week period prior to the survey had received some type of ORT, and 47 per cent of those children had received either *soro caseiro* (in most cases prepared with the standardized measuring spoon) or the government-produced packets. More than 21,000 community health agents work in north-eastern Brazil, although the community health agent programme is beginning to spread to the rest of the country as well. In Brazil, community health agents are paid approximately \$100 per month out of federal funds, and each agent is responsible for an average of 150 families in rural areas, 250 families in urban areas.

→ In Honduras, volunteers chosen by the community are trained to care for those suffering from diarrhoea and to notify the nearest health centre of the beginning of a possible outbreak of cholera. They

Neighbours helping neighbours

Like the *favelas* of Brazil, the *callampas* of Chile or Argentina's *villas miserias*, Rinconada, a Peruvian shanty town near Lima, is home to the poorest of the poor. But thanks to dedicated volunteers from the community, Rinconada now has running water, electricity, a school and a two-lane road that gives access to public transportation. It also has Luisa Vargas' CORU (Community Oral Rehydration Unit).

Luisa's house is small, with thin walls and a sheet-metal roof. With the aid of an NGO, she added two new cement-floored rooms that are used exclusively for treating visitors. A bright blue banner identifies her home as a CORU.

During the summer months, Luisa might see five or six sick children each day. Using simple and direct language, she explains to mothers the dangers of diarrhoeal dehydration and the importance of ORT. And they listen. To them,

she is a neighbour. At times, they express doubts, but without reservation, they trust her advice.

When Luisa is away from home, two of her twelve children, aged 15 and 17, take over. Trained by their mother, the girls attend to visitors and pass out ORS, always keeping track of whom they see. When she returns, Luisa follows up by calling on those people in their homes.

Keeping detailed records of whom she sees and how much ORS she distributes, Luisa reports to the Ollantay Health Centre, which manages the CORUs in the zone.

For her commitment, she receives no pay, only the satisfaction of helping fellow community members and, in return, their respect. In a way, defeating diarrhoea has become for many CORU volunteers a matter of pride. The saving of lives is a powerful enough reward.

deliver ORS to those in need, day and night, teach ORS preparation and administration, organize transport on a stretcher, or by animal or car, to the nearest health centre, monitor the condition of patients being given ORT at home and educate people in preventing and treating diarrhoea. These volunteers played an especially important role in reducing the death toll during the country's 1991 cholera epidemic: in 75 per cent of cholera cases, volunteers took a leading role in handling the situation, and their contribution prevented many deaths.

→ To reach mothers in Mexico, especially in those areas with the highest child mortality rates, the Ministry of Health trained more than 1 million people, mostly women, to be health promoters. They are trained in the correct management of diarrhoeal diseases and ORT and learn how to teach others in their community valuable skills that can save their children's lives. Once the health promoters are educated, they fly the white flag of the ORT campaign outside their homes or place of work, signalling their training in correct case management for diarrhoeal diseases. The training is kept as simple as possible and is based on three lessons known in Spanish as the 'ABC formula' - *alimentación* (continued feeding), *bebidas* (frequent drinks) and *consulta oportuna* (medical help when necessary). By the end of 1993,

more than 5 million mothers had been educated about ORT.

→ In Peru, Community Oral Rehydration Units (CORUs) have become the main network for reaching people with the message of ORT. There are more than 15,000 CORUs throughout Peru, each run by a volunteer, usually a woman, from her home. CORUs are available to the community 24 hours a day and use attractive blue banners to identify themselves, in accordance with the old Andean tradition of placing flags on locales that have something to offer. By painting colourful murals on their houses, with themes related to breastfeeding, diarrhoea prevention and ORT use, they send messages to the community that are clear, direct and inviting. Besides making their own banners, many CORU volunteers prepare posters, using traditional silk-screening techniques, and give community health talks.

National NGOs

→ In Bangladesh, the Oral Rehydration Therapy Extension Programme (OTEP), launched in 1980 by the Bangladesh Rural Advancement Committee (BRAC), a local NGO, has been described as the most extensive public health initiative ever undertaken by an NGO anywhere in the world. Door-to-door half-hour counselling sessions, involving over 600 field workers at any given time, have systematically taught mothers to prepare an ORS mixture, using three fingers of *lobon* (salt), a 'fistful' of *gur* (unrefined brown sugar) and half a litre of water — common ingredients in all Bangladeshi homes. "In spite of all the scepticism from the global health community, BRAC carried the science of ORT into every home in Bangladesh. Never before, or since, has a public health effort of this intensity been tried," wrote Dr. Jon Rohde, former UNICEF Representative in India and an international expert on diarrhoea, in 1995. By the time OTEP ended a decade later, in November 1990, over 12 million mothers (80 per cent of all rural households) had been taught how to prepare the mixture.

