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THE CEARA EXPERIENCE

**Traditional Birth Attendants and Spiritual Healers as Partners
in Primary Health Care**



Also in This Issue: Oral Rehydration

EDITORIAL NOTE:

In this issue Dr. José Galba Araújo, a Brazilian Professor of Gynaecology and Obstetrics, describes a fascinating project for using primarily local human resources to promote health and save lives in rural Brazil.

Dr. Galba and his staff in the University Hospital in Fortaleza had taken part in many meetings with the Brazilian Ministry of Health and other groups looking for low-cost health projects geared to the needs of underprivileged people, particularly in rural areas. Interesting programmes existed, but they were often not practical, particularly because of high cost. Those looking for new ideas realized that most people of the world are lacking in basic health care and almost never have access to a hospital. Hospitals are too expensive; there are never enough doctors or funds.

So, keeping always in mind the need to respect the practices, traditions and customs of the local community, the hospital staff began to design the project described here. They offered it to the most disadvantaged rural community near Fortaleza. This community, Guaiuba, had been promised aid many times before, but nothing had come of it. The planners intended to make good use of local material and human resources and to make sure that whatever promises were made would be kept. They wanted to develop a programme for the state of Ceará which could serve as a model for the government. A programme on a foreign model was not much help; the communities around the town of Fortaleza had their own special problems to solve.

Because the programme described started with impetus from the University-affiliated

maternity hospital, the primary emphasis of the project is on maternal care at the community level. In making use of midwives available locally, the hospital team worked with women who had several levels of training. Some of the health team were obstetrical nurses with extensive hospital experience; others were trained midwives who had worked for years in a hospital. In the villages the team occasionally found women who had worked only short periods in the hospital and who had some training. Usually, however, the village midwife was a traditional birth attendant with only practical training, and these midwives were the ones mainly trained by the programme.

Traditional birth attendants assist at the birth of the majority of babies born in the developing countries. Practices and beliefs surrounding birth vary from culture to culture; but whether they are called *parteiras*, *dais*, or *matrones*, the traditional birth attendants constitute a reservoir of potential health workers respected in their communities. With further training (perhaps in a programme similar to that which has worked in Ceará) these women can provide valuable health services.

This project is truly exceptional in two aspects. First, it made an unrelenting effort to rely primarily on the local communities and the people with traditional knowledge and skill to carry out meaningful primary maternal health services. Secondly, the services evolved not by a preconceived plan. Rather, as teams encountered problems, new solutions were found that relied heavily on traditional knowledge and skills. This approach with its inherent humility and unpretentiousness, led to an increasingly more comprehensive programme that remains technologically quite simple

THE CEARA EXPERIENCE

Traditional Birth Attendants and Spiritual Healers as Partners in Primary Health Care

By José Galba Araújo *

The state of Ceará is located along the coast and stretches to the interior of north-eastern Brazil. It has an area of 148,016 km², encompassing 141 municipalities. The population of the state is 4,400,000. The proportion of people employed is small, less than the national average. Together with some fisheries and cattle raising, agriculture provides the main source of employment. The main crops are: cotton, beans, rice, corn, manioc, coffee and sugar cane. These agricultural products are mainly for local consumption.

The land in Ceará is divided into large and medium-sized estates (latifundia). The average income of the local population is very low: 90% of the people receive less than the Brazilian national average. Income is also very unevenly distributed. The 1970 census of the state of Ceará showed that 55.5% of the population over the age of ten is illiterate. The birth rate for the state is 56 per 1000 population (47 per 1000 in the capital city of Fortaleza). The average number of children per family is five. Sixty-six percent of the municipalities have pipe-borne water.

According to a survey covering 14 municipalities taken by the Secretary of Health and the SEPS Foundation in 1971, 29.8% of the 1,368 pre-school children and 36.6% of the babies under six months examined had normal weight. Approximately 70% of the children had malnutrition: 37.6% belonged to the first degree, 21.9% to the second degree, and 10.7% to the third degree of malnutrition (Gomez Classification**). At present these percentages have increased considerably, due to the drought which has affected the state for the last five years.

The principal causes of death in those under the age of five years are:

1. water- and food-borne diseases (36.4%)

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** The Gomez Classification is based on the percent of average weight for age obtained by a child. First degree malnutrition is the mildest form, third degree malnutrition is the most severe form.

2. birth complications and congenital defects (16.4%)
3. acute respiratory disease (11.2%)
4. diseases which could be prevented by immunization (7.5%)

The regions covered by this programme are found along the coast and slightly to the interior. They were chosen as rural communities where practically no health service was available. Other criteria for beginning the programme in these communities were the proximity of these regions to the University Hospital "Assis Chateaubriand" in Fortaleza and the easy railroad access to the whole area.

At present, the programme reaches 36 municipalities with a population of 310,721; the smaller villages also served increase the total population reached to around 400,000.

GOAL

We in the maternity hospital "Assis Chateaubriand", wanted to create a simple and efficient system of health care for the region. We knew that cases of small pelvis and pregnancy toxæmia were the major causes of maternal and child deaths. We saw that many women with serious complications of childbirth arrived in desperate condition at our maternity hospital in Fortaleza. Our primary goal was to save these cases by ensuring their prompt referral to the hospital.

Beginning the project

We knew that in these rural zones it would not be easy to develop a Primary Health Care Programme. We knew that these areas had no previous outside help or preparation for our programme.

After choosing the area to begin the programme, the team from the maternity hospital began to consult with the local leaders—the mayor, the priest, the teachers, and also with the people and the people's organizations already existing. We explained what we hoped could be accomplished: the saving of lives of women and children.

