AGENDA
5TH CCCD CONSULTATIVE MEETING
EZULWINI, SWAZILAND
APRIL 2-6, 1990

MONDAY, 2 APRIL

Opening Ceremonies

Master of Ceremonies, Mr. E. Hlope
Minister of Health Address and Welcome of Prime Minister, Dr. F. Friedman
Address of Prime Minister, the Honourable O.M. Dlamini
Minister of Health, Dr. F. Friedman
U.S. Charge d'Affaires, H.E. Mrs. A. Karaer
Deputy Director, Office of Technical Resources, Bureau for Africa, USAID, Judith W. Gilmore
Director, USAID/Swaziland Mr. R. Carlson

Introduction of Keynote Speakers

- Keynote Address, M. Moteetee, Lesotho Child Survival in Lesotho, Yesterday and Today
- Keynote Address, J. Limbassa, Central African Republic, Child Survival in CAR, Today and Tomorrow

Health Information Systems

S. Diallo, Guinea (Chairperson)

- Progress Toward Targets, S. Foster, CDC/USA From Data Collection to Data for Decision Making, A. Glickpo, Togo
- Hospital-based Sentinel Surveillance, M. Galakpai and J. Gouwan, Liberia
- Health Information Systems in Swaziland, E. Hlope, Swaziland
- Measuring Mortality -- Preceding Birth Technique, A. Boby, CAR

J. Roungou, CAR (Chairperson)

- Acute Respiratory Infections, S. Redd, CDC/USA
- AIDS, WHO/Geneva
- Birth Spacing, T. Johnson, CDC/USA
- Child Survival Programs in the 1990's: Caring for the Child, J. Davis, CDC/USA

TUESDAY, 3 APRIL

Expanded Program on Immunization

S. Saba, Nigeria (Chairperson)

- EPI Update, S. Robertson, WHO/Geneva
- EPI Update, Africa, L. Arevshatian, WHO/AFRO
- Measles Control in Kinshasa, O. Othepa, Zaire
- Epidemic Measles in Burundi: Implications for a Maturing EPI, F. Bizimana, Burundi and R. Chen, CDC/USA
- New Strategies for Controlling Measles, M. Nkuebe, Lesotho
- Paralytic Poliomyelitis in Kinshasa, O. Okwo, Zaire

M. Galakpai, Liberia (Chairperson)

- Evaluating Tetanus Toxoid Vaccination Coverage, Dr. D. Nshimirimana, Burundi
- Problems and Successes of the 1987 National EPI Campaign, J. Koffi, Cote D'Ivoire
- EPI Campaigns: A Sustainable Strategy?, T. Karsa, Togo
- Factors Determining Non and Under-Utilization of Vaccination Services, S. Diallo, Guinea
- Vaccination Coverage and Missed Opportunities, J. Roungou, CAR

Workshops

- CDD Program Expansion
- Missed Opportunities for Vaccination
- Case Management of Febrile Illness at the Periphery
- Birth Spacing

Future of A.I.D. Public Health Assistance in Africa

J. Shepperd, AID/Washington (Chairperson)

WEDNESDAY, 4 APRIL

Malaria

O. Ekanem, Nigeria (Chairperson)

- The Global Status of Malaria and Issues for the 1990's, P. De Raadt, WHO
- Current Status of Malaria Control in CCCD Countries, J. Breman, CDC
- Malaria, Pregnancy and Low Birth Weight in Malawi, R. Steketee, CDC/USA
- Recent Studies of Antimalarial Drug Effectiveness in Zaire: Sensitivity Patterns and Clinical Issues, K. Paluku, Zaire and J. Breman, CDC/USA
- A New Look at the Sick Child in Africa: The Relationship of Malaria, Anemia, HIV and Respiratory Diseases, K. Campbell, CDC/USA

K. Paluku, Zaire (Chairperson)

- Malaria Control by a Selected Antivector and Drug Use Strategy in Swaziland, S. Kunene, Swaziland
- Household Curtains and Bednets Prevent Malaria in Kenya, J. Sexton, CDC/USA
- Surveillance in Togo for Monitoring Malaria Morbidity and Mortality, A. Gayibor, Togo
- Development of a National Malaria Control Plan in Nigeria, O. Ekanem, Nigeria
- Summary and Future of Malaria Control in Africa, R. Steketee, CDC/USA

Workshops

- The Rational Use of Drugs in CDD Programs
- Strategies for Measles Control
- Definition of Effective Antimalarial Drug Use - Field Testing and Policy Development
- AIDS

THURSDAY, 5 APRIL

Diarrheal Diseases

D. Nshimirimana, Burundi (Chairperson)

- CDD Update: Africa and the World, M. Claeson WHO/Geneva
- Appropriate Case Management in Health Facilities, F. Mamadou-Yaya, CAR
- Three Years' Experience with CDD, A. Helal, Guinea
- From DTU to Program Expansion, T. Mndzebele, Swaziland
- ORS Distribution and Sales by Village Health Workers, T. Khoali, Lesotho
- Case Management: The Role of Drugs, M. Claeson, WHO/Geneva

M. Moteetee, Lesotho (Chairperson)

- Lessons from Five Years' Experience with CDD, M. Mutumbo, Zaire
- Community Practices for Diarrhea Management, M. Ntakibirora, Burundi
- Case Management in the Home, J. Roungou, CAR
- Prinicples of Case Managment in the Home, D. Olivola, CDC/USA

Workshops

- Diarrhea Case Management at Home
- Neonatal Tetanus Surveillance, Tetanus Toxoid Vaccination Strategies and Coverage
- Prevalence of Low Birth Weight and Implications for Child Survival
- Acute Respiratory Infections

FRIDAY, 6 APRIL

Health Care Financing and Operational Research

M. Miaka, Zaire (Chairperson)

- Revolving Drug Fund and Fee-For-Service Schemes, P. Wonokey, Liberia
- Alternatives for Cost Recovery, K. Drame, Guinea
- Health Financing Policy Development, J. Roungou, CAR
- EPICOST - Results of One Experience, E. Hlope, Swaziland
- Developing African Research Capacity, A. Yakubu, Nigeria

Health Education and Training

T. Karsa, Togo (Chairperson)

- Developing a Continuing Education Strategy, A. Adegoroye, Nigeria
- Improving Vaccination Follow-up Rates: An Intervention Trial, R. Macauley, Liberia
- Field Assessment of Health Worker Performance, M. Traore, Côte d'Ivoire
- The ARHEC Experience, J. Adeniyi, Nigeria

OPENING REMARKS OF THE HONOURABLE MINISTER OF HEALTH

DR. F. FRIEDMAN

ACSI-CCCD CONSULTATIVE MEETING, APRIL 2, 1990

Master of Ceremonies, Your Excellency, the Acting Prime Minister, Members of the Diplomatic Core, Members of the Royal Family and in particular the team from CDC in Atlanta City, Distinguished Participants, Ladies and Gentlemen. We, I must first of all apologize for the slight disruption but when the weather is as bad as it is, one is to descend our famous Malaguani hill very slowly and I think that is what has happened to the Honorable Senator Mamba and his trip here. I would like very much to echo the words of all those who have spoken before me in welcoming you to Swaziland on behalf of His Majesty's Government. I hope that none of you have had any hassles when traveling to our country, but if you did I'm confident that at the end of the week you will say it was well worth it. Distinguished delegates, we're indeed delighted to welcome you to Swaziland at a time when major political reforms are being instituted throughout Europe and indeed nearer at home in our region in southern Africa. I would particularly like to welcome the Delegation from Namibia. Could we give them a hand please. Thank you. Thank you very much. I have no doubt that as a result of these changes some of the obstacles and constraints that prohibit the child from receiving it's full and rightful

attention in all aspects necessary for it's healthy development into adulthood will be eradicated. The portrayal of children as victims of atrocities in Europe, the plight of children of refugees, the walking skeletons we see of crippled children, crippled by disease or hunger, the women and children who are victims of war ravished countries where amongst appalling health conditions there is never enough food, a sum of the events that spur us to greater efforts to strengthen our capability to address ourselves to the unacceptable consequences of events that are beyond our control as health workers. Mr. Chairman and distinguished delegates the triple CD programs and the child survival initiatives are the mechanisms through which we hope to reduce the alarming childhood mortality and mobility figures revealed in our statistics from whatever source. It is a pity that in many of our countries, as has been stressed by speakers just before me, with limited resources, progress is hampered by the competition to cater for other programs of national concern. However, with the commitments that we have, pledge and with donor assistance, the ball is now in our court. To maximize on the tools at our disposal to meet the grave challenge of saving the lives of our children and giving them a chance to survive. These programs, again as you have just heard, should not be only continued till we reach our targets but we should aim simultaneously at maintaining and putting together our act so that we can be able to give

sustainability to these programs when the donors pull out. Because of the intimate relationship of mother and child, from pregnancy onwards, let us not forget to give some attention to the mother's health and role in her own right as a child bearer as well as a provider for the welfare and health needs of the child. Your presence here distinguished delegates reflects your concern. I am confident that with so much expertise, knowledge and experience amongst you, this conference is bound to be a success. My task this morning is not to make a speech but to introduce to you your guest speaker who'll officially open the conference for you. I wish on behalf of the Prime Minister to offer apologies for him not being able to attend today. But I can assure you, you have an equally able person in the person of the Honorable Senator Sir George Mamba who is the Acting Prime Minister. It is now my pleasure to invite him to address you. Sir George.

CLOSING REMARKS OF THE HONORABLE MINISTER OF HEALTH

DR. F. FRIEDMAN

ACSI-CCCD CONSULTATIVE MEETING, APRIL 6, 1990

Thank you Mr. Chairman. Distinguished delegates, distinguished guests, ladies and gentlemen. I first of all wish to thank the speakers for their sentiments about our country and hospitality. They are only confirming what we always suspected. However, I think we need to thank you very much for those words and I'll certainly convey them to government and to his Majesty. And I think we will entrust you with the function of being our ambassadors outside this country. It gives me great pleasure indeed to address you at this important conference as this important conference draws to a close. For the past two weeks you have deliberated and exchanged views and experiences on many of the issues, fundamental to the health process on our continent with particular emphasis on child survival and maternal health. We are gratified to have had so many eminent professionals present in our country. We are heartened by the prominence of nationals amongst those presenting, including our own and their obvious dominance in the development and establishment of future directions for these programs. These people we are confident will be the technical experts of the future. As well as reviewing programs successes, constraints and I'm sure some failures, my colleagues inform me

this conference may be viewed as a watershed in CDC's sponsored program activity in African countries. Substantial program achievements have been reported in the field of EPI. Most countries now are at a stage of consolidation, quality enhancement and management strengthening with increasing national influence and a desire to reduce dependency on donor inputs as part of the effort toward achieving sustainability. Similar success has been achieved in the control of diarrheal disease programs and a new program launched in many countries directed towards efficient case management of acute respiratory illness. These three major interventions have gone a long way towards the reduction of mortality in infancy and early childhood and the focus now is on reduction of morbidity and the enhancement of the quality of survival. In the area of malaria control, many challenges remain. A major problem is vector adaptability which will spread to new environments, previously malaria free. Even mosquitoes seem to be caught up in the trend towards rapid urbanization. Since it now seems to have a propensity for peri-urban living and also for lowering agricultural development, especially that associated with deforestation and irrigation. In addition, the increase in drug resistance poses major challenges to the control of the scourge of our continent. A move away from verticality in program management and committed drive to genuine integration of services has been dominant throughout this conference. This move is generated by the

reality of ever diminishing resources, both domestic and external. In face of a need to extend services to meet the demands of an increasingly sophisticated and repeatedly expanding population. While we may expect a better educated and more sophisticated population to be more capable of influencing their health status, it becomes incumbent upon us to take into account the changing perceptions and expectations of this population. This is the challenge which we as health care providers must face. This is nowhere better exemplified than in our efforts to control the HIV epidemic. We must deal with the dilemma of establishing a perception that natural human sexual behavior can be associated with the contraction of a disease that is associated with certain death and for which there is no cure or even palliation. This in a society where the predominant perception is that disease and death is the consequence of some misdemeanor and for which a cure either traditional or mordant is expected. It is both tragic and sobering that the successes in the different program areas highlighted during this conference be so threatened by this epidemic. The enormous shift of resources to AIDS program which we have witnessed as both international and national levels must surely threaten the survival of the programs included in the triple CD, ACSI initiative. Urgent steps must be taken to redress this resource imbalance and mobilize those additional resources being made available for HIV to the benefit of the health care in general

and the child survival programs in particular through an integrated manner focused through the primary health care process. The scenario presented on behalf of a million children orphaned by HIV on the African continent within the next few years is surely fearful. Not only will many of those children themselves die from AIDS but the survival of the rest will be jeopardized. The importance of the mother to the integrity of the family and the well being of the individual child could not be better exemplified than in the above scenario. We are pleased to note expansion of CDC's focus to include reproductive health and to the attention paid in this conference to the empowerment of women to have a greater measure of control over their old fraternity. The need to delay the first pregnancy until full physical and social maturity is achieved and the need to increase the birth interval and to reduce the reproductive burden on mothers of pregnancy later in life are of paramount concern in this process. These measures will go a long way toward improving both the actuality and the quality of child survival as many papers presented here have demonstrated. The parallel changes, the parallel challenges of generating attitudinal change in respect to fertility and to influence that sexual behavioral which leads to STD's and to promote the health of mothers during their reproductive cycle will substantially influence child survival in the decade and beyond. The ministry of health in Swaziland

is committed to mobilizing the resources required to meet these challenges and welcomes the anticipated support from the Centers for Disease Control through phase 2 of the triple CD Program. Swaziland is not complacent in spite of its notable achievements in the health care process highlighted during this conference and is only two aware that political changes both on this continent and beyond may greatly influence the human and financial resources available to meet the challenges that lie ahead. It is for this reason that we are so pleased to have been host to this conference, where our health care workers have been able to share ideas and establish context so that we may travel on the road to universal health together. Thank you and God speed.