Their work continues today with impressive results. A 1993 study carried out by BRAC showed that 93 per cent of mothers remembered how to make the solution, over 60 per cent used ORS to treat diarrhoea cases, and the use of ORT had jumped from a low 24 per cent in 1990 to over 40 per cent. Earlier, a 1992 joint study by BRAC and UNICEF showed 70 per cent of children interviewed knew that ORT including increased fluids was the correct treatment for diarrhoea.

→ In Burkina Faso, Femmes et Santé, a women's health NGO, has trained 480 male and female facilitators in 10 provinces from the country's village associations to fight against diarrhoeal dehydration. Selected by the village associations themselves, based on their dynamism and efficiency, these volunteers live in the community, know the residents well and, as association members, are accustomed to advising them in a number of areas. Femmes et Santé also provides the facilitators with new skills: detailed health training in other health-related

fields, including immunization, breastfeeding, vitamin A deficiency and dracunculiasis (guinea worm disease).

Equipped with ORT posters and pamphlets and ORS sample packets, the facilitators establish contact with administrative and religious leaders, conduct field studies, give talks on ORT to community members and conduct home visits to teach about ORT. Between December 1994 and February 1995, they held 2,372 ORT information and discussion groups in 1,280 villages and urban areas. The sessions were followed by a demonstration of ORS and homemade fluid use. In markets and during other festive occasions, the project also organized about 50 animation days, including debates, ORT information kiosks, ORS preparation booths, games and films.

An evaluation carried out in March 1995 showed that the facilitators had in-depth knowledge of their subjects and, more important, that they successfully mobilized the villagers for ORT. Case management at home has improved, and the number of health-centre referrals has declined. In one province, for example, two months after the facilitators began their activities, the numbers of referrals and diarrhoea-related deaths were cut in half.

Religious organizations

Religious leaders are among the most influential members of a community and their endorsement of ORT can have a significant impact in getting the community to accept it. At the same time, their network of clergy, often working in the most remote regions of the country, can play an important role in educating communities to prepare and administer the life-saving solution correctly.

→ In Brazil, more than 70,000 trained volunteer community leaders of the Child Pastorate, a programme begun by the National Conference of Brazilian Bishops (CNBB), work with more than 1.5 million of the poorest families in the country to provide vital information in a variety of areas including ORT, breastfeeding, immunization, prenatal care, acute respiratory infections and AIDS. Working through the Catholic Church's extensive network of dioceses and parishes, these retired teachers and nurses, domestic workers and housewives assist more than 2.1 million children under six years of age in all 27 states and 2,158 municipalities. A computerized information system, initiated in 1988, tracks vital statistics on children and their families, enabling community leaders to continuously evaluate and improve their work.

"We wanted parents to be able to depend on themselves," says Dr. Zilda Arns Neumann, National Coordinator of the Child Pastorate of CNBB. "We're telling them: 'Don't wait for government to help. You have all the ingredients to help yourself — water, sugar and salt. When you organize you can create miracles to save children'."

In small and large, rural and urban communities across the country, the Child Pastorate has made a significant contribution to improv-

ing the health of families. Child Pastorate records indicate that in the first trimester of 1995, only 6 per cent of all children under six assisted by the Child Pastorate across the country had diarrhoea. Of these children, 91 per cent had been given *soro caseiro*. During this same period, 75 per cent of mothers assisted by the Child Pastorate had exclusively breastfed their infants for a minimum of four months — the national average is 6 per cent.

To further reinforce the messages delivered by the volunteers, four years ago, the Child Pastorate began producing a weekly 15-minute radio programme that promotes ORT and breastfeeding as well as other preventive child health measures and broadcasts it over 677 local radio stations.

➤ In Ethiopia, more than 2,300 scholars, priests, Sunday-school teachers and archbishops of the Ethiopian Orthodox Tewahido Church have attended workshops on ORT and have adopted the motto: one priest, one ORS, one family every year. The goal is to ensure that every priest can convince at least one family each year to use ORS when a

The word of God

More than 300 students gather every Sunday afternoon in a meeting hall in Akaki, a suburb of Addis Ababa, to hear Abera Kuma read stories from the Bible.

"Many children in this community are dying from diarrhoeal diseases," says the Sunday-school teacher. "I must tell my students about ORT so that these children can be saved." Nearly 46 per cent of all child deaths in the country are attributable to diarrhoeal diseases.

Since he participated in a workshop on the expanded programme on immunization and ORT, Abera has been linking the teachings of the Church with his newly acquired health education and instructs his students about the dangers of diarrhoeal diseases and the importance of rehydration and continued feeding.