It was apparent the traditional midwives were the local people with the greatest capacity to

help in this project. They had the greatest influence in maternal care and childbirth practices, and they performed most of the deliveries in the area. We accepted that we knew very little about the traditional midwives; we wanted to correct mistaken impressions we had of them and the methods they used.

Our first contacts with the traditional midwives made us realize how many false statements were made about them, such as: "They only know how to infect the women and induce abortions." Nothing could be further from the truth. Their traditional respect for the modesty of the women prevents them from behaving aggressively during childbirth. Infections caused by manipulation were practically non-existent in their practice. We also discovered that the only traditional midwives who practiced abortions were those who had previous training with doctors or who had spent some time working in the hospital.

The traditional midwives sometimes kept women needing hospital care at home, not because they wanted to keep the patients for themselves, but simply because they did not know where to send them. Some traditional midwives did not even know a hospital existed nearby. Others had taken patients to the hospital and been very badly treated at the reception desk or by the nurses and doctors. For these reasons they were hesitant to use the hospital again.

What we learned about traditional midwives

For a start we called a meeting of midwives of the area. We let them know that they had our support, and that we could help them to improve mother/child care.

We found out that the traditional midwives in the area are simply women who help other women. They earn almost nothing for their work; often they receive gifts, but their main interest lies in helping the women—not only to give birth, but also to take care of domestic chores during this difficult time. They are always on call, sympathetic and cooperative, and they are indispensable in most small communities.

They are called "aparadeiras", literally one who catches the babies. They do not handle or touch the women, often do not even look at the genital area. As one of the midwives said, "Be patient, I'll catch your baby; he won't fall on the floor!" Often they catch the babies in their wide skirts.

Community support

They do their work in a spirit of solidarity with their patients who are often relatives. Even in small communities it is common to have several traditional midwives—women who have helped in one or more births, and who thereafter are considered fully capable of assisting in childbirth.

In rural areas a birth is always considered a happy family occasion. It is common to have the mother, the husband, married sisters or anyone else in the family participate in the event. We could observe that rural women giving birth think of it as normal and natural. We don't hear all the wailing and screaming that is common in the hospital.

Many times we have heard it said, "You are lucky because you were born on a "quarta." At first we did not know what a "quarta" was. We learned it is a large box which is used for storing grain. The box is turned upside down and often serves as a delivery table. So if the child was born on a "quarta" it means that the mother started to go into labour while working, and the best thing she could do was turn over the "quarta", sit down and have her baby. Babies have been born in hats, when the mother was all alone working in the fields and a hat was the only thing handy to catch her baby in. Then the mother brought the baby to the house and called someone else to cut the umbilical cord.

Usually, however, the rural woman giving birth is surrounded by support. The traditional mid-



Childbirth in a hammock, with family members present



(Collection of Dr. José Galba Araújo)

Birthing chairs and stools from all over the world.

wife often relaxes the woman in labour by combing her hair and talking to her or saying prayers. Sometimes the midwife puts a rope around the woman's forehead to be pulled by the husband sitting behind her. Often he will put his arms around her waist and she will put her arms around his neck and thus receive his help during contractions.

Midwives consider the arrival of a new human being a happy event, a joy that can be shared by the whole community. Everything that can be done to further this event – without breaking local traditions and principles – is received with satisfaction and approval by the community.

We also discovered to our surprise that in the rural areas and even on the outskirts of the city all deliveries are done with the mother in a vertical position. The women giving birth use special chairs and seats where they can squat, or they kneel, sit on a bench, stool or hammock. (Here in the Northeast a hammock is used for everything. A person is born, lives, marries, sleeps and dies in a hammock.) We encouraged this traditional position because keeping the woman in a supported vertical position is helpful as it slightly straightens the birth canal.

Traditional practices of midwives

By talking with the traditional midwives we learned about local beliefs and practices, many of which were correct or harmless. For example, they never cut the umbilical cord until the placenta has been expelled because they believe that the child is connected to maternal blood. This is a very good practice because we want the baby to receive as much of the blood in the placenta as possible. But sometimes, if

the placenta was not expelled, the custom called for cutting the umbilical cord and tying it to the woman's leg.

Sometimes I ask the midwives, "What do you do if the placenta is not expelled?"

"Doctor, we pray."

"What do you pray?" I ask.

"The prayer of Saint Margaret."

"And how does it go?"

"It goes like this: My Saint Margaret, I am not pregnant and I am not in labor, please remove from me this dead and battered flesh, have compassion on me, Saint Margaret."

"And after this, if the placenta has still not been expelled?"

"We say the prayer two more times."

"And if the prayer has no effect after this?"

"Well, Doctor, then there is only one solution, and that is to place the hat belonging to the husband on the woman's head and make her sneeze three times, until the hat falls off her head. When that happens, the placenta is also expelled."

All these midwives have learned to serve the community without expecting much in return. We noticed a marked tendency to pass on the knowledge acquired to a daughter or other close family member. The average age of the midwives in our programme is 48 years. The average midwife has worked for 20 years and has herself given birth to 10 children. Nearly all the midwives in our programme are illiterate. They have delivered an average of 300 babies each. When asked how they chose to become midwives, they answered: first, that there was no other local midwife; secondly, they followed in the steps of a mother or grandmother; thirdly, it was a gift of God; fourthly, they simply wanted to be a midwife.

First steps of the programme

So after talking with community leaders and learning about the traditional midwives, we called the midwives of Guaiuba together for a continuing series of short introductory talks about what should be considered normal during pregnancy and childbirth and what is abnormal and should be referred to the hospital. We strengthened their good practices, told them what they should not do and corrected some of their customs that were harmful. We showed them how to clean the mouth and nose of the baby and how to remove breathing obstructions, and we told them to leave the baby lying on its side so that it could normally expel excretions.