TALK BY U.S. CHARGE D'AFFAIRES, H.E. MRS. A. KARAER

RIGHT HONORABLE PRIME MINISTER, HONORABLE MINISTERS FRIEDMAN AND LIMBASSA, DR. MOTEETEE, PRINCIPAL SECRETARY MKONTHA, DISTINGUISHED PARTICIPANTS AND GUESTS, LADIES AND GENTLEMEN.

A FUNDAMENTAL MEASURE OF OUR HUMANITY AND OUR CONFIDENCE THAT LIFE IS WORTH LIVING IS THE CARE WE GIVE OUR CHILDREN - THE MEASURES THAT WE AS INDIVIDUALS AND COMMUNITIES TAKE FOR THEIR WELL-BEING AND SURVIVAL.

FOR THAT REASON THE UNITED STATES GOVERNMENT IS HONORED TO JOIN IN CONVENING THIS DISTINGUISHED GATHERING OF INTERNATIONAL EXPERTS IN THE FIELD OF CHILDHOOD DISEASES.

IN A WORLD BESET WITH MANY APPARENTLY INSOLUBLE POLITICAL AND ECONOMIC PROBLEMS, THIS CONFERENCE PRESENTS AN OPPORTUNITY TO STEP BACK AND CONSIDER ONE OF THE BASICS: HOW CAN WE WORK TOGETHER TO INSURE THAT OUR CHILDREN, THOSE MOST DEAR TO US, ENJOY THE MOST BASIC RIGHT OF ALL -- THE RIGHT TO LIVE?

YOUR WORK IN THE TRIPLE-C-D PROJECT HAS MADE AN IMPORTANT CONTRIBUTION TO THAT JOINT EFFORT. A PROJECT WHICH HAS SOUGHT TO IDENTIFY PRIORITY HEALTH PROBLEMS WHICH ARE AMENABLE TO COST-EFFECTIVE SOLUTIONS AND TO EFFECT A RATIONAL CONCENTRATION OF SCARCE RESOURCES ON THOSE PROBLEMS.

WHAT DOES THIS MEAN IN PRACTICAL TERMS? IT MEANS THAT RATHER THAN SCATTER RESOURCES ACROSS THE FULL RANGE OF HEALTH PROBLEMS WHICH FACE AFRICAN COMMUNITIES, THE PROJECT HAS CONCENTRATED ON THOSE IMPORTANT FEW DISEASES FOR WHICH EFFECTIVE MEDICAL INTERVENTION IS AVAILABLE: MALARIA, MEASLES, NEO-NATAL TETANUS, DIARRHEAS AND PNEUMONIAS. THE PROJECT, THEN, ADHERES TO THE SIMPLE MAXIM THAT IN AREAS WHICH EXPERIENCE HIGH LEVELS OF AVOIDABLE DEATHS, A PUBLIC HEALTH SYSTEM SHOULD EXPEND THE GREATEST PART OF ITS RESOURCES ON THOSE TREATMENTS AND PROCEDURES WHICH CAN PREVENT THE LARGEST NUMBER OF DEATHS.

IN ADDITION TO FOCUSING OUR ATTENTION ON THESE PRIORITY HEALTH PROBLEMS, TRIPLE C-D ALSO ADDRESSES THE QUESTION OF HOW TO MANAGE THE HEALTH SERVICES WHICH DEAL WITH THOSE PROBLEMS. AGAIN, THE PROJECT'S APPROACH HAS BEEN PRACTICAL. IT EMPHASIZES OPERATIONS RESEARCH AND HEALTH INFORMATION SYSTEMS TO PROVIDE DECISION MAKERS, LIKE DR. FRIEDMAN AND MR. MKHONTA, WITH THE DATA THEY NEED TO EFFECTIVELY MANAGE PRIORITY SERVICES. IT IS NOT SUFFICIENT THAT OUR NATIONAL HEALTH SERVICES ARE ORGANIZED ACCORDING TO THE CHARTS IN TEXT BOOKS. TOO OFTEN SUCCESS IS MEASURED BY THE NUMBERS OF CLINICS AND

HEALTH WORKERS WE HAVE IN THE FIELD. TRUE SUCCESS DEPENDS ON HOW WELL THOSE SERVICES ACTUALLY WORK AND BY WHAT THEY ACCOMPLISH. OUR REAL SUCCESS, IN OTHER WORDS, IS MEASURED BY FACTORS LIKE NUMBERS OF CHILDREN VACCINATED OR A STEADY DECLINE IN NEO-NATAL DEATHS. THEREFORE, SYSTEMS TO ENABLE MANAGERS TO QUANTIFY PROBLEMS AND RISKS, TO ESTABLISH PRIORITIES AND STRATEGIES, AND TO MONITOR PROGRAM IMPLEMENTATION AND IMPACT ARE URGENTLY NEEDED. DEVELOPING THESE MANAGERIAL CONCERNS MAY BE ONE OF TRIPLE-C-D'S MOST IMPORTANT LEGACIES.

YOU HAVE COME TO SWAZILAND THIS WEEK WITH THESE PRINCIPLES IN MIND TO CONSIDER HOW WE CAN FURTHER IMPROVE OUR EFFORTS IN CHILD SURVIVAL OVER THE YEARS TO COME. I WOULD THEREFORE LIKE TO SUGGEST FOR YOUR CONSIDERATION AN INTERVENTION THAT IS CLOSELY ALLIED TO CHILD SURVIVAL AND THAT I KNOW IS BEING IMPLEMENTED IN MANY COUNTRIES. THAT INTERVENTION IS FAMILY PLANNING.

IT IS OBVIOUS THAT HIGH POPULATION GROWTH RATES IN AFRICA ARE A PHENOMENON WHICH HAS THE POTENTIAL TO UNDERMINE DEVELOPMENT EFFORTS IN VIRTUALLY EVERY SECTOR, INCLUDING HEALTH. ASIDE FROM THIS, HOWEVER, IT IS CLEAR THAT FAMILY PLANNING IS ALSO A POWERFUL MEANS OF REDUCING INFANT, CHILD AND MATERNAL DEATHS. FAMILY PLANNING IS SIMILAR TO IMMUNIZATION

AND ORAL REHYDRATION THERAPY. IT IS A CHEAP, SAFE, SIMPLE AND EFFECTIVE MEANS TO REDUCE DEATHS. I SUGGEST, THEREFORE, THAT THE TIME HAS COME TO GIVE FAMILY PLANNING, ESPECIALLY BIRTH SPACING, EQUAL EMPHASIS WITH OTHER CHILD SURVIVAL INTERVENTIONS IN THE TRIPLE-C-D PROJECT, AND I HOPE THAT YOU WILL CONSIDER IT.

BEFORE I CLOSE, I WISH TO EXTEND A SPECIAL WELCOME TO THE DELEGATE FROM THE NEWEST OF THE FAMILY OF NATIONS, NAMIBIA. NAMIBIA'S PARTICIPATION IN THIS CONFERENCE REFLECTS THE POSITIVE CHANGES WE ARE BEGINNING TO SEE IN SOUTHERN AFRICA, CHANGES WHICH WE BELIEVE HOLD THE PROMISE OF A BETTER LIFE FOR ALL PEOPLE IN THE REGION.

I ALSO WISH TO THANK THE GOVERNMENT OF SWAZILAND FOR THEIR CONSENT TO HOLD THIS CONFERENCE IN THEIR BEAUTIFUL COUNTRY. THE SWAZI, AS I AM SURE YOU HAVE ALREADY NOTED, ARE A WARM AND HOSPITABLE PEOPLE. THIS HOTEL IS LOCATED IN EZULWENI, WHICH, IN SISWATI, MEANS "HEAVEN". I AM THEREFORE CONFIDENT THAT YOUR STAY WILL BE A PLEASANT AS WELL AS A PRODUCTIVE ONE.

Vth Bi-Annual ACSI-CCCD Consultative Meeting

April 2, 1990

Kingdom of Swaziland

Address on Behalf of the Agency for International Development

by

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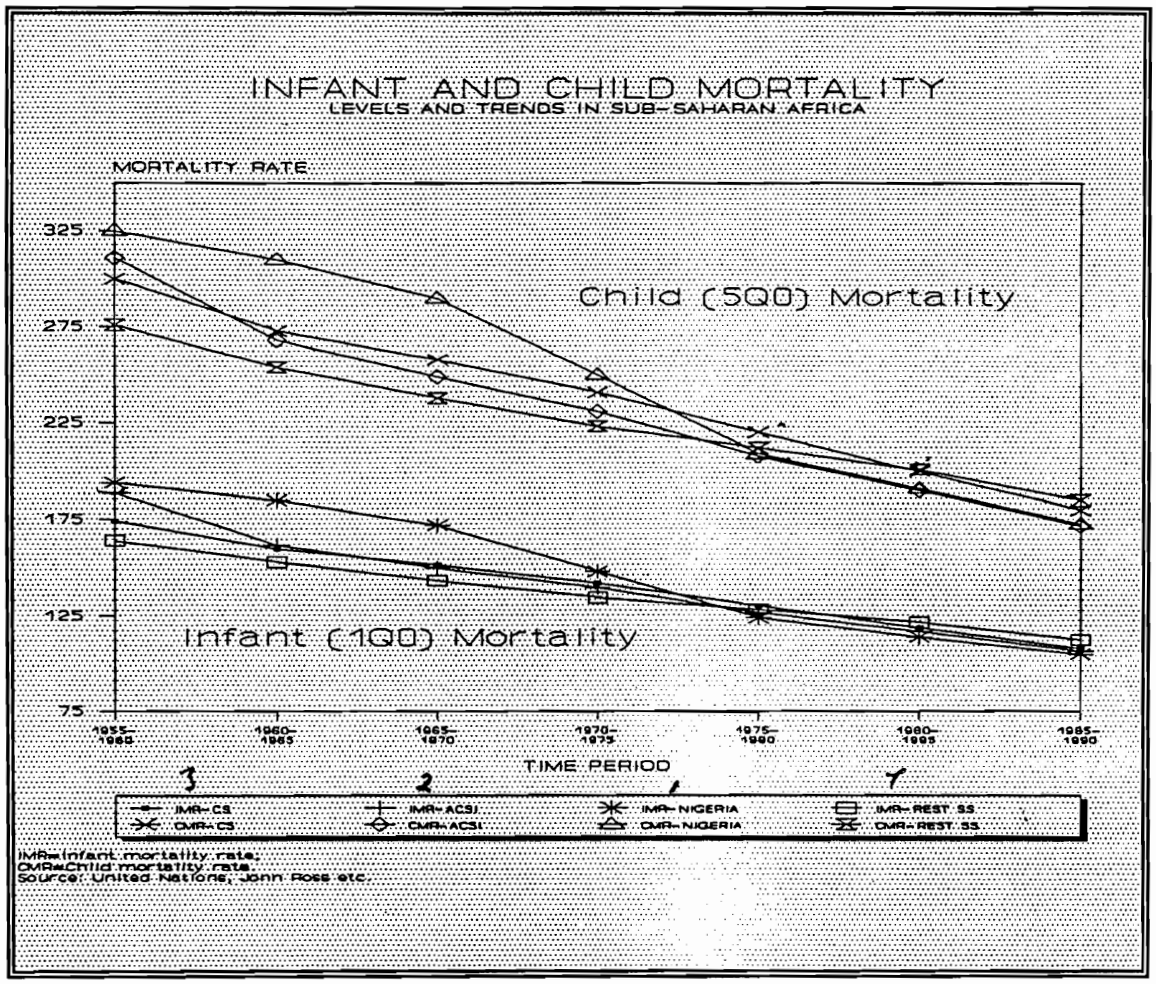


This Figure illustrates the steady declines in infant (age 0-1) and child (age 0-5) mortality over the periods, 1955-60 through 1985-90. Data are taken from the United Nations, World Population Prospects, 1988. The lines correspond to countries grouped as follows:

CS = A.I.D. Child Survival emphasis (Kenya, Malawi, Mali, Niger, Senegal, Sudan, Zaire).