Reciting from the Book of Kings in the Old Testament, he explains that by advising King Hezekiah to place a lump of figs on his boil, Isaiah the Prophet cured the King's fatal illness. "Like Isaiah, we also have various types of medicines

that can save those who are dying today," he tells his attentive students, describing the types of diseases from which children, in particular, are dying. "They are dying from dehydration from diarrhoeal diseases, and they are dying from poor nutrition, poor hygiene and sanitation and lack of vaccinations," he says.

For each cause of death, he explains how his students can help. "For those afflicted with diarrhoeal diseases, we must replenish their bodies with fluids. We must tell them where to find the packets of ORS and how to prepare them — using three beer bottles of clean water. We must continue giving this fluid to the child every day for three days and we must not stop feeding him because he needs nourishment to get well." Abera continues to give details about ORS and ORT and then discusses the importance of vaccination before he returns to the Old Testament. "Society belongs to the Church," he says. "The Church is responsible for the people and has to protect and save their lives."

child becomes ill. In regions across the country, members of the churches' 400,000 clergy are beginning to call attention to ORT during christenings and home visits. They talk about ORT between services and church gatherings, and Sunday-school teachers explain it in their classes. The Patriarch even discussed the dangers of diarrhoeal diseases and the importance of ORT during his benedictions at Christmas in 1994 and Easter in 1995, broadcast nationally on television and radio.

The nation's Islamic community has become involved as well. In 1995, more than 540 Islamic leaders, imams, *ulamas* and *madrassa* teachers participated in workshops, and since then, in mosques across the country, imams are talking about ORT and *madrassa* teachers are incorporating child survival messages into their teachings.

Separate manuals have been developed with UNICEF support for Christian and Muslim clergy that cite biblical and Koranic verses to link religious with child survival messages. The Ethiopian Evangelical Church Mekane Yesus and the Ethiopian Catholic Church have also recently joined the effort.

Teachers

→ In the province of Toamasina in Madagascar, the local Student/Parents Association is sensitizing parents about diarrhoeal diseases and correct case management. Plans have been made to promote ORT through the school curriculum, and the province has provided several workshops for national leaders from the Ministry of Health and the Ministry of Education, as well as members from various NGOs who wish to learn from its success.

→ In Mexico, educational messages on the prevention and control of diarrhoea included in the official primary and secondary school textbooks have encouraged preschool and primary schoolteachers to play a particularly strong role in the ORT education process. At the same time, these messages have encouraged schoolchildren to adopt beneficial health practices from an early age.

→ In Malawi, diarrhoeal management is part of the primary school curriculum, covered in science and health education as well as needlecraft and home economics.

→ In Bangladesh, the 11th day of every month has been designated as ORT orientation day, when teachers in districts across the country learn about ORT. They are also given 50 ORS packets so they can become depot-holders and are expected to train other teachers in their school about ORT. Since teachers have become involved in ORT education, more than 400,000 children between the ages of 10 and 16 have been trained in ORT.

Hope in the face of war

In countries damaged by internal conflict, volunteers working with NGOs, schoolteachers and religious organizations have played an espe-

Reading, writing and ORT

At the Jalma Chakrakali primary school near Khulna, 320 km south of Dhaka, the shy children peer suspiciously over their shoulders at the visitors in the classroom.

Reassurance from Vidyadhar Viswas, the head teacher, relieves the tension in the air, and the children begin competing with one another to answer a simple question.

"You take a pinch of salt with three fingers, then scoop up a fistful of gur like this, and mix the two in a half litre of clean water," says little Utpala Goldar, demonstrating how to make lobon-gur solution.

Shatinath Goldar (no relation) stands up and adds that diarrhoea patients needed lots of fluids as well as plenty of food. "You can make khabar (edible) saline with

rice powder, and coconut water is good for diarrhoea too," he says, hoping to impress the visitor at the end of the small classroom.

Vidyadhar Viswas was responsible for introducing ORT to the students, and he was delighted they had learned their lessons well. As a depot-holder trained in ORT, he keeps at least 50 packets of ORS with him all the time. He was also responsible for providing all his seven teachers with ORT orientation, which they have passed on to the 156 pupils of Jalma Chakarkali school.

"It is an extra load of work, but it is worth while," said Mr. Viswas.

"When teachers of primary schools convey a message to their pupils it is bound to reach the most remote village home in the country."

cially important role in improving access to both ORS packets and providing ORT education. War destroys a country's infrastructure as well as a government's ability to deliver basic services. Serious disruptions to water and sanitation services make diarrhoeal diseases a particularly deadly problem.

→ In Iraq, the General Federation of Iraqi Women has played a significant role in social mobilization efforts, especially at the village level. Rural teams undertake regular visits to villages, showing women how to use locally manufactured ORS as part of their health education programme. Other health and community motivators as well as primary school teachers have also educated and mobilized people to use ORT.