Then the midwives returned to their little communities. We encouraged them in their work, and they knew that they could turn to us at all times, for we were setting up a Community Health Unit where they could come for help. This Community Health Unit is a small maternity ward, not a hospital. It avoids the unfamiliar, frightening aspects of a hospital, yet it is more hygienic than a home.

For this first Community Health Unit we used a building which had been constructed about 15 years earlier as a maternity center, but which had been abandoned for lack of funds. Through motivation of the community we restored the building. We used the local carpenters and masons. With everyone pitching in, even the mayor and the priest, we painted the building ourselves. We cleaned, made wooden beds, mattresses, everything. We received donations of kitchen utensils—plates, pans, spoons, forks.

We put eight beds in the Community Health Unit plus two more for women in labour and a delivery table. We also used the traditional delivery chair used by the midwives. We stressed cleanliness, but did not put any special emphasis on sterilization. We only sterilized in a simple way for which we used solutions or chlorine tablets.

This Community Health Unit belongs to the community, and only the community can decide how it will be run. A Local Health Association was formed to run the Unit without any interference on our part. This administration works well and has the support of the community.

We asked those women who lived close by to bring food from home, or to contribute something. We would say in a joking way, "If you can contribute a chicken, fine; if not, then an egg will do, but everyone must give something." We received donations of rice, beans, macaroni, meat and chicken.

So that the Community Health Unit could function at all times, we asked those midwives who lived nearest to come in, so that we could always have four midwives on duty with four aides, a maid for cleaning, a cook and a watchman. These four midwives were well known in the community and respected by the local women. We knew it would be a mistake to bring in someone from the outside. All these women worked with dedication, keeping to a strict schedule so that the Unit was never without a midwife.

Learning through mistakes

Soon we became aware that some of the measures we suggested were not clear to the local midwives. For example, when we asked one midwife, "How do you use your gloves?" she answered, "Oh, Doctor, I hang my gloves there on that post outside and when I leave I can put them on right away." We made many mistakes at first, but we learned to listen and to ask questions to help the women.

The first Community Health Unit was set up in 1976, and in the beginning we had a hard time working with the midwives. They resented us, thinking that we were there to criticize them. Very slowly, with much conversation and patience, we managed to gain their confidence.

Moving forward

The first month the Unit delivered 20 babies. We realized there could be problems requiring medical assistance. We were very cautious, but we knew we had a good follow-up system: a taxi could be summoned at any hour to take the cases requiring medical attention to the maternity school hospital 30 km away. This system works well. The midwife does not have to make the diagnosis as to whether the patient has placenta previa or ruptured uterus. She only needs to know that if the patient is bleeding heavily it is necessary to get her to the hospital immediately.

The second month also passed with good results. The local midwives also continued delivering in the people's homes, but the maternity center was there for support. They would drop by when they needed items such as scissors, thread, merthiolate and gauze.

Within the community we began to teach pre-natal care to those women within easy reach of the Community Health Unit. To help the midwives administer pre-natal care, we made a set of cards to help the midwives identify cases needing referral. (See pictorial report 1, pg 7.)

We also encourage breast feeding. We did a study on what the time delay should be before letting a newborn baby nurse. Should it be put to the breast after 24 hours, 12 hours, 6 hours, 2 hours, one hour, or immediately after birth? We came to the conclusion that the newborn baby should be allowed to nurse immediately after birth, even before the placenta is expelled. This procedure increases the flow of oxytocin which helps improve uterine contractions and speeds the expulsion of the placenta. The



A normal birth as it would take place in the midwife's home. The baby is put to nurse even before the placenta is expelled.

mother and baby also feel better because of the warmth, affection and intimacy they share.

As our Community Health Unit continued to function, we found the number of normal deliveries there much greater than in the hospital. The percentage of women who had to be transferred to the hospital was around 10% of which half resulted in miscarriages. Among the women referred, caesarian sections had to be done on only 2%, whereas the general average at the hospital was 20%.

HOW WE WORK TODAY

The Programme grows

The FUNRURAL (a Brazilian Government organization for social and medical assistance in rural areas) heard about the first Community Health Unit and paid us a visit. Our Unit was the first project of its kind in the State of Ceará, and they were impressed with its success. They agreed to give us funds and an ambulance.

This original Community Health Unit continues to function very well. Before we reached a total of 1,000 deliveries, we received requests to set up similar systems in other communities. At present in the state of Ceará there are 40 Community Health Units of from one to ten beds. (Units with only one bed are installed in the midwife's own home.) Five-hundred-eighty-six midwives have been trained in these communities. In 1983 trained midwives delivered 3,827 babies in Community Health Units and practised 1,361 home deliveries.

A total of almost 10,000 babies have been delivered in these various Community Health Units, and not a single woman has died. Whenever a problem has presented itself, the midwife has transferred the patient to the hospital. Unfortunately not every woman who arrives at the hospital can be saved, but those who are referred now arrive at the hospital in better condition and we are able to care for them more quickly. We are saving more lives than before the Community Health Units began to work.

With the simplest and cheapest methods and materials, we have reached a point where midwifery care is good. All the community Health



Chair for vertical delivery used in the hospital. A bar is substituted for the rope which might be used at home.

Units which were established with government aid are today self-sufficient. The midwives who work in the Community Health Units are paid through funds coming from the community who work out an agreement about payment. As part of the training programme, those midwives who continue to work at home and who do not deliver more than 10 babies receive \$ 35 for the first year of their work after training. This amount is paid from external funding. After the first year they may charge patients for their services. At the beginning of the programme we also received some funds from external sources for training and evaluation of the programme.