ACSI = CCCD (Burundi, C.A.R., Cote d'Ivoire, Guinea, Lesotho, Liberia, Togo, Swaziland, Zaire).

Nigeria is common to both CS & ACSI categories for A.I.D. but since the country is so large and because the mortality data are so uncertain, Nigeria is shown separately.

REST SS = all remaining countries in sub-Saharan Africa.

INTRODUCTION

Right Honorable Prime Minister,
Honorable Ministers, Permanent Secretary,
Distinguished Participants and Guests, Ladies and Gentlemen:

It is a great pleasure to join you today to participate in this, the Fifth ACSI-CCCD Consultative Meeting in Africa. Let me first convey to you the warm greetings of your many colleagues in the Agency for International Development. We especially wish to thank the Right Honorable Prime Minister for joining us here today, and to thank the Government of Swaziland for hosting this conference. What a superb setting for our deliberations!

In international public health circles, the CCCD Project is well-known for its leadership as our largest and most important child survival project in Africa. You can be proud of your achievements in improving child health through increasing coverage for immunizations and oral rehydration therapy, and for improving malaria programs.

CCCD also has taken great strides towards establishing the systems needed to support technical interventions: training, supervision, information systems, cost recovery, applied research, and health education. I want to share with you our agency's deep appreciation for your achievements over the past decade, many of which will be reviewed at this meeting.

The partnerships developed in this project over the past decade--between Africans and Americans, and between their governments; between A.I.D., the Centers for Disease Control, UNICEF, and the World Health Organization--these constitute in themselves important achievements, in which we take pride.

THE A.I.D. CONTEXT

Let me now share with you some features of the project as it relates to A.I.D. I should first point out that A.I.D.'s commitment to child survival is strongly supported by our United States Congress, which established a special account, the **Child Survival Fund**, in 1985. This account assures steady funding--about $90 million per year so far--for A.I.D. to support focused child survival efforts throughout the world. This special account was based largely on the model that had evolved already in the CCCD program, and more than a third of these funds have gone to sub-Saharan Africa.

Mortality in Africa has declined steadily over the past three decades, though the HIV/AIDS pandemic will soon increase adult mortality in some countries. Acceptance of family planning methods, on the other hand, remains very low. Sharp increases are beginning to be seen, but only in a few countries. Thus the high number of children born each year will continue to provide the backdrop for public health programs well into the next century. For example, immunization programs will need to keep growing to keep up with the target population.

Continued high fertility in the face of lower mortality has produced the world's highest ratios of children to parents in Africa, where the lowest per capita incomes are also found. Such circumstances cry out for better program planning and efficiency.

STRENGTHENING INSTITUTIONS

Many of our A.I.D. missions have been asked to assist in child survival and family planning, as well as in HIV/AIDS. Since programs in all three of these areas often can share the same support systems (for example, health information, training, supervision, and financing systems), we are seeking ways of expanding the use of these common support systems, while continuing to stress effectiveness and impact.

Our work in the coming decade should focus on developing and reinforcing the support systems and institutions needed to maintain and increase our gains. To do this we need your ideas and guidance. When CCCD began almost ten years ago, we thought it might take only four or five years to institutionalize services for immunizing children and for controlling their diarrheal diseases and malaria. Now we know it takes longer, and we have learned a great deal about making these programs work. But our task is far from complete. We still need to take our achievements in CCCD a step further to ensure that they are sustainable.

Undoubtedly there will be various ways of meeting our aims--depending on specific country situations. Our DFA Action Plan emphasizes that reduced mortality and increased child spacing will be achieved best if **both private organizations and government agencies are effectively engaged.** Our tasks are too difficult and the needs are too great to rely on a single approach. Finding ways of integrating services for child survival, family planning, and HIV/AIDS--while making best use of both public and private sectors--will be among our greatest challenges in the years ahead.

REMARKS OF ROGER D. CARLSON, DIRECTOR

USAID MISSION TO SWAZILAND

CCCD CONFERENCE, APRIL 2, 1990

HONORABLE PRIME MINISTER, HONORABLE MINISTERS FRIEDMAN AND LIMBASSA, DOCTOR MOTEETEE, DR. DAVID, DR. GALAKPIE, DISTINGUISHED PARTICIPANTS, LADIES AND GENTLEMEN:

I AM VERY PLEASE TO BE WITH YOU THIS MORNING AND TO WELCOME YOU ALL TO SWAZILAND ON BEHALF OF THE U.S.A.I.D. MISSION. WE ARE MOST HAPPY TO HAVE YOU HERE BECAUSE WE BELIEVE AS A DEVELOPMENT AGENCY THAT WE CAN BENEFIT CONSIDERABLY FROM YOUR DELIBERATIONS. WHILE I INTEND TO SPEND MOST OF MY TIME LISTENING TO YOU, THE TECHNICAL EXPERTS, THIS WEEK, I WOULD LIKE TO TAKE MOMENT TO SHARE WITH YOU A FEW THOUGHTS WHICH MAY BE GERMANE TO YOUR DISCUSSIONS OVER THE NEXT FEW DAYS.

BEFORE YOU GET INTO YOUR TECHNICAL DELIBERATIONS, I WOULD LIKE TO TOUCH ON THREE SUBJECTS WHICH AFFECT ALL OF US WORKING IN DEVELOPMENT AS WE ENTER THIS CRITICAL DECADE OF THE 1990'S. THE THREE ISSUES I WANT YOU TO THINK ABOUT ARE:

1. THE INCREASING COMPETITIVENESS IN THIS WORLD FOR THE SCARCE RESOURCES REQUIRED TO IMPROVE OUR SOCIETIES.

2. THE NECESSITY FOR ACHIEVING MEASURABLE RESULTS FROM OUR WORK, AND
3. ASSURING THAT THE CHANGES BROUGHT ABOUT IN HEALTH CARE PRACTICES ARE SUSTAINABLE WITHIN THE CONTEXT OF THE SOCIETIES IN WHICH WE LIVE AND WORK.

FIRST, WITH RESPECT TO COMPETITION FOR RESOURCES, I SPEAK TO YOU AS REPRESENTATIVE OF A DONOR AGENCY WHO IS FORCED TO MAKE CHOICES, OFTEN DIFFICULT CHOICES. AS MY COLLEAGUE, JUDY GILLMORE, JUST MENTIONED, THE UNITED STATES CONGRESS CREATED THE DEVELOPMENT FUND FOR AFRICA SEVERAL YEARS AGO. A LARGE AMOUNT OF OUR HEALTH FUNDING IN AFRICA NOW COMES FROM THAT FUND. WHILE WE DO HAVE SPECIAL ACCOUNTS, SUCH AS THE CHILD SURVIVAL FUND, WHEREAS PREVIOUSLY WE RECEIVED FUNDS SPECIFICALLY EARMARKED FOR HEALTH AND OTHER SECTORS, DFA FUNDS COME WITH RELATIVELY FEW STRINGS ATTACHED. EACH USAID MISSION, WITHIN BROAD LIMITS AND SUBJECT TO WASHINGTON'S CONCURRENCE, MAY CONCENTRATE ITS RESOURCES IN WAYS WHICH SEEM SUITED TO THE INDIVIDUAL CIRCUMSTANCES FOR EACH COUNTRY.

WHILE THIS KIND OF FLEXIBILITY IS WELCOME, IT DOES REQUIRE FACING THE DIFFICULT CHOICES I MENTIONED EARLIER. IT MEANS THAT HEALTH HAS TO COMPETE MORE THAN BEFORE WITH OTHER SECTORS FOR FUNDS WHICH WE ALL WISH WERE IN MORE PLENTIFUL SUPPLY. THIS INCREASED COMPETITION

FOR RESOURCES IS NOT CONFINED TO THE BUDGET OF USAID. ALL DEVELOPING COUNTRIES ARE CONFRONTED WITH HARD CHOICES AND MUST MAKE DIFFICULT DECISIONS, AS MUST DONOR AGENCIES, IN DETERMINING HOW MUCH MONEY WILL BE ATTRIBUTED TO HEALTH CARE VERSUS OTHER DEVELOPMENT NEEDS. THE COMPETITION IS BECOMING EVEN KEENER AS MORE COUNTRIES TURN TO THE WESTERN DONOR AGENCIES FOR SUPPORT AND HELP IN CONFRONTING THE PROBLEMS OF ECONOMIC GROWTH AND CHANGE.

IT IS ABSOLUTELY ESSENTIAL THAT AS WE EXAMINE TOGETHER THIS WEEK THE CRITICAL ISSUES AFFECTING CHILD HEALTH AND SURVIVAL IN THE AFRICAN CONTEXT, THAT WE DO SO WITH A FULL RECOGNITION OF THE COSTS SUCH CHOICES IMPLY.

THE SECOND IMPORTANT ISSUE WHICH I WANT YOU TO THINK ABOUT AS WE GO FORWARD WITH OUR TECHNICAL DISCUSSIONS IS THE IMPORTANCE EVEN MORE TODAY OF ACHIEVING MEASURABLE RESULTS. THE MANAGERS THAT ARE MAKING THE DECISIONS ABOUT THE ALLOCATION OF RESOURCES TO DEVELOPMENT NEEDS, WHETHER THEY ARE MINISTERS OF GOVERNMENT OR ADMINISTRATORS OF DONOR AGENCIES, MUST BE CONVINCED THAT THE RESOURCES BEING APPLIED ARE HAVING A DEMONSTRABLE IMPACT. OUR U.S. CONGRESS HAS COME RECENTLY TO THIS CONCLUSION AS WELL. OUR AID ADMINISTRATOR AND HIS SENIOR STAFF IN WASHINGTON ARE BEING BOMBARDED WITH DEMANDS FROM ELECTED OFFICIALS TO SHOW

SPECIFICALLY WHAT OUR RESOURCES HAVE ACHIEVED IN REAL TERMS AND IN MEASURABLE WAYS. NOW, GIVEN THAT THE CCCD APPROACH HAS BEEN, AS OUR CHARGE D'AFFAIRES, ARMAJANE KARAER, JUST POINTED OUT, A HIGHLY TARGETED PROGRAM TO DATE, I AM CONFIDENT THAT WE CAN SHOW -- PERHAPS BETTER THAN SOME OTHER PROGRAMS CAN -- THAT CCCD IS MAKING A MEASURABLE DIFFERENCE. BUT TO TELL THAT STORY AND TO BE SURE THAT WE HAVE THE COMMITMENT OF PEOPLE, MANAGERS, ADMINISTRATORS, MINISTERS BEHIND THIS EFFORT, I URGE YOU ALL TO GIVE HIGH PRIORITY TO THAT WHICH I KNOW IS ALREADY A PART OF YOUR EFFORTS IN MANY COUNTRIES, AND THAT IS THE CREATION OF MANAGEMENT SYSTEMS THAT PROVIDE REGULAR FEEDBACK ON WHAT IS HAPPENING AS A RESULT OF YOUR EFFORTS. AND, THAT FEEDBACK CANNOT JUST BE IN A VAST ARRAY OF STATISTICS -- IT MUST BE TRANSLATED IN TERMS OF REAL IMPACT ON PEOPLE'S LIVES AND THE STATUS OF THEIR HEALTH.

FINALLY, I WANT TO MENTION A FEW WORDS ABOUT SUSTAINABILITY. WE HAVE ALL TALKED ABOUT THIS CONCEPT AT SOME LENGTHS IN OUR DELIBERATIONS ON HEALTH AND OTHER DEVELOPMENT PROBLEMS, BUT AGAIN AS WE MOVE INTO THE 1990'S IT IS AN ISSUE THAT IS BECOMING EVEN MORE IMPORTANT. WE ARE ALL AWARE OF HOW QUICKLY THE SANDS OF THE TIME CAN OBLITERATE THE MOST WELL INTENTIONED AND CREATIVE PROJECT. WHAT WE MUST CONSIDER TOGETHER IS HOW CAN THESE IMPORTANT INTERVENTIONS IN CHILD SURVIVAL BE INSTITUTIONALIZED AND MAINTAINED IN THE AFRICA CONTEXT.

I AM PROUD TO SAY THAT HERE IN SWAZILAND USAID WAS INVOLVED IN A PROJECT WHICH HAS PROVEN ITS SUSTAINABILITY. WE ASSISTED THE GOVERNMENT OF SWAZILAND IN THE CREATION OF AN INSTITUTE OF HEALTH SCIENCES WHICH TURNS OUT TODAY HIGHLY QUALIFIED NURSE GRADUATES. THAT IS AN INSTITUTION WHICH IS A PERMANENT PART OF THE DEVELOPMENT PROCESS IN SWAZILAND.