→ In the Sudan, the grass-roots networks of various youth and women's groups are providing one-on-one ORT instruction to their members in small towns and villages in several regions of the country. The Sudanese Red Crescent, an organization with an extensive network of volunteers dotted across the country, has asked its 200,000 volunteers to contact 10 to 20 families each to promote ORT, enabling 2 million to 4 million families to receive CDD personal communication messages at their doorsteps. Members of the Sudanese Women's Association, another large organization with a presence in virtually all Sudanese states, the Islamic Council, the Sudanese Girl Scout Association and the Sudanese Council of Churches are also being approached for ORT training and promotion.

X. ORT OPENS NEW DOORS

While increasing ORT use will prevent children from dying from diarrhoeal dehydration, many of these same children will succumb to other infections, including pneumonia, malaria and malnutrition, unless other interventions are taken. A number of basic health measures need to be addressed simultaneously to ensure that once a life is saved, it stays saved. Educating the community about ORT presents an opportunity to introduce other important health interventions:

→ *Promoting breastfeeding.* WHO reports that bottle-fed infants in poor communities are 15 times more likely to die from diarrhoeal diseases than breastfed children. Ministries of Health in many countries actively promote breastfeeding and improved weaning practices through a national policy on infant feeding practices and through the baby-friendly hospital initiative — a worldwide initiative that encourages all hospitals and maternity units to renounce free or low-cost supplies of breastmilk substitutes and to adopt the ‘ten steps to successful breastfeeding’ recommended by WHO and UNICEF. At the end of 1996, more than 8,000 hospitals had been designated as baby-friendly throughout the 171 countries now actively working towards achieving the global breastfeeding goals established by the World Summit for Children.

→ *Reducing malnutrition.* A malnourished child is more susceptible to diarrhoea, and frequent diarrhoea episodes stunt children’s normal growth by reducing the appetite, inhibiting the absorption of food, burning up calories in fever and draining nutrients. Such episodes are a significant factor in malnutrition: one third of all children under five years of age are malnourished. Unless malnutrition is addressed, children cannot break free from the cycle of disease.

→ *Reducing measles.* Measles, a serious and debilitating illness, is often accompanied by severe diarrhoea. In some developing countries, measles is a contributing factor in up to 25 per cent of diarrhoea-associated deaths.

XI. LOOKING TO THE FUTURE

While these country experiences demonstrate that extraordinary success has been achieved in increasing ORT use, there is still a great deal of work to be done. Over 2 million children continue to die each year from diarrhoeal dehydration.

In some countries, despite large investments in training and health services, the management of diarrhoeal diseases by health personnel is largely inadequate. Many physicians still regard ORT as a secondary, supportive approach to treating diarrhoea and continue the indiscriminate use of ineffective and harmful antidiarrhoeal drugs and antibiotics. Meanwhile, an insufficient supply and uneven distribution

of ORS packets denies far too many people, especially in remote regions, access to the life-saving packets.

Once planted, the seeds of development take time to root and grow. They need to be nurtured to ensure that today's gains will not become tomorrow's losses. By 1991, 98 per cent of mothers of children in Egypt knew about ORS, and 67 per cent of children under five with diarrhoeal diseases were given the packets. In less than two years, by August 1992, as international aid was withdrawn and social mobilization decreased, ORS use had dropped to 22.7 per cent, and ORT use was at a low 34 per cent. Moreover, mothers' knowledge of correct preparation and administration had also dropped markedly. Health facilities were not providing health education, and only 2 per cent of mothers received any information on proper home case management. ORT rates did improve later but only after the programme geared itself up again to provide correct case management, partnerships were formed and the community became involved in ORT promotion.

Making this simple, inexpensive and effective therapy more widely available around the world is still a challenge, yet, as the example of Egypt demonstrates, sustaining progress already achieved over the long term is an even greater one. ORT must penetrate into the very beliefs and practices of every family. It must become as familiar and available to parents and health workers as aspirin, and ORS sachets as available as soap, batteries, razor blades and cola drinks.

The challenges are formidable but can be overcome if countries stay committed to improving the lives of their citizens. International agencies need to continue to finance CDD programmes and invest in countries' skilled manpower as well as production capabilities so that they can develop their national capacities. Governments must become and stay committed to ORT, partnerships must continue to be encouraged and local initiatives must continue to be supported. The work of non-governmental groups, religious organizations and private enterprise must be supported and reinforced so that they are comfortable in their new roles as educators and mobilizers. Finally, the concept of quality health care as a basic human right must continue to be legitimized and engraved in the minds and consciousness of people around the world. Only when ORT is integrated into the culture of the poorest families will we see the full promise of this scientific revolution.

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