Local organization

In order for a Community Health Unit to function well it is necessary for the whole community to take an active interest in it and for the community to help the Unit as much as possible. The whole community elects the Community Health Association from among its leaders to represent the community in its responsibility for the Community Health Unit. This board is officially registered; it takes over the administration of the Community Health Unit and raises funds for maintaining it. Another important task of the Community Health Association is to speak up for the people and their desires and needs when dealing with the programme staff. The Association is empowered to seek agreements with other institutions which could help the community, and it has financial autonomy.

Choosing and training midwives

The local midwife is invited to work in the programme through personal contact with local people and the programme supervisor. Her appointment is always subject to the approval of the local leadership. The community participates in identifying possible midwives and proposes them for training to the local health team. The training of midwives is done by the local health team and by the supervisor of the project. The training always takes place in the community itself. The first midwives were trained for a period of six months in a support hospital (MEAC). However this was soon abandoned, because it conflicted with the traditional midwives' culture and way of working, and it did not allow them enough time with their patients. Nowadays, training is done in the Community Health Unit nearest the home of the midwife, so she can continue to work in

her usual environment and relate to people in her usual way.

The training programme is divided into two parts: theoretical and practical. The programme focuses on pre-natal and post-natal care, deliveries, prevention of cancer, family planning, breast-feeding and other aspects of disease prevention and health care. Because most of the midwives can neither read nor write, teaching is done in the simplest possible way to make it meaningful.

The objectives of the training course are:

- observe and support the activities of the midwife
- prepare the midwife to extend basic health services to all the community with special emphasis on maternal-child care
- give basic orientation and supervise the midwife in the following activities: check-ups of pregnant women; identification of high-risk pregnancies; assistance in normal deliveries; follow-up after delivery; identification of complications arising during or after labour and referral to the hospital; help in family planning
- promote the activities of the midwife through the local health system
- help reduce complications during deliveries and the death rate of mothers and babies in the rural areas.

Methodology of the training course

The training course is given once a week. It consists of a short formal lecture and an hour of discussion and communication where the whole team of midwives and trainers talk together.

Our training activity can be divided into four phases. The first phase, recruitment of midwives, is the responsibility of a local leader, previously chosen to recruit midwives in the area. Generally this leader is one of the best-known and most respected midwives in the community.

In the second phase the trainers have the opportunity of getting to know the midwives. Themes for discussion are chosen according to the specialty of each professional on the team. In this phase an effort is made to maintain a relaxed spirit of communication and to keep the teaching simple for the midwives to understand. We make good use of pictures, posters, slides, and actual things that the midwives can see and handle.

Pictorial Report Number 1

MATERNITY-SCHOOL ASSIS CHATEAUBRIAND
PRIMARY HEALTH CARE PROGRAM (PAPS)
CODE 010 DELIVERIES AT HOME

Mother: _____ Midwife: _____
Age: _____ Date of Birth: _____
No. of births: _____ Municipality: _____
No. of abortions: _____ Town: _____
Unit: _____

SOCIAL WELFARE



INAMPS



FUNRURAL



CLASS A

PRE-NATAL CARE

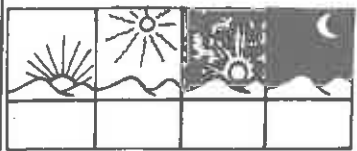
YES



NO



HOUR OF BIRTH



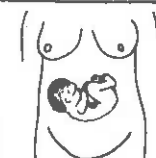
DELIVERY



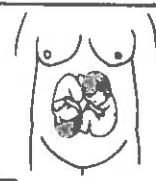
NORMAL



BREECH



TRANSVERSE



TWINS

SEX

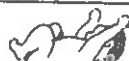


BOY



GIRL

CONDITION OF NEWBORN



NORMAL



SICK



DIED

BREAST FEEDING



NURSED AT BIRTH



NOT NURSED

WEIGHT



WEIGHING WITH SCALES



WEIGHT BY GUESSING

COLLYRIUM

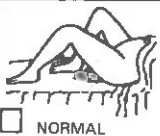


YES



NO

BLEEDING



NORMAL



EXCESSIVE

PUERPERIUM



NORMAL



FEVER



DIED

REASON FOR TRANSFER



ECLAMPSIA



HEMORRHAGE



TRANSVERSE PRESENTATION



UMBILICAL CORD



HAND



FOOT



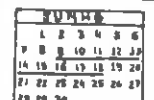
TRANSFERRED



FAMILY PLANNING



BREASTFEEDING



RHYTHM METHOD



ORAL CONTRACEPTIVES



IUD

RISK OF DEATH



UNIT

The third phase of training, the practical part of the course, takes place in the Community Health Unit. It consists of being on duty 3-5 times for a period of 12 hours each, always under the supervision of a nurse or other more highly trained midwife. This permits the midwife to put into practice what she has learned, and to become familiar with the team at the Unit.

In-service training is the fourth phase of our programme. In-service classes are given to groups of midwives together. They center around subjects taught in the regular classes or on subjects of concern which the midwives themselves bring up.

When the training period is finished, we give each midwife material for use in deliveries: scissors, thread for tying the umbilical cord, gauze, antiseptic solutions, soap, formalin, eye drops, stethoscope, a scale for babies. We also provide a uniform and a shoulder bag. The midwives are given a questionnaire to fill in after home deliveries. Since most of the midwives are illiterate, we designed these reports as pictorial cards (pictorial report 1). We provide a metal box which holds everything. After use, the midwife washes all the material with soap and water and places it in the box together with the formalin tablets. Material used in the Community Health Units is sterilized by flame and placed in an antiseptic solution.

The midwives are well supervised by nurses and/or doctors. They receive their material free of charge, and they also receive financial aid during training and in-service training. Those midwives who are selected to work in the Community Health Units receive a salary which is usually paid by the community.

As the technical knowledge of the midwives varies greatly, the courses are adapted as much as possible to their needs. However, standard instruction manuals are used in all Units, and we try to maintain a common standard for all midwives.