SADLY I ALSO HAVE BEEN INVOLVED IN OTHER COUNTRIES, AS I AM SURE YOU ALL HAVE IN PROJECTS THAT COULD NOT BE SUSTAINED -- WHERE THE COMMITMENT WAS WEAK, WHERE THE BUDGETARY RESOURCES WERE NOT FORTHCOMING, WHERE THE QUALITY OF THE TECHNICAL ASSISTANCE PROVIDED WAS LESS THAN IDEAL, AND WHERE FOR A VARIETY OF REASONS THE HOPES AND THE COMMITMENT OF PEOPLE SOMEHOW DID NOT YIELD A SUSTAINABLE RESULT. IN THIS TIME OF SCARCE RESOURCES, WE MUST DO ALL IN OUR POWER TO MINIMIZE THOSE FAILURES AND BE SURE WHEN WE START DOWN THE TRACK OF DEVELOPING AN ACTIVITY THAT THERE IS COMMITMENT ON THE PART OF ALL THE PARTIES -- NOT ONLY TO SEE THE PROJECT THROUGH, BUT TO SEE THAT THE ACTIVITY IS ROUTED IN THE INSTITUTIONS AND IN THE SOCIETY IN A MANNER THAT WILL ASSURE THAT IT FLOURISHES AND LIVES ON BEYOND THE COMMITMENT OF THOSE WHO WERE THERE AT THE BEGINNING.

AS WE THINK OF THESE THREE ISSUES, COMPETITIVENESS, ACHIEVING MEASURABLE RESULTS, AND SUSTAINABILITY, I HOPE THAT WE CAN ALL CONSIDER THE IMPORTANCE OF TACKLING THESE PROBLEMS IN A WAY WHICH STIMULATES CLOSE COLLABORATION BETWEEN THE PUBLIC AND PRIVATE SECTORS. FOR EXAMPLE, I URGE YOU TO CONSIDER MEANS TO MAKE SUSTAINABILITY MORE LIKELY AND TO STRETCH RESOURCES FURTHER, BY THINKING HOW RESPONSIBILITIES CAN BE TRANSFERRED FROM OVERBURDEN GOVERNMENT INSTITUTIONS TO THE PRIVATE SECTOR. I BELIEVE, FOR EXAMPLE, THAT THERE IS IMPORTANT ROOM FOR SUBSTANTIAL PRIVATE SECTOR INVOLVEMENT IN THE SALE OF ORAL REHYDRATION SALTS, CONTRACEPTIVES, AND MAYBE EVEN ANTI--MALARIALS BY APPROPRIATELY TRAINED PRIVATE INDIVIDUALS. COMMERCIAL DISTRIBUTION CHANNELS ARE OFTEN FAR MORE EXTENSIVE AND EFFICIENT THAN OFFICIAL ONES.

IT IS TRUE THAT CONSUMERS HAVE TO PAY FOR THESE SERVICES, BUT PERHAPS THAT IS, IN ITS MOST BASIC FORM, WHAT SUSTAINABILITY IS ALL ABOUT -- PROVIDING SERVICES THAT CAN BE PAID FOR. IN ANY EVENT, IT HAS BEEN DOCUMENTED IN MANY COUNTRIES, INCLUDING SOME OF THE POOREST, THAT PEOPLE DO SPEND SIGNIFICANT PORTIONS OF THEIR INCOME ON PRIVATE HEALTH RELATED EXPENDITURES. WE NEED TO FIND WAYS TO GET THEM TO SPEND THAT MONEY ON WHAT WE ARE TRYING TO SELL.

IN CLOSING, I WANT TO SHARE THE REMARKS MADE BY SPEAKERS WHO WENT BEFORE ME IN WELCOMING YOU TO THIS BEAUTIFUL KINGDOM OF SWAZILAND. USAID AND SWAZILAND HAVE HAD A LONG HISTORY OF PARTNERSHIP IN DEVELOPMENT, AND I AM CONFIDENT THAT WE HAVE A LONG AND SUSTAINABLE FUTURE AS PARTNERS TOGETHER IN THE 1990'S. MR PRIME MINISTER, YOUR SMALL COUNTRY, THE KINGDOM OF SWAZILAND, HAS AA REMARKABLE RECORD OF ADHERING TO THE PRINCIPLES OF A FREE AND OPEN MARKET ECONOMY OVER THE 21 YEARS OF ITS INDEPENDENCE, AND OF STICKING TO SOUND GROWTH POLICIES THAT HAVE DONE SO MUCH TO IMPROVE THE WELFARE OF YOUR PEOPLE. YOU HAVE, IN SWAZILAND, MR. PRIME MINISTER, MUCH TO BE PROUD OF. AT THE SAME TIME, I THINK YOU WILL AGREE THAT MUCH MORE NEEDS TO BE DONE. FOR EXAMPLE, THE POPULATION CRISIS IS BEGINNING TO STRAIN THE RESOURCES OF THIS COUNTRY, AND WE HAVE MUCH TO LEARN ON HOW A COMBINATION OF INCREASED FAMILY PLANNING SERVICES AND THE KIND OF PROGRAMS IN CHILD SURVIVAL THAT YOU WILL BE DISCUSSING HERE AT THIS CONFERENCE CAN BE INTEGRATED IN A WAY TO ASSURE A HEALTHY AND PROSPEROUS FUTURE FOR ALL SWAZIS. AS I SAID AT THE BEGINNING, AFTER HOLDING YOU CAPTIVE TO MY THOUGHTS FOR A FEW MOMENTS, I NOW INTEND TO LISTEN AND, I HOPE, TO LEARN.

I TRULY WELCOME THE PRESENCE OF YOU ALL HERE AND AM PLEASED AND HONORED THAT THE CENTER FOR DISEASE FOR CONTROL HAS CHOSEN THIS LOCATION FOR ITS ALL AFRICA MEETING. ALONG WITH CDC AND HIS MAJESTY'S GOVERNMENT, WE HAVE TRIED TO ARRANGE THINGS TO MAKE YOUR STAY AN ENJOYABLE ONE. I CERTAINLY HOPE THIS WILL BE THE CASE. PLEASE ACCEPT MY BEST WISHES FOR A STIMULATING AND PRODUCTIVE WEEK.

END

CHILD SURVIVAL IN LESOTHO, YESTERDAY AND TODAY

by Dr. Mpolai 'Maseila Moteetee

Head, Family Health Division, Ministry of Health

Kingdom of Lesotho

INTRODUCTION

The Lesotho Child Survival Programme began with the launching of the Expanded Programme on Immunisation in 1979-1980. The World Health Organisation, UNICEF, NGO's, USAID and other agencies joined forces with the Programme. At about the same time, oral rehydration therapy emerged as a key strategy for the reduction of child mortality and has been accepted since then by health providers.

From the onset, we recognised the correlation between mothers' health and that of her children, and endeavoured to strengthen maternal services concurrently with those for children. All these were developed and implemented within the framework of primary health care.

In the case of Lesotho, the Family Health Division is the focal point for the development and implementation of child survival strategies, and coordinates such programmes as: EPI, CDD, MCH/FP, nutrition, and the community health worker programmes.

PROGRAMME STRATEGIES

The Division found the following key programme strategies for child survival to be the most effective and successful:

1. Integration of health services: This strategy aims at improving the efficiency and effectiveness of delivery of health services, thus ensuring maximal use of limited resources. In implementation, the following programming aspects were considered:

a) Complementarity of programmes;

b) Uniformity of programme targetting;

c) Accessibility and availability of services, considering convenience of clients rather than that of providers;

d) The services are all provided by the same individuals rather than different ones for each programme area.

2. Decentralization:

Decentralization was essential in empowering the local level to take appropriate decisions and actions in all aspects of primary health care programming. The local level health workers used their experience and available data to determine programme priorities, including problem identification, adoption of the appropriate strategies, and implementation of planned activities.

3. Training:

Following a decentralized strategy, a cadre of Trainer of Trainers has planned and implemented their own local training and

continuing education programme and strategies.

In-service training of health workers at both central and peripheral levels was determined to be a key strategy at ensuring that the health workers acquired requisite and practical knowledge and skills. In-service training was integrated into all programmes, inclusive of technical and management aspects. Decentralisation meant delegation of managerial responsibilities to the peripheral level.

4. Health Education/Social Mobilisation:

Demand creation is crucial. Mothers have to be given adequate information to ascertain their involvement in support and use of services. The health education strategy therefore included material production, dissemination of information and evaluation of community impact.

5. Monitoring, support, supervision and evaluation:

Tools such as simple reporting forms and checklists were developed for routine and special reporting based on programme needs. Health information was regularly reviewed and its tools updated to reflect changing programme priorities and strategies.

Efforts have been made at providing feedback to all levels through use of programme reports and a quarterly Bulletin. We hope to improve feedback with the institution of a simple newsletter.

6. Operational Research:

At the central level, we encouraged and undertook operational research. Results were valuable in modifying and updating programme activities, identifying needs and deciding on interventions. The institution of locally-based research and evaluation helped at building a local research capacity, as well as ability to explore the local situation.

7. Logistics Systems:

While ensuring the availability of appropriate and adequate materials was always a priority, it was also one of our biggest challenges. Given our constraints, we attempted to coordinate all inputs from both government, NGO's and donor agencies.

PREREQUISITES FOR SUCCESS:

1. Effective decentralisation of the health services requires that local personnel are equipped with the knowledge and skills in programme management. Appropriate management support systems must be in place centrally and at the local level. The central level must not only delegate its authority and responsibilities to local personnel, but it must have in place management support systems to facilitate coordinated programme implementation.

2. The adaptability of strategies to the local situation and to changing priorities is crucial to programme success and sustainability.

ACHIEVEMENTS:

1. Lesotho's child survival programmes have made a significant impact in reducing morbidity and mortality due to EPI target diseases and childhood diarrhoea. We have noted over the years a steady decline in hospital admissions on account of childhood diarrhoeal diseases and selected EPI target diseases, e.g. measles has declined four-fold during the past 10 years. This has led to savings in terms of cost of hospitalisation. It has also reduced the burden of cases, allowing health workers more time to pay attention to other critical conditions.

2. As traditional child survival target diseases decline in importance, other conditions emerge as priorities, e.g. in Lesotho, ARI has now been identified as the leading cause of childhood morbidity and mortality; in response, new programme strategies have been developed.

3. Decentralisation and training have led to improved programme management capabilities at the local level. Local health workers are beginning to have ownership of programmes.

4. Improved management of health information has provided critical measures of performance and impact, and led to identification of emerging priorities.

5. Through integrated training, health workers have developed multiple programme strateiges for effective and efficient

delivery of health services without the expanding staff levels. The quality of services remains a concern as health workers are involved in implementing many programme strategies.

CURRENT CHALLENGES

1. Coordinating programme inputs to facilitate integration has been difficult, and not all local staff find it easy to re-organise for an integrated approach given perceived and real staff and resource shortages.

2. Available government and donor resources for developing child survival programmes do not always respond to the priority health problems identified locally.

3. We have difficulty generating community participation.

4. Identifying creative, longterm solutions to health financing is our overwhelming concern.

CONCLUSION

Child survival programmes have made an impact on the health of mothers and children. However, new priorities are emerging and a lot more still needs to be done to fully attain programme goals.

KEYNOTE ADDRESS,

CHILD SURVIVAL IN CAR, TODAY AND TOMORROW

J. LIMBASSA

MESDAMES ET MESSIEURS,

PERMETTEZ-MOI TOUT D'ABORD D'ADRESSER AU GOUVERNEMENT DE SWAZILAND, TOUTE L'AMITTIE DU GOUVERNEMENT CENTRAFRILCAIN POUR AVOIR AUTORISE MA PARTICIPATION ET CELLE DE 4 AUTRES COMPATRIOTES A CETTE IMPORTANTE CONFERENCE DANS CETTE TRES BELLE VILLEE ET NOTRE SINCERE GRATITUDE POUR L'ACUEIL TRES FRATERNEL QUI NOUS EST RESERVE DEPUIS NOTRE ARRIVEE.

QUANT AUX ORGANISATEURS DE LA CONFERENCE, QUI PAR SYMPATHIE POUR MOI, PARCE QUE J'EVOLUE AVEC EUX DANS LE CADRE DU PROJET CCCD DEPUIS 6 ANS M'ONT INVITE A PRENDRE LA PAROLE POUR MOUS FAIRE PART DE MA VISION DE LA SANTE DE NOS ENFANTS AU COURS DE LA PROCHAINE DECENNIE, J'IMPLORE D'AVANCE LEUR INDULGENCE DE N'AVOIR A OFFRIR A CETTE AUGUSTE ASSEMBLEE CE QUE CHACUN DE NOUS ICI PRESENT SAIT DEJA.

CEPENDANT, JE DOIS AUSSI AVOUER LE SENTIMENT DE FIERTE QUE J'EPROUVE A L'IDEE D'APPARTENIR A LA FAMILLE DE CEUX QUI, PAR LA FORCE D'UNE CONVICTION INEBRANLABLE ET D'UN DEVOUEMENT QUI N'A D'EGAL QUE LEUR HUMILITE, TRAQUENT JOUR ET NUIT LES MALADIES INFANTILES, POUR GARANTIR A L'AFRIQUE UN LENDEMAIN MEILLEUR.

VOUS CONSTITUEZ, EN EFFET, MESDAMES ET MESSIEURS, LA FRACTION INFIME, MAIS HAUTEMENT REPRESENTATIVE DE CETTE FAMILLE, DONT LA GRANDE MAJORITE DISPERSEE AUX QUATRE COINS DE NOTRE PLANETE, IGNORENT JUSQU'A LA TENUE MEME DE CETTE CONFERENCE, MAIS NE SE DEPENSE PAS AVEC MOINS DE FRENESIE POUR PERFECTIONNER LES STRATEGIES ACTUELLES OU INVENTER DE NOUVELLES ARMES PLUS PERFORMANTES POUR LA SURVIE DE NOS ENFANTS. C'EST DONC ANIME DE CETTE SENSATION DE FAIRE PARTIE D'UN IMMENSE RESEAU DE SOLIDARITE OU LES EFFORTS DES UNS S'AJOUTENT AUTOMATIQUEMENT A CEUX DES AUTRES QUE JE ME REPRESENTE L'AVENIR DE LA LUTTE CONTRE LES PATHOLOGIES DE L'ENFANT D'ICI LA FIN DU SIECLE SUR UN FOND DE CRISE ECONOMIQUE TOUJOURS GRAVE ET DE PERTURBATIONS GEOPOLITIQUES IMPONDERABLES. MA VISION S'ORGANISE AUTOUR DES ELEMENTS VISANT A:

1. CONSOLIDER LE CADRE INSTITUTIONEL DU TRAVAIL QUE NOUS AFFECTUNONS.

2. REORGANISER LES SERVICES EN VUE DE PARVENIR A UNE STRUCTURE

EFFECTIVEMENT DECENTRALISEE.

3. RENFORCER NOTRE CAPACITE DE PLANIFICATION ET DE PROGRAMMATION.

4. ACCORDER UNE PLUS GRANDE IMPORTANCE A LA RECHERCHE OPERATIONNELLE DANS NOS PROGRAMMES.

5. CONSIDERER LA GESTION COMME LE DETERMINANT FONDAMENTAL DE SUCCES DE NOS PROGRAMMES ET, A CE TITRE PRIVILIGIER LA FORMATION DES CADRES DANS LES STRUCTURES NATIONALES.

AINSI, PAR LA CONSOLIDATION DU CADRE INSTITUTIONNEL, JE VOULAIS SOULIGNER LA NECESSITE DE REFLECHIR SUR LES COMPOSANTES SUIVANTES:

1. D'ABORD LES MESURES LEGISLATIVES ET REGLEMENTAIRES:

LA PLUPART DE NOS SYSTEMES SANITAIRES SONT REGIS PAR DES LOIS OU REGLEMENTS QUI NE SONT PLUS ADAPTES AUX EXIGENCES DES OBJECTIFS DES PROGRAMMES EN COURS ET CONSTITUENT MEME PARFOIS UNE CONTRAINTE IMPORTANTE. C'EST LE CAS PAR EXEMPLE DES LOIS INSTITUANT LA GRATUITE DES SOINS DANS LES SERVICES AU LENDEMAIN DES INDEPENDANCES DE NOS PAYS, MAIS QUI CONSTITUE UN PARADOXE AVEC L'OPTION POUR LE PRINCIPE DE RECOUVREMENT DES COUTS DE SANTE DEVENU INCONTOURNABLE.

2. LA REORGANISATION EFFECTIVE DES SERVICES PERMETTANT LA DECENTRALISATION DE LA DECISION, DE L'EXECUTION DES ACTIVITES, AINSI QUE LA CONCERTATION INTERSECTORIELLE.

BIEN QUE CETTE DECENTRALISATION EST RECONNUE COMME LE PREALABLE A L'INSTAURATION DE LA PARTICIPATION COLLECTIVE OU INDIVIDUELLE AU COUT DE SANTE, ELLE MEME INDISPENSABLE POUR L'ACCELERATION DE LA MISE EN OEUVRE DE LA STRATEGIE DES SOINS DE SANTE PRIMAIRES, LES MULTIPLES CONTRAINTES A SA REALISATION RAPIDE LA RENDENT PRESQU' INCOMPATABLE AVEC LA VOLONTE DES BAILLEURS DE FONDS D'OBTENIR DES RESULTATS IMMEDIATS.

3. LA CAPACITE DE NOS SERVICES A PLANIFIER EST ET SERA SANS DOUTE ENCORE UNE PREOCCUPATION MAJEURE DE NOS ETATS, POUR DEUX RAISONS:

- L'INSUFFISANCE EVIDENTE DE CADRES COMPETENTS, MAIS AUSSI
- LE MANQUE DE CONFIANCE DES BAILLEURS EN CES CADRES DONT LE TRAVAIL N'EST ACCEPTE QU'A LA CONDITION EXCLUSIVE QU'UN CONSULTANT AGREE PAR LE BAILLEUR AIT PARTICIPE A CE TRAVAIL, CERCLE VICIEUX QUI INTERDIT TOUTE EMULATION DE SPECIALISTES NATIONAUX DANS CE DOMAINE VITAL POUR LE DEVELOPPEMENT DES PROGRAMMES

4. LA RECHERCHE OPERATIONNELLE

LA CRISE ECONOMIQUE A LAQUELLE J'AI FAIT ALLUSION NOUS IMPOSE CETTE STRATEGIE JUSQU'ICI SOUS DEVELOPPEE:

EN EFFET, LES CONNAISSANCES EPIDEMIOLOGIQUES SUR LES MALADIES CIBLES DU PROJET ACSI-CCCD ONT PEU EVOLUE. EST-CE PARCE QU'IL LEUR A ETE RESERVE UNE PLACE INSUFFISANTE DANS LES PROGRAMMES AU DEPART? JE CONSTATE POUR MA PART QUE DES RESSOURCES INSUFFISANTES LEUR ONT

ETE AFFECTEES ET CELA POURRAIT EN ETRE LA PRINCIPALE RAISON. DE CE FAIT:

- LE PROGRAMME PALU RISQUE D'ETRE COMPROMIS PAR LA RESISTANCE CROSSANTE AUX ANTIPALUDEENS
- LES VACCINS A PLUSIEURS DOSES MAINTIENNENT A UN TAUX BAS LA COUVERTURE VACCINALE DANS LES PAYS A GRANDE SUPERFICIE
- LA LUTTE CONTRE LES MALADIES DIARRHEIQUES RESTE TRIBUTAIRE DE LA DISPONIBILITE EN SRO ET EN EAU POTABLE.

IL ME SEMBLE URGENT DE RECONSIDERER LA PLACE DE LA RECHERCHE OPERATIONNELLE DANS NOS PROGRAMMES.

5. LA GESTION DES PROGRAMMES FAIT PARTIE DU MAL MAINTENANT BIEN IDENTIFIE DE NOS SERVICES SOCIO-SANITIARES. DES HOMMES D'AFFAIRS AVISES L'ONT VITE COMPRIS ET CREENT DE TOUTES PIECES DES ECOLES DE GESTION DES SERVICES DE SANTE UN PEU PARTOUT.

POUR MA PART JE PENSE TRES HUMBLEMENT QUE LA FORMATION EN GESTION, POUR ETRE EFFICACE DOIN NECESSAIREMENT S'APPUYER SUR LES STRUCTURES NATIONALES. D'OU NECESSITE DE DEGAGER LA AUSSI UNE PLACE SUFFISANTE A L'AVENIR DANS LE PROJET POUR LA FORMATION DE GESTIONNAIRES A PARTIR DE GUIDES LOCAUX.

II. EXTENSION DES INFRASTRUCTURES LEGERES POUR LA PREVENTION ET LES SOINS PRIMAIRES.

NOUS DEVONS ADMETTRE MAINTENANT QUE L'EFFICACITE DES PROGRAMMES EST ETROITEMENT LIE A LA CAPACITE DES INFRASTRUCTURES PHYSIQUES D'OFFRIR UNE COUVERTURE SANITAIRE SUFFISANTE. LES PROGRAMMES DE REAJUSTEMENT STRUCTUREL QUE S'IMPOSENT LA PLUPART DE NOS ETATS LEUR INTERDIT TOUT INVESTISSEMENT DANS LA CREATION DE NOUVELLES STRUCTURES. LA CONTRIBUTION DES POPULATIONS EST DE CE FAIT RECHERCHEE, AU MOMENT-MEME OU LEUR POUVOIR D'ACHAT EST RECONNUE

DERISOIRE. IL ME SEMBLE QUE LE PROJET DEVRA SE PENCHER SERIEUSEMENT SUR CETTE SITUATION.

III. REDEFINITION DES PRIORITES DANS LE DOMAINE DES MALADIES INFANTILES TRANSMISSIBLES.

DEPUIS LA CONFERENCE CCCD DE WASHINGTON L'IDEE DE PRENDRE EN COMPTE DEUX PATHOLOGIES MAJEURES QUI FRAPPENT NOS ENFANTS, A SAVOIR LES CARENCES NUTRITIONNELLES ET LES MALADIES RESPIRATOIRES A DEJA FAIT DU CHEMIN. LES ANNEES 90 DEVRAIENT VOIR CETTE IDEE SE CONCRETISER PAR DES PROGRAMMES OPERATIONNELS.

PAR AILLEURS, LE CONSTAT SELON LEQUEL L'APPORT D'EAU POTABLE CONTRIBUE A BAISSER DE FACON SIGNIFICATIVE LE TAUX DE MALADIES DIARRHEIQUES DEVRAIT AUSSI NOUS INCITER A RECHERCHER L'ASSOCIATION DE NOTRE PROJET ACSI-CCCD AVEC DES PROJETS D'HYDRAULIQUE, SURTOUT

POUR LES AGGLOMERATIONS URBAINES OU L'INSUFFISANCE ET LA DEFECTUOSITE DES INFRASTRUCTURES D'EVACUATION DES ORDURES DE TOUT GENRES CONSTITUENT UN RISQUE, PLUTOT UNE CAUSE PERMANENTE DE CONTAMINATION.

CONCLUSION

S'APPLICANT AU GROUPE LE PLUS PRECIEUX DE NOS POPULATIONS, LE PROJET ACSI-CCCD EST CONDAMNE A SE DEVELOPPER EN PRENANT DE PLUS EN PLUS EN COMPTE LES PROBLEMES CRUCIAUX DE CETTE CIBLE. IL CONVIENDRAIT DONC D'UNE PART D'EVITER UN DERAPAGE PAR UNE EXTENSION TROP RAPIDE DE SON DOMAINE D'ACTION, ET D'AUTRES PART DE MIEUX MAITRISER LE CADRE DE SON APPLICATION POUR PERMETTRE AUSSI BIEN LA PRISE EN COMPTE DE NOUVEAUX PROGRAMMES QUE L'INTERATION CALCULEE AVEC D'AUTRES PROJETS A EFFETS SYNERGIQUES.

PROGRESS TOWARD TARGETS

PRESENTED AT

FIFTH CCCD CONSULTATIVE MEETING

EZULWINI, SWAZILAND

APRIL 2, 1990

BY

STANLEY O. FOSTER

CENTERS FOR DISEASE CONTROL

ATLANTA, GA 30333, USA

Initiation of this technical meeting with a session on health information, more specifically a session on targets, is symbolic of the great progress you and your colleagues are making in the collection, analysis, and use of data. Congratulations.

However, the challenge of this meeting is not only to celebrate achievements but to look realistically at the work not done. To do this we need to answer four basic questions:

Where did we start?
Where do we want to be?
Where are we now?
If we are not where we want to be, why, and what can be done about it?

Based on what we have learned together over the last five years, setting of targets and monitoring of results are required in 5 areas.

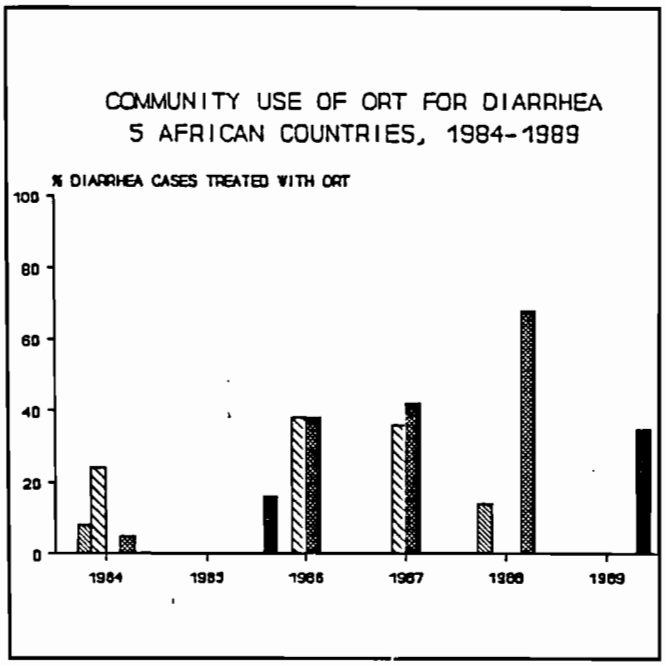
Community Health Behavior
Coverage
Quality
Morbidity and Mortality Reduction
Child Survival and Child Health

In this presentation 1-2 examples will be provided for each of the five areas.