We find that people go to midwives for many health questions other than pregnancy and childbirth. They are called upon to help in educational programmes concerning disease prevention, family planning, and also for first aid in emergencies. We try to help them to be prepared to meet these needs. Our role in continuing support of the Community Health Units is always to be present in the background. Once the traditional midwife has been trained, she cannot be abandoned. She has the right

to continued exchange of information and training.

SPIRITUAL HEALERS AND CHILD CARE

The trained midwives have enabled many communities to have a good programme for maternal and newborn care, but we began to be concerned about the babies leaving our Community Health Units as well as those born at home. The paediatric side of our programme was not as well-developed as our obstetric care, probably because the programme had developed with the help of a maternity hospital which taught obstetrics. So we began to search for ways of providing better health care for children.

We had already begun to vaccinate mothers against tetanus, thus improving neonatal survival; this helped some, but it was insufficient. We knew that gastro-enteritis was the biggest problem. In the pre-natal consultations, we began to encourage breast feeding more and more, in order to try to solve the problem of contamination through water and bottles and thus diminish the number of deaths due to gastro-enteritis.

We knew that, just as in each community the traditional midwife was the person responsible for deliveries, the spiritual healer was the person responsible for child care.* The spiritual healer is the most sought-after person in the community: She might be considered a "theological sympathizer". Like the traditional midwife she is on call at any hour of the day or night. She is the person called whenever a child becomes sick, whether with a cold, diarrhoea, an accident—anything at all. She always tries to share her knowledge and is always willing to be of help. We determined to try to enlist her help in our programme. We have found that the spiritual healers are of Christian background and are highly respected by the community. In the same way as we had taught the midwives what they should and should not do, we began to talk to the spiritual healers, giving them training while at the same time letting them continue to practise their rituals which offered prayer and comforted their patients. We were most concerned that the children with diarrhoea receive oral rehydration before it was too late to take them to the doctor.

We introduced the use of a solution containing salts and sugar to be dissolved in water which

** Ed. note: Many cultures have spiritual healers specializing in child care, a traditional role which often dates from ancient times even prior to the founding of present religions.*

MATERNITY-SCHOOL ASSIS CHATEAUBRIAND
PRIMARY HEALTH CARE PROGRAM (PAPS)
RECORD CARD FOR FAITH-HEALERS

Child's Name: _____
Mother's name: _____
Name of Faith-Healer: _____
Unit: _____ Date: _____

Pictorial Report Number 2

AGE

LESS THAN 1 YEAR

FROM 1-5 YEARS

MORE THAN 5 YEARS

CAUSE OF DEHYDRATION

LITTLE DIARRHEA

MUCH DIARRHEA

VOMITING

SIGNS AND SYMPTOMS

SUNKEN EYES & FONTANEL

DRY SKIN

EMACIATION

FEVER

QUANTITY OF SOLUTION TAKEN ORALLY

SERUM TAKEN ORALLY

SERUM TAKEN ORALLY

SERUM TAKEN ORALLY

SERUM TAKEN ORALLY

SERUM TAKEN ORALLY

CONDUCT OF FAITH-HEALER

PRAYED

SHOWED HOW TO PREPARE SOLUTION

ACCEPTANCE OF SOLUTION

YES

NO

FEEDING

BREAST FEEDING

OTHER MILK

COMPLEMENTARY TREATMENT

RICE WATER

COCONUT WATER

TEAS:

CITRON

ANISE

SAINT'S GRASS

MINT

IPECAC

SESAME

MEDICINES

UNIT

EVOLUTION

HEALTHY

SICK

DIED

is much used by UNICEF for rehydrating children.* The spiritual healer was to start giving this solution to the child right after her prayer ritual. We provided simple pictorial record cards for the spiritual healers' record keeping (pictorial report 2).

How spiritual healers work

The spiritual healer works with dignity, always following a certain ritual: putting one arm

* See oral rehydration solution formula in this issue.

behind her "in order to give strength to the prayer", then taking a branch from a bush and praying with much faith in God. She watches to see if the branch withers or not. If it withers, it means that the sickness has left the child's body; if not, she continues repeating her prayers until the branch withers.

Confidence is such that whenever I have asked, "And did the child get well?" she answers, "Of course, Doctor, how could it be otherwise? Didn't I pray? God cures, God does everything." Colleagues have asked me, "Do you

believe this?" Well, I see that children with severe gastro-enteritis survive, and that families feel supported. This is not due to my help, nor that of another doctor or a nurse. But someone has done something.

There are some fascinating aspects to the practice of spiritual healers. For example, they will not pray at mid-day. I tried to find out why. They answered, "Because the dogs are always on the loose at noon." This is a popular saying in north-eastern Brazil. They also do not like to pray on Mondays, because Monday is the day of souls. If a spiritual healer is obliged to pray for a very sick child on a Monday, she always fears that other souls will summon that child's soul and take it with them. There are many such taboos.

We have an elderly woman working with us now who is both midwife and spiritual healer. The interesting thing about this woman is that she is completely blind. She has been blind for the last 15 years, but she is the midwife most often called for in the community. She still continues to deliver and still prays for the sick children of the community.

Oral rehydration

As we saw, we introduced the spiritual healers to oral rehydration, but the administration of salts and sugar under sanitary conditions was difficult. So we started using rice, coconut or corn water, broths, teas, and in fact everything liquid that could be used for rehydration. Results have been encouraging.

We tried to find out if our new system of oral rehydration was giving good results. We had no reliable statistics, so we tried to find out if there had really been a decrease in infant mortality. The only place we could really verify this was in the cemetery. We asked the grave-digger if the number of children he buried had decreased recently, and he answered: "Doctor, since your project started working around here, I can only tell you that I will soon be dying of hunger, because I have practically no one to bury any more! Few children are dying, and since we are paid per number of burials, the situation is not easy. I can tell you that the number has decreased by more than half. It used to be customary for me to bury 8 or even 10 children a week in Guaiuba, but now I bury no more than one or two a week." This is empirical information, but nevertheless encouraging.