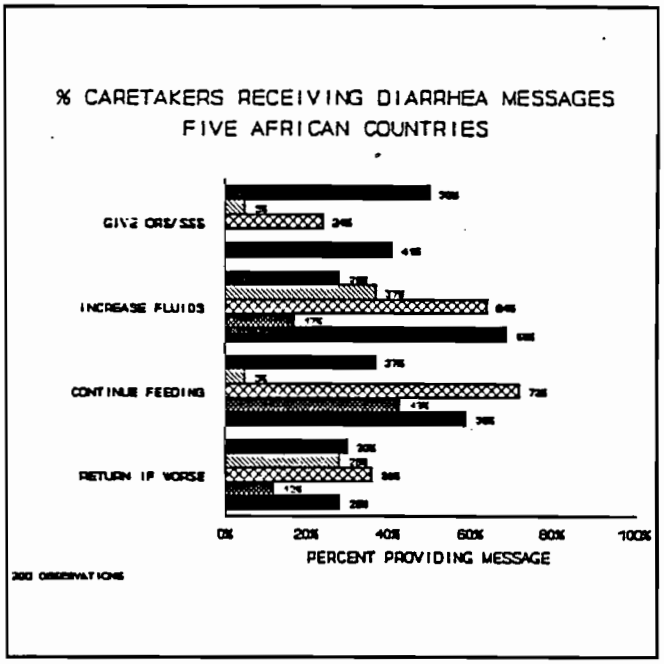
FIRST, COMMUNITY HEALTH BEHAVIOR

What is happening in the community with diarrhea, with fever, with cough and rapid breathing? What should people be doing? TARGET! What are they doing? INDICATOR!

Globally, regionally, and nationally we have targets for home treatment of diarrhea with fluids to prevent dehydration - for example - 50 %. How are we doing?



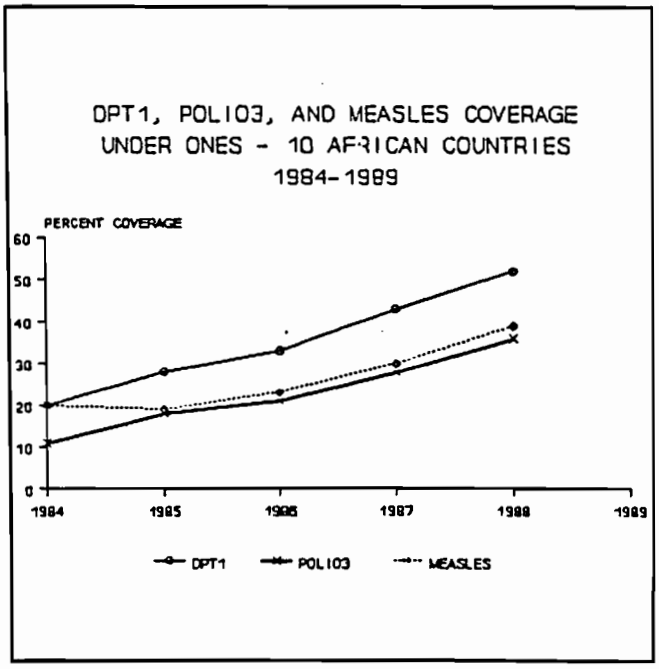
This graph summarizes results from community surveys. With one exception, all surveys are below the 50% target.
Why have we not made our target? Are we informing mothers that fluids are important? how to mix? how much to give? Data from 5 country practice surveys indicate major deficiencies in health worker communication to mothers.



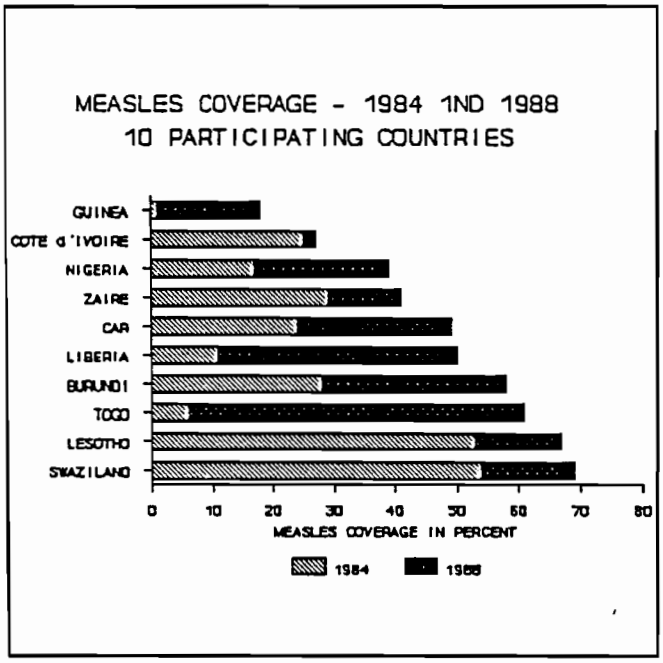
How do we improve health worker communication skills? What other constraints are limiting home use of ORT.

SECOND, COVERAGE

The second group of targets is coverage. What percentage of children and mothers in need of services are receiving them, in the home in the community, or in a health facility? Africa has set a goal of 75% immunization coverage for 1990, TARGET 75%. For the 10 countries participating in CCCD progress has been made, but not enough.



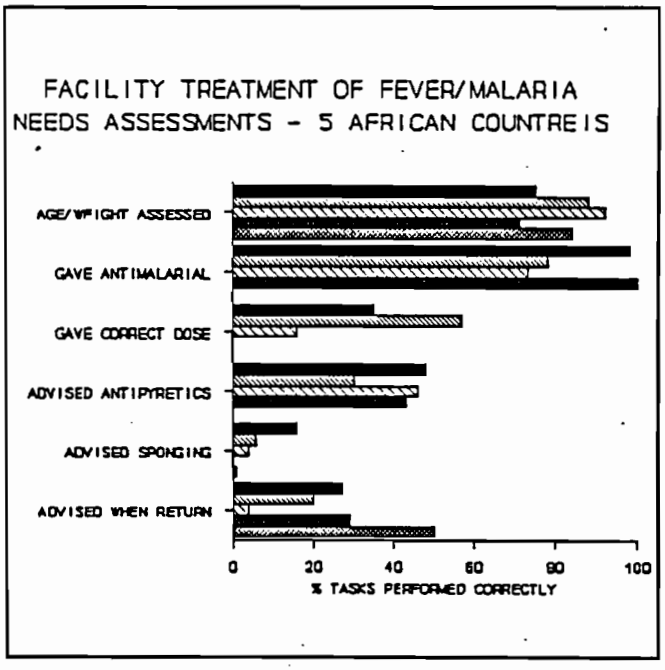
Aggregate data at the regional level or the country level masks individual differences. Some countries are close to their targets others have away to go.



Why has the 75% target not been achieved In all countries? Lack of political support? Lack of access? Lack of a functioning refrigerator, lack of vaccine, and lack of health worker motivation, or poor community mobilization. What is the problem? How do we solve it?

THIRDLY, QUALITY

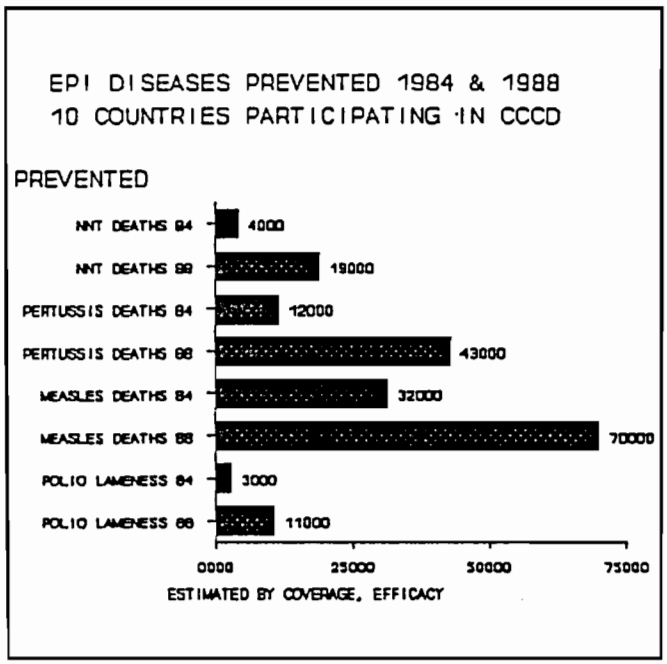
Coverage is not enough. Quality makes coverage work. If we make the wrong diagnosis, prescribe the wrong drug, incorrectly inform the mother on what to do and how to do it, poor quality, coverage won't work. Perhaps the single most important legacy of our experience together is the shift in training strategies to measuring worker performance, identifying problems, and providing corrective training. For malaria, we have a target of 90% effective case management at health facilities. As can be seen in the graph below, performance has not yet reached the target.



Malaria is an increasing cause of Mortality in Africa. Mortality reduction requires effective case management. What is needed to improve case management?

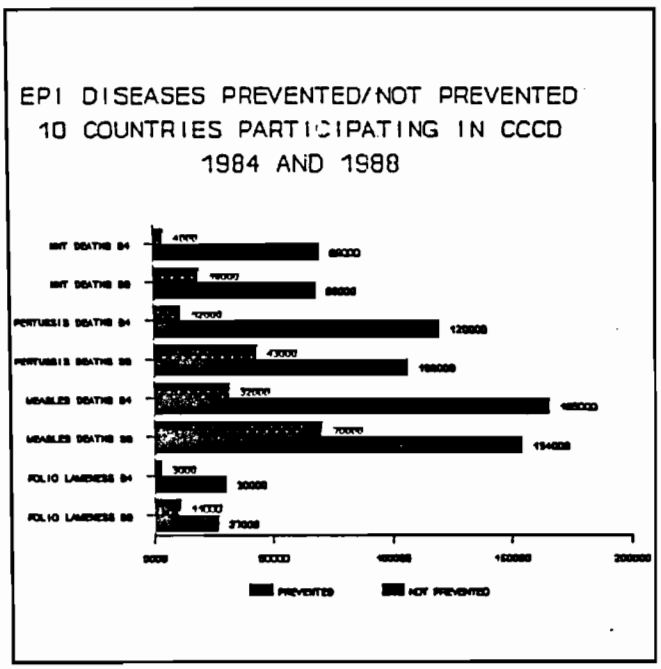
FOURTHLY, DISEASE REDUCTION

Coverage and quality does not ensure that deaths will be prevented or that diseases will be cured. If measles vaccine is given after disease, it doesn't work. If we give the correct dose of chloroquine to a child with malaria and the Plasmodium falciparum is resistant to chloroquine, the child will die. We can't assume results. Are we achieving our morbidity and mortality reduction targets. For the 10 countries participating in CCCD, it is possible to estimate mortality prevention for neonatal tetanus, pertussis (coqluche), and measles (rougeole), and polio residual paralysis for the years 1984 and 1988 Significant disease reduction have been achieved.



Estimates use national population data, WHO figures on disease specific morbidity and mortality, and field data on vaccine efficacy. How good are these estimates? Surveillance data to be presented this week suggest that reductions may in fact be greater than those presented in the graph. Sounds good, yes. Congratulations in order, yes. But, what was our target? Most countries are aiming for reductions of 50%.

If we compare numbers prevented and not prevented, we see the 50% reduction target has not been achieved.



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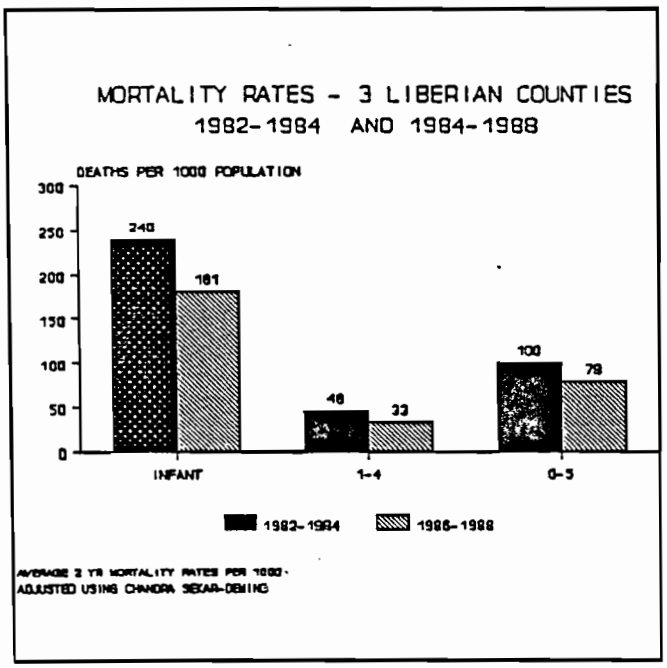
Why? What can we do about it?

LASTLY, CHILD SURVIVAL AND CHILD HEALTH

Our ultimate objective is to improve child survival, child health, and quality of life. CCCD has a mortality reduction target of 25%. Several years ago, the Kasongo team in Zaire, suggested that replacement mortality, deaths from other causes, would cancel out the benefits of interventions, specifically measles vaccine.

In an attempt to answer this question Ministries of Health in Liberia and Zaire with assistance from CCCD have carried out surveys to assess mortality and use of health services. While the Zaire data is still being analyzed, the Liberia data show a 20-25% decrease in mortality.



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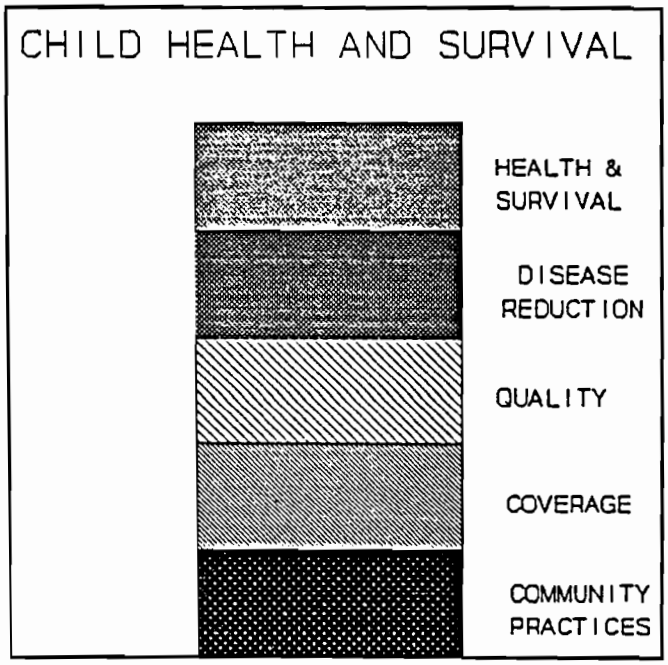
This has occurred in the presence of a modest 20-40% increase in immunization coverage. Although it is not possible to say assuredly that the fall in mortality is do to the increased levels of services, the trends are compatible.

As I prepared this presentation, I was struck by the similarity of the five target areas to a five story building. Our goal, our target is improved child survival, improved child health, the top floor. Its achievement is dependent on the integrity, the effectiveness of the floors below:



All Floors are essential to improved child health in Africa. 8Child health will not come from assumptions, it will come from setting targets and measuring results for each floor. When targets are not met, questions need to be asked, alternative strategies need to be tested.

In conclusion, I leave you with two comments:

1. You, your ministries of health, your health workers, your communities have made progress, you have data to prove it, congratulations.
2. The job is not yet done. Children are suffering and dying from preventable morbidity and mortality. Setting targets, measuring results, asking questions, and finding better ways of doing things hold the answers.

THANK YOU

"HOSPITAL-BASED SENTINEL SURVEILLANCE: LIBERIA"

Dr. Moses K. Galakpai, M.D.
Deputy Chief Medical Officer
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Mr. Jallah Gouwan
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ABSTRACT

Like many developing countries, Liberia has experienced serious difficulties in the collection and management of health information. Lack of trained manpower, poor logistics support, and inadequate feedback contribute to the problem. In 1989, with the assistance of CCCD, Liberia took a first step towards improving its overall Health Information System by establishing a Sentinel Hospital Disease Surveillance System. This system uses an EPI-INFO based computer program that allows hospitals to enter basic patient information such as name, age, sex, service (Pediatric, Ob-Gyn, Adult Med-Surg), diagnosis and discharge status. Routine reports summarizing this information in tables and graphs can be generated automatically on a monthly, quarterly and annual basis. During 1989, six hospitals pilot-tested the program. Information on 22,478 patients (25% Pediatric, 31% Med-Surg and 44% Ob-Gyn) was submitted to Central Bureau of Vital and Health Statistics. Analyses of these data have provided useful information on the most common pediatric discharge diagnoses, disease-specific case fatality rates, patient age and sex distributions, average numbers of days of hospitalization for different hospitals, and disease trends by month. While use of this program requires a significant amount of training and supervision at both the Central and hospital levels, it has afforded Liberia its first opportunity to manage and analyze a large inpatient database.

"HOSPITAL-BASED SENTINEL SURVEILLANCE: LIBERIA"

Before beginning this presentation, I would like to acknowledge the presence at this meeting and contribution of Mr. Jallah Gouyan, Statistical Analyst, at the Bureau of Vital and Health Statistics.

SLIDE 1

Liberia, located along the west coast of Africa, has a population of approximately 2.5 million and occupies an area of about 43,000 square miles. The country is divided into 13 counties. Approximately 500,000 people live in Monrovia, the capital city. Liberia's health delivery system consists of 32 hospitals, 43 health centers and about 270 clinics. Approximately 45% of the total population has access (that is, lives within a 5 mile radius) to a health facility.

Like many developing countries, Liberia has experienced serious difficulties over the years in the collection and management of health information. Poor logistics support, lack of trained manpower, inadequate supervision, lack of standardized report forms, and the virtual absence of feedback from central to the county level have resulted in a system characterized by gross under-reporting, inaccurately filled out forms and oftentimes misdiagnoses.

In 1989, with the assistance of CCCD and Dr. Richard Spiegel from the Centers for Disease Control, Liberia took a serious look at its overall Health Information System.

SLIDE 2

This slide shows the major types of information which together make up a Health Information System:

- Outpatient data (from both hospitals and clinics)
- Inpatient data (from hospitals), and
- Information from surveys, outbreak investigations, censuses, and other special studies

As a first step toward improving HIS in Liberia, we chose to focus on improving hospital inpatient reporting.

SLIDE 3

The PURPOSE of this presentation is to share with you Liberia's experience in establishing a computerized Hospital-Based Sentinel Surveillance System. I will describe how the system evolved, present information collected during 1989, and conclude with a discussion of future plans and issues relating to sustainability.

SLIDE 4

Our efforts to build a sentinel surveillance system began with field trips to major hospitals in Monrovia and nearby counties. Through these visits, we found six hospitals (designated by the red numbers on this map) which had a functional computer and personnel capable of performing basic data entry. Most importantly, each of these hospitals had been looking for a computer program suitable for managing routinely collected inpatient data.

SLIDE 5

Based on input from hospital directors and medical records personnel, a program for entering and analyzing inpatient data was developed. This program uses EPI-INFO software and allows hospitals to enter the following information on each patient: Name, Medical Record Number, Age, Sex, Service (Pediatric, Ob-Gyn, Med-Surg), Primary Diagnosis and Outcome.

Routine reports summarizing the above information in tables and graphs can be generated automatically on a monthly, quarterly and annual basis.

During 1989, the Bureau of Vital and Health Statistics trained personnel from each of six hospitals to pilot test this program. I shall now present data collected during this pilot year.

SLIDE 6

Information was collected on 22,478 patients admitted to six hospitals during 1989. It should be noted that this total reflects data available as of January 1990 and represents varying numbers of months of reporting for the different hospitals. Pediatric cases (which include children under age 15) accounted for 25% of all admissions. Adult Med-Surg patients accounted for 31% and Ob-Gyn patients accounted for 44% of all admissions.

SLIDE 7

Shown here are the ten major causes of hospitalization for ALL patients. Normal deliveries, malaria, anemia and ARI are among the most common. Since CCCD's primary focus is on childhood diseases, the remainder of my presentation will focus on pediatric admissions only.

SLIDE 8

The seven most common pediatric diagnoses are Malaria, Anemia, ARI, Measles, Malnutrition, Neonatal Tetanus and Diarrhea. While diarrhea and malnutrition rates may seem low, remember that this slide shows PRIMARY diagnoses. Many malaria admissions, for example, will have diarrhea and/or malnutrition as secondary and tertiary diagnoses.

SLIDE 9

Although the number of malaria admissions is high, the case fatality rate is relatively low, at about 3%. On the other hand, neonatal tetanus admissions are low in number but the case fatality rate is high, at 57%. Approximately one in five children admitted with measles, and one in three with malnutrition, die in the hospital.

SLIDE 10

Pediatric case fatality rates are higher than case fatality rates for Obstetric and Gynecologic cases and Adult Medical and Surgical patients. Case fatality rates also vary by hospital, with JFK (a large government referral hospital in Monrovia) having the highest case fatality rates, especially notable in the pediatric and the adult medical and surgical wards.

SLIDE 11

Here we see the age distribution of pediatric malaria cases. Among the pediatric malaria cases, children over two years of age are more highly represented than those under two years of age.

SLIDE 12

In contrast to malaria, admissions for acute respiratory infections are greatest among children under one year of age.

SLIDE 13

The majority of diarrhea admissions also occur among children under one year of age.

SLIDE 14

Here we see the number of measles cases by hospital. Routine data of this nature collected over time will provide useful trend data and epidemiologic information, without requiring the initiation of special studies. Measles admissions at Catholic Hospital in Monrovia, for example, show no major difference from 1988 to 1989.

SLIDE 15

This graph, showing malaria admissions by month, clearly demonstrates the seasonal pattern of malaria in Liberia. Peak incidence occurs during rainy season, from July through October.

SLIDE 16

In summary, we have found this system to be extremely useful and relevant to the information needs of Liberia's health delivery system. Information generated is important for planning, monitoring and policy making purposes. Use of computers is an appropriate technology and is essential for handling large amounts of data. Finally, Liberia is fortunate in that many of our major hospitals are mission or concession hospitals which have the necessary support to maintain computer hardware. This gives us a greater degree of assurance that the system will be sustainable over time.

SLIDE 17

Based on our experience during 1989, the hospital EPI-INFO program has been modified to include THREE diagnoses and to allow for the collection of additional information on certain childhood diseases such as smear positivity rate for malaria, dehydration status for diarrhea, and vaccination status for measles. Of course, training and supervision at both Central and the hospital level will continue and production of a quarterly feedback bulletin to all health facilities is planned.

SLIDE 18

During 1990, the system will be expanded to include hospitals in the rural areas (as shown in this slide) in order to improve representativeness.

SLIDE 19

To ensure the sustainability of this computerized hospital surveillance system, trained personnel and necessary computer hardware and software support must be available. We have been encouraged by the high level of motivation among hospital personnel and look forward to additional support from both government and the donor community as we continue our efforts.

SLIDE OFF

I thank you for your kind attention and now welcome any comments or questions you may have.

AFRICAN CHILD SURVIVAL INITIATIVE CONFERENCE

APRIL 2, 1990

PAPER:

HEALTH INFORMATION SYSTEM SWAZILAND

BY

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Under Secretary
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Mbabane
Swaziland

INTRODUCTION

H.I.S. IN THE MANAGEMENT OF HEALTH CARE

The objective of introducing H.I.S. into health programme management is to improve the quality of the information availabe. Information can be used to assist management in policy formulation, planning, budgetting, programme implementation and evaluation.

Informatics on the other hand reduces problems of inaccuracy, incompleteness and unavailability of data transcription errors, and delay that occurs in manual management systems.

Computerized H.I.S. allows the aggregation of data from many sources, the analysis of large volumes of data in a short time and increased effciency of collection, validation, storage, retrieval, presentation and distribution of data.

Information can be used to support the managerial routines and the day to day operations of health care organizations, contributing to overall efficiency and effectiveness.

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MOH SWAZILAND'S HEALTH INFORMATION SYSTEM

FROM THE BOTTOM UP

E.M. HLOPHE

March 29, 1990

1. HISTORY OF THE STATISTICS UNIT

In November, 1978 World Health Organisation (WHO) provided a consultatant to the Ministry of Health (MOH) to discuss the development of a Health Information System, and in mid- 1979 the first long-term consultatant arrived to work at the Central Statistics Office Department of Economic Planning and Stistics for developing MOH's Health Information System (HIS) capacity. In October, 1979 the MOH decided to move the Health Statistics Office from Central Statistics to the Ministry of Health, and six months later (April, 1980) the first HIS trial was begun in the Ministry. At this time, the HIS was a central MOH effort with little if any Regional direction or involvement. The system was primarily geared towards the processing of inpatient data.

January, 1981 saw the introduction of the HIS Into Shiselweni and Lubombo regions and a MOH statistician was appointed in May of that year. By November of 1981 all four regions were active in the new HIS. The first report on inpatient statistics was published in April,1982.

Computerization of the HIS Began on January, 1983 with the arrival of two SERIUS computers. Programs were written in the BASIC language by an expatriate consultant between February and November, 1983 with computerized statistical reports being the output of the system.

In 1985 the last expatriate consultant left and the system was fully operational and included several components:

1. inpatient data entry and reporting;
2. outpatient data entry and reporting -EPI, morbidity, antenatal care, family planning;
3. notification of selected communicable diseases;
4. monitoring of mother and child health;
5. village health worker reporting form; and
6. facility information list - all types.

All parts of the system were computerized at this time. with the Statistics Unit being part of the Planning Unit and the Statistician reporting to the Health Planner.