SUMMARY

As our project continued we developed pro-

grammes of peripheral sanitation, vaccination and educational programmes, because without education a health project cannot be successful. Education is absolutely necessary.

Now we are encouraging family planning, first of all through breast feeding for better spacing of children. We have observed that when a baby is breast-fed on demand, the intervals between pregnancies can be extended by a year or more. In cases where a baby is both breast and bottle fed, there is much less chance of success as the risk of becoming pregnant is greater. In our family planning service, we advise the use of contraceptive pills, and if these are not advisable, we recommend an IUD. In women who run a greater risk, such as the woman who already has many children, the woman who has had pre-eclampsia or other problems such as placenta previa more than once, we advise tying the Fallopian tubes.

A recent development is our use of local herbal ingredients. The spiritual healers use teas made of anise, saint's-grass, mint, guava, verbena, papaya leaves, etc. We have started a medicinal plant garden to which everyone has access. We call our herbal garden a "living pharmacy". Anyone is free to come and pick the desired plant. The spiritual healers look after the garden, but it belongs to the community.

We have learned that as we work together with communities, sharing our knowledge, we learn from each other. We do not want to innovate with city-oriented ideas, because we know that this would not work in the long run. And so we continue as we started, always present in communities, listening and giving explanations, having closer contact with the people, trying to obtain their friendship, so that they will learn to solve many problems locally and will turn to us for medical help when necessary. ■

USEFUL PUBLICATIONS FOR TRAINING TRADITIONAL BIRTH ATTENDANTS

1. *The Traditional Birth Attendant in Maternal and Child Health and Family Planning—1975*, World Health Organization, Geneva.
2. *The Training of Traditional Birth Attendants, Guidelines for Midwives Working in Underdeveloped Countries*, Maureen Williams. 1980, Catholic Institute for International Relations, 1 Cambridge Terrace, London NW1 4JL, England.
3. *The Universal Childbirth Picture Book*, Fran P. Hosken & Marcia Williams. 1982, Women's International Network News, 187 Grant St., Lexington, Ma 02173, U.S.A.

ORAL REHYDRATION THERAPY FOR DIARRHOEA

A careful reader of CONTACT has written to us and pointed out that we had included two different, and confusing, formulas for the home preparation of "salt and sugar solution" (see pages 8 and 9 of CONTACT No 76, December 1983). We have rechecked our sources, and we wish to present this time a correct, fairly complete and authoritative recommendation, based on the Joint WHO/UNICEF Statement on the Management of Diarrhoea and Use of Oral Rehydration Therapy (1983).

The standard WHO/UNICEF recommended formula for Oral Rehydration Salts (ORS) consists of:

Sodium chloride	3.5 grams
Sodium hydrogen carbonate (sodium bicarbonate)	2.5 grams
Potassium chloride	1.5 grams
Glucose	20.0 grams

to be dissolved in one litre of clean drinking water.

ORS is available in many places in dry, pre-packaged form, ready for preparation by dissolving the salts in drinking water. This makes sure that the concentrations are correct for maximum benefit and minimum difficulty. The packages are often available from government, UNICEF or WHO sources or through the efforts of one or another non-governmental health programme.

Treatment of dehydration

The treatment of dehydration requires the use of a balanced glucose-salt solution, administered by mouth or by IV route. Much experience has now been gained in the use of ORS for the treatment of dehydration in hospitals, clinics and homes. This solution, with the standard formula as listed above, has been shown by WHO and UNICEF over the past 13 years to be *universally applicable*, i.e., it can be used to treat dehydration from diarrhoea of any cause, including cholera, in all age groups. It is safe and effective when used to correct dehydration (the rehydration phase) and to maintain hydration during continuing diarrhoea (the maintenance phase).

Some doctors have expressed concern that the sodium concentration is higher than that in cer-

tain commercial preparations. These commercial solutions may well suffice for *maintenance* phase therapy, but they are not recommended for rehydration. The standard WHO/UNICEF ORS formula very rarely causes an elevation of blood sodium and that is usually brief and of no clinical significance. Even in the newborn, ORS has proven safe provided that additional fluid is given during the maintenance phase of treatment. Thus, young infants receiving ORS solution should at the same time be breast-fed, or given juices, weak tea or plain water. A very extensive global experience has shown that the ORS with the formula and concentration as listed above is the suitable one for use as a universal treatment solution.

The presence of potassium in ORS is particularly important for the treatment of children already dehydrated, in whom potassium losses in diarrhoea are relatively high. Studies have shown that undernourished children who have suffered repeated bouts of diarrhoea are especially likely to develop a blood level of potassium below normal if the potassium is not replaced during rehydration.

The bicarbonate in ORS is needed for the treatment of acidosis, which occurs frequently with dehydration. The possibility that citrate can be substituted for the bicarbonate is under study.

Glucose is included in the solution principally to help the absorption of sodium and not as a source of energy. Ordinary sugar (sucrose) can be substituted for glucose with near equal efficacy, though twice the amount by weight is needed. Increasing the amount of sugar in the formula as a means of improving palatability or increasing its nutritive value is potentially dangerous as it can worsen the diarrhoea. ORS is in fact acceptable to almost all infants and children and can be universally recommended for use in hospital, clinic and home.

However, many health workers and mothers will not have access to the pre-prepared packets of ORS, and they will need to depend on solutions that can be prepared at home, both for the prevention of dehydration in cases of diarrhoea and in the treatment to correct dehydration.

Remedies for Home Use

There are two groups of *home remedies*:

(a) **Household food solutions**—fluids or liquids that are normally available in the home and are appropriate for the early home treatment of acute diarrhoea. Such solutions are often prepared from boiled water, thus ensuring safety for drinking, and contain sodium, sometimes potassium, and a source of glucose—such as starches—that can facilitate the absorption of salts in the intestine; they also may contain other sources of energy. Two examples are rice water, often found in homes in Asia, and various soups—e.g., carrot soup, often found in homes in North Africa; other less robust examples include fruit juices, coconut water, and weak tea.

(b) **Salt and sugar solutions**—consisting of ordinary white sugar (sucrose) and cooking salt (sodium chloride). In a few countries, molasses or unrefined sugar is used in the place of white sugar; it has the advantage of containing also potassium chloride and sodium bicarbonate. In the interest of being absolutely clear this time, we present here a useful and practicable method to use for household preparation. Please note that the teaspoon measures must be **LEVEL** and not heaping.

What to do

1. Measure 1 litre of drinking water into the container. 5 cupfuls or 5 glassfuls are about 1 litre (See Figure 1).
2. Take salt in a teaspoon, level it with a knife or a flat object (see Figure 2). Add 1 level spoonful of salt to the water and mix the water.
3. Taste the salt and water. It should *not* be very salty. If it tastes more salty than tears, pour away this mixture and make it again with less salt.
4. Take 8 level teaspoonfuls of sugar. Put these in the water and mix the water.

Figure 1
MAKING SALT AND SUGAR WATER

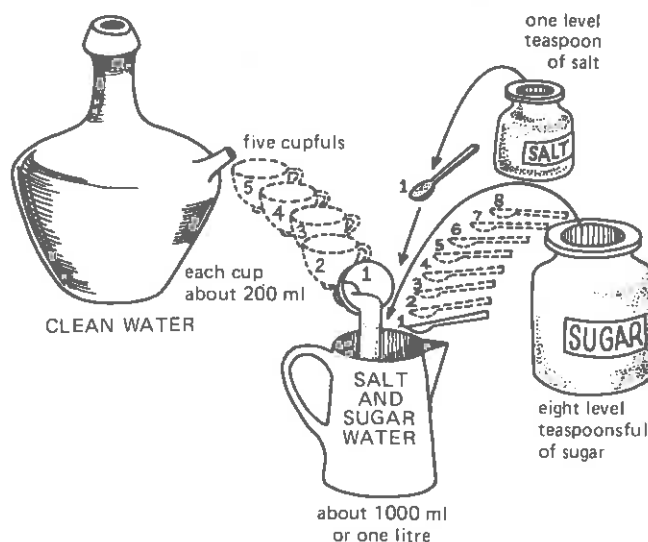
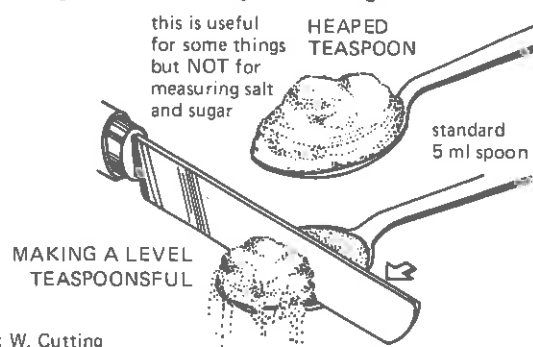


Figure 2. Measuring salt and sugar



SOURCE: W. Cutting

The proper management of diarrhoea in the home also includes, along with the administration of ORS or "salt and sugar solution", the promotion of appropriate child feeding, both during and after a diarrhoea episode, to prevent excessive and uncompensated loss of nutrients. Withholding food and fluids, including breast-milk, will not stop the diarrhoea; it will only add to the dehydration and malnutrition caused by the illness.

NEW PUBLICATIONS

Where There is No Dentist, by Murray Dickson, with an introduction by David Werner. The Hesperian Foundation, 1983, 208 pages.

"With proper care", the author states, "you can keep your teeth for a lifetime." This book, a companion to "Where There is No Doctor", encourages people to take the lead in caring for their own teeth and gums. Two special chapters for the "village dental worker" show how to recognize and care for many common problems.

Price:

\$ 4.50 each; 24 or more copies, \$ 3.50 each.

Available from: The Hesperian Foundation
P.O. Box 1692
Palo Alto, California 94302
U.S.A

A Guideline for Annual Reports of Hospitals in Tropical Countries, by H.J.G. Kok & J.L. Hamel. 1983. 25 pages.

Often hospital reports in tropical countries are the only comprehensive information about health services to the community. The authors state that, "Hospital reports deserve much effort and atten-

tion." This helpful booklet offers ideas and suggestions about the information that could be included in a hospital annual report and about the format for organizing this information. Those interested should write directly to:

J.L. Hamel
Medical Officer, Catholic University of Nijmegen
Institute of Health Care in the Developing World
Verlengde Groenestraat 75
6525 EJ Nijmegen, The Netherlands

Report on Oral Therapy Extension Programme, Bangladesh Rural Advancement Committee, 1984. 35 pages.

This report describes the problems and progress of a programme on oral rehydration therapy undertaken by the Bangladesh Rural Advancement Committee. The programme trained women as Oral Rehydration Workers; these workers visited each household teaching other women how to prepare oral rehydration formula. The report can be recommended, not only for its contents but also for its well-thought-out format. Those interested should write to: Frikyrkan Hjälper

Swedish Free Church Aid,
Älvsjö Gardsväg 3,
125 30 Älvsjö, Sweden

Leprosy: A Pack of Teaching Materials, OXFAM Health Unit, 1984. Contains 8 booklets.

This "mini-pack" replaces the previous 25-document pack originally distributed by OXFAM two years ago. It is a valuable aid intended mainly for medical students, medical officers (with or without experience of leprosy), leprosy control officers, nurses, and potential teachers. Booklets included in the packet are: *Chemotherapy of Leprosy for Control Programmes*; *OXFAM Memorandum on the Implementation of Multiple Drug Therapy (MDT) for Leprosy*; *Leprosy*; *The Diagnosis and Management of Early Leprosy*; *Better Care in Leprosy*; *Insensitive Feet*; *Technical Guide for*

Smear Examination for Leprosy by Direct Microscopy; *Atlas of Leprosy*.

Price: £ 10 or \$ 15.

Available from:

OXFAM Health Unit, 274 Banbury Road
Oxford OX2 7DZ/U.K.

(In view of the high cost of overseas mail, OXFAM strongly recommends hand delivery of the packet, tel. 0865.56777).

How to Choose and Make a Cold Box: Chocsing, Buying, Adapting, Making, Testing Cold Boxes. Appropriate Health Resources and Technologies Action Group Ltd., 1983. 78 pages.

A companion to "How to Look after a Refrigerator" and "How to Look after a Health Centre Store", this illustrated manual clearly presents and illustrates ways for programme managers, technicians and others working in immunization programmes to choose and make the most appropriate cold boxes for vaccine transport in their areas.

Price: £ 3+50% post/packing air post; 30% post/packing surface mail.

Available from:

Teaching Aids at Low Cost (TALC)
P.O. Box 49
St. Albans, Herts A11 4AX/U.K.

World Neighbors Development Communications Catalogue. World Neighbors, 1984.

A new 10-page leaflet describes all the educational Material available from World Neighbors. material with emphasis on person to person education is available for: health and nutrition; family planning; community development; agriculture and food production.

Price: free

Available from:

World Neighbors
5116 North Portland Ave.
Oklahoma City, Oklahoma 73112/U.S.A.

CMC NOTES

The Institute of Child Health, University of London, is starting a **Diploma Course for Trainers and Supervisors of Community Rehabilitation Workers in Developing Countries** under the direction of Professor David Morley. There are now 14 countries which have programmes attempting to reach the disabled in the rural and slum communities. This new diploma course, intended for doctors and therapists with experience in the field of rehabilitation, will help provide teachers and trainers for such programmes. Graduates of this nine-month programme will be qualified to set up

training schools or programmes for community rehabilitation workers. The course is offered in conjunction with AHRTAG.

DATES: Initial course begins October 1984 for nine months; further courses are planned. **COST:** Tuition £ 4,500.

ENQUIRIES TO:

The Secretary
Rehabilitation Trainers Course, AHRTAG
85 Marylebone High Street,
London W1M 3DE/UK

The MEDEX Group at the John A. Burns School of Medicine, University of Hawaii, will be offering a course in **Strengthening Primary Health Care at the Health Center and Community Level**. Subtitled "A Practical Course in Primary Health Care Manpower Training & Operations Management", the programme is designed for personnel from Ministries of Health, international organizations and non-governmental organizations. The nine-week course will focus on methods of training and management of community health wor-

kers, mid-level health workers and administrative health personnel.

DATES: October 15-November 9, 1984. COST: \$ 1,850 tuition.

APPLY TO:

Mr. Frank White, Course Coordinator
The MEDEX Group,
John A. Burns School of Medicine
University of Hawaii
1833 Kalakaua Ave., Suite 700
Honolulu, Hawaii 96815-1561/U.S.A.

CMC NEWS

CMC Staff Changes

Our CMC staff has recently been strengthened by addition of several new members.

Reginald Amonoo-Lartson, M.D., M.P.H., from Ghana joined the CMC staff in March 1984 as a Consultant in Family Health. He shares with us his rich experience of many years in the management of health services.

Ms. Christine Wade, who has extensive experience in office administration and finance, has replaced

Ms. Heidi Schweizer as CMC's Administrative Assistant. Heidi is now working as the Administrative Assistant with the Deputy General Secretary of the WCC.

Ms. Ann Dozier brings us many years of experience as journalist and editor. She is our new Editorial Assistant on CONTACT as of May, replacing Ms. Miriam Reidy who has become the Editorial Assistant for *One World*, a WCC publication.

Ms. Jenny Roske joined the CMC as secretary, also from May.

CONTACT is the periodical bulletin of the Christian Medical Commission (CMC), a sub-unit of the World Council of Churches (WCC). It is published six times a year in four languages: English, French, Spanish and Portuguese. Present circulation is in excess of 25,000.

Papers presented in CONTACT deal with varied aspects of the Christian community's involvement in health and seek to report topical, innovative and courageous approaches to the promotion of health and integrated development. A complete list of back issues is published in the first issue of each year in each language version. Articles may be freely reproduced, providing acknowledgement is made to: CONTACT, the bimonthly bulletin of the Christian Medical Commission of the World Council of Churches.

Editor: Eric Ram (Director). Editorial Assistant: Ann Dozier. Editorial Committee: Eric Ram, Reginald Amonoo-Lartson, Cécile De Sweemer, Ann Dozier, Jeanne Nemec. The rest of CMC staff also participate actively in choosing topics for emphasis and the development of materials. Mailing List: Fernande Chandrasekharan. Printer: Imprimerie Arduino. Correspondence: CMC/WCC, PO Box 66, CH-1211 Geneva 20, Switzerland.

On the average, each copy of CONTACT costs SF 2.50 (US\$ 1.25) to produce and mail, which adds up to SF 15.— (US\$ 7.50) per year for 6 numbers. Industrialized-country readers are strongly encouraged to subscribe to CONTACT to cover these costs. Please note that orders of back issues of CONTACT will be charged at the above rate.