In 1984 the data entry programs were altered to a dBASE II format still using the SERIUS computers with a non-DOS operating system. In 1985 the SERIUS computers were replaced with IBM PC's using dBASE II and then dBASE III. Since the operating systems were incompatible date entered in the SERIUS computers were not easily available to the Statistics Unit for analysis.

By the end of 1986 both the Health Planner and Statistian had returned from the US with Master's degrees to take up their respective roles vis a vis the information system.

2. ISSUES IN IMPLEMENTATION

Even though the system was fully operational in 1985, it was particularly sensitive in several areas, namely on issues related to manpower, hardware and software, system maintenance, data quality and data use.

2.1. Manpower

Few people in the MOH were trained in the use of computers, how the system operated and how to maintain the system. Early on it was evident that the supervisors (e.g., Statistician and Health Planner) knew less about the system than the Statistical Clerk, compromising their ability to supervise the implementation of the system.

Reliance on international technical assistance was so great that when the system failed, nobody internally was able to maintain the system. No MOH Swazi staff or local computer company was able to help. This, coupled with the lack of transport and supervisory staff made it difficult to oversee the operation of the system.

2.2. Hardware and Software

Computerization of the system was appropriate at the time, however the use of a non-standard hardware and software configuration made later access to data difficult and ultimately impossible. Later efforts were made to standardize on IBM PC compatibles and dBASE as the data base program of choice because of its widespread use in Swaziland.

Development of the system initially included procedures for data backup, storage and retrieval. These procedures failed immediately following departure of the technical assistance and have been difficult to implement since. Techniques of data base management data storage and hard disk management were not adequately taught and so only partially implemented. This compromised data base integrity and has affected historical data quality.

Finally, training in dBASE programming was done for one person in the Statistics Unit. When that person left the MOH there was no person who could maintain the system if there were problems.

2.3. System maintenance

The system was initially documented well in 1983. As program policies changed, i.e. EPI schedules, the forms changed without changes in the documentation. At present the HIS system is very out of date. Historicla records of forms also was not maintained making access to the data more difficult.

2.4. Data quality

Overall, data collection in facilities has been exceptionally good. With little supervision and support clinic nurses have continued to report. After nearly 5 years, still well over 50% of the clinics are reporting.

What hasn't been done, however, is to assess the quality of the reported data. Are nurses diagnosis appropriately? We now must find out.

2.5. Date use

One of the weakest areas of the system over the past 5 years has been the use of data. The last MOH report was for 1986 with the report prior to that being for 1984. Data are not currently being used for management or decision making and skills in data use are limited in the MOH management cadre. Although attempts were made to upgrade these skills (for example a one day course in descriptive epidemiology was given by CCCD & PHC Projects) this was an isolated case.

The feedback to the reporting units has also been limited. Nurses were taught how to draw graphs from data they collected but systematic feedback and inter-facility comparisons were few and far between.

All of these factors influences what happened to the system between 1985 and 1988 when steps were taken to repair the system.

3. HIS SYSTEM FROM 1985 TO 1988

Between 1985 and 1988 the system collapsed. The Statistical Clerk, Assistant Statistical Clerk and MOH Statistician left the Ministry of Health. The PHC Project employed two full time people to continue, sporadically, data entry efforts. The majority of reporting units ceased reporting, feedback to reporting units became erratic and finally non-exisistent, glitches in the computer programs or small changes to the original files caused the computerized data entry, editing and reporting programs to collapse and lack of supervision of reporting of communicable diseases caused that system to cease functioning. This all occurred in spite of the fact that the MOH placed high priority on continuation of the HIS.

In early 1988 an assessment of the system was undertaken by the PHC Project to assess its status and to make plans for putting it back on its feet. It was not until mid 1989 that efforts got underway for system improvements.

4. HIS AND THE MOH'S EMPHASIS ON DECENTRALIZATION

During the years 1984 - 1988 the Ministry of Health embarked on a system of decentralization and regionalization. Authority and responsibility for many aspects of the Ministry's operations was slowly divested from the central level and placed at the regional

level under the guidance of Regional Health Management Teams (RHMT's) headed by well trained Regional Health Administrators.

Initially the Health Information System was not part of decentralized functions, Data entry, editing and reporting continued to be under the control and supervision of the Health Planner and Statistician. Data entry was carried out at the MOH Headquarters with completed forms sent directly from the reporting facility, bypassing the RHMT's, to the Planning and Statistics Unit. The result was that RHMT's were not aware of the volume and type of services provided at a given facility and reports, which became nonexistent, did not provide them any information withwhich to take management action.

5. STEPS TOWARDS CORRECTING THE PROBLEMS AT HAND

In July 1988 the Principal Secretary of the Ministry of Health agreed that the Health Information System be placed as high priority for attention and that the system be made operational again. At that time as the new Under Secretary for Health, I gave initial priority to improving outpatient reporting. For this reason I'll speak below only about the outpatient reporting system. I strongly felt the need to have a data base for management decision making and that the HIS could provide the needed data. I also felt that regionalization of the HIS would provide an opportunity to bring data down to the level where timely decision could be made.

With assistance from teh PHC and CCD Projects we outlined how we would proceed. Our intent was to make changes in teh HIS which would:

1. Strengthen and improve the institutional framework qualitatively provide readily understandable information for people unfamiliar with tabular presentation of data. Re-organise the control of Statistics Unit reporting to the U.S. as opposed to the Health Planner.

2. reduce time of data collection time in facilities.
3. be implemented regionally through the RHMT with a strong central supervisory unit for more rapid feedback to reporting units.
4. maintain, to the extent possible, current forms;
5. be computerized in order to systematize and automate the reporting back to reporting units and the RHMT but which would simplify and speed up data entry, editing and reporting program.
6. establish a core data set selected from data already collected and which would include more than counts of occurances of problems (i.e., indicators of productivity and timeliness of service provision).
7. be based on case definitions for morbidity reporting and other definitions which would affect reported data, e.g., first and re-visit definition.

We also, during the computerization process, made sure to install standard software and computers compatible with those already in the MOH Statistics Unit.

5.1. Providing Readily Understandable Data

The old system provided data which was tabular in format. Experience with clinic nurses indicated that they found it difficult to understand and interpret data this way. Historically nurses were provided training on how to construct graphs of their data. This proved time consuming and infrequently reinforced or followed-up. In addition, these graphs were not compiled or reported upward in the system, so the RHMT had no access to these data.

Because of this, an effort was made to use a computer program with built in graphics capability but which also was easily learned by low level MOH employees who would be entering data and producing reports. LOTUS 1-2-3 was chosen. Each clinic had a predefined range in the spreadsheet and predefined graphs. As data were entered into the appropriate cells in the spreadsheed the graphs were updated automatically.

Simple macros were used to save the updated graphs for printingand for consolidation of clinic data into a regional summary and for producing the monthly regional summary report. Printing of graphs was easy using LOTUS's print graph function.

One advantage of using a spreadsheet for data entry was the ease by which one could relate two different data counts to produce performance indicators. For example, the ratio of DPT 1 to DPT 3 vaccinations gives one a simple indication of the completeness of immunizations given to the target population and the extent of drop outs. This ratio, in LOTUS, can be graphed and trends followed visually.

5.2. Reducing the Time for Data Collection

Collection of service-specific data was done on tally sheets and summarized onto a monthly summary sheet. The summarization process proved time consuming taking up to one full day per month. Forms were modified to reduce the amount of time needed to summarize data monthly and reduce the amount of error inherent in transferring data from one form to another. The amount of time to produce a facility monthly summary has been reduced by more than one half.

5.3. Providing Rapid Feedback

The system developed as mentioned above, included the capacity to produce a report by facility for each month. Data were set up in a

simple row and column format and printed manually or through a simple macro referencing range names or co-ordinates. Our experience indicated that the RHMT monthly summary was the most frequent report produced even though the system could support more specific clinic feedback. The lack of use of system capacity was related primarily to infrequent supervisory visits to the facilities and the lack of understanding on the part of supervisors about how to use these data as part of their routine supervisions.

In our over one year of experience with two regions there were no requests by the MOH for more extensive data analysis nor alternative types of reports. The lack of experience and low level of sophistication on the part of the RHMT's and MOH Headquarter's staff in date use was evident.

Graphics were critical to the understanding of the data. For example, although misreporting of polio cases and cases of neonatal tetanus was common for several years, it was not until a graph of critical communicable diseases revealed several cases of these diseases that the RHMT investigated and found misreporting.

5.4. Using Current Forms for Reporting

From the beginning we tried not to alter current forms. Initially, the only alteration was to have the forms sent to the RHMT at the regional level. From these forms we took only certain selected information which was derived (see core data set below) which was entered into the computer.

Although some modifications of the form were necessary to simplify summarization, the basic format and layout of the forms did not change.

5.5. Standard Definitions

As part of the reform process we felt that difinitions should be

standardized. For example, the definition of new and re-visit for morbidity should be the same as new and re-visit for family planning. During this process we developed the first set of definitions for morbidity and family planning. Much yet needs to be done but this initial start has been well received.

5.6. Computerization

Each RHMT, which has responsibility for managing regional health services, was provided by a computer donated by either the CCCD Project Staff at the central and regional levels were trained in use of the computer and use of standard software (DBASE, lotus, word processor). The regional data systems were initially using LOTUS but recently converted, with recent changes in forms, to a dBASE system. With the latter, graphics are not possible however each Regional Information Officer is capable of taking system output and putting data into LOTUS predefined graphs.

6. LESSONS LEARNED

We have learned several lessons which I will briefly outline below:

6.1. Complexity

The system should be only as complex as people are able to handle. If the MOH has the capacity to implement a complex system and maintain it, it is appropriate. If not, reduce the level of complexity. A LOTUS-based system was simple with poor data management capacity, but people could understand it and fix problems which they occurred. The new system is error prone and too complex for the Regional Information Officers to understand and fix.

The level of complexity also depends on the technical backstopping

at the central MOH level We have been using local technical assistance and this has worked out well. What we do not have is internal capability to fix the system if it goes down.

6.2. Graphics

Graphics have proven to be a useful part of the system. Again, given the data base limitations of LOTUS, we felt that the transition from LOTUS to dBASE was appropriate. However, it is not a two step process to put data into graphics form. Use of graphics should continue to be encouraged.

6.3. Indicators not just counts

The use of indicators for timeliness of service, productivity of staff and so on was a good idea and appropriate but not well understood by the RHMT's central planning unit. Counts of data, i.e., monthly morbidity counts, are useful for trend analysis but only when combined do they provide information more useful for decision making. Work needs to be done to develop a core set of indicators for use by management, and training management to use them.

6.4. Standard soft and hardware

It goes without saying that systems should be compatible not only in operating systems (e.g., DOS) but also software. Even standardizing of computer and printer types is essential.

6.5. Regionalization

Regions, in Swaziland, are capable of implementing a decentralized HIS. Simple systems are appropriate with limited output. What is lacking, however, is the sophistication of the RHMTs in making use of the data that such a system produces.

6.6. Personnel

Trained personnel specific to the task of implementing a regional and central HIS are critical to its success. The cost of training staff in computer use and report generation is high. If clinical staff, i.e., nurses, are used for HIS purposes and they are transferred away, it is a loss which is hard to replace. Personnel do not have to be highly skilled, just intelligent, motivated and available for the specific task. The Ministry of Health needs epidemology urgently. We are expecting one from training in the USA in 1990.

6.7. Statistics Unit

A strong and skilled staff in the MOH Statistics Unit is essential. These staff must maintain, repair and supervice implementation of an HIS. We started at the regional level and have worked up to an improved national system. In many ways two of our regions are ahead of our central Statistic Unit's capacity to maintain a system. Resources dedicated to upgrading our central Statistics Unit are necessary to maintain our system.

7. NEXT STEPS

In implementing our current system it is obvious what steps are now necessary. They are:

a. documenting and archiving historical data sets;

b. developing and documenting the system and how it operates including documentation of software applications developed exclusively for our HIS.

c. Provision/strengthening and training Statistics Unit staff in operating, maintaining and supervising the

the system is a high priority.

d. developing skills of regional and central managers in use of data for management decision making.

e. developing general computer skills on the part of central MOH personnel to effectively use the computing power which we now have in the Ministry before we expand efforts further.

f. recognizing the need for quality data; we need to conduct research on the reliability and validity of the data we are collecting.

We have many things to do before the PHC and CCCD Projects are completed. We hope that this collaboration continues so that by the end of 1990 we had a well functioning regional and central system capable of being maintained by the MOH.

ESTIMATION DE LA MORTALITE CHEZ LES ENFANTS DE O A 2 ANS A LA MATERNITE DE CASTORS A BANGUI, R. C. A.

PRESENTE PAR: BOBY AIME MOISE

1. INTRODUCTION

LES PAYS EN DEVELOPPEMENT SONT CONFRONTES AUX PROBLEMES DE SANTE DONT CELUI DE LA MORTALITE.

CEPENDANT, LE PROBLEME DE LA MORTALITE INFANTILE PREOCCUPE PARTICULIEREMENT LES GOUVERNEMENTS ET LES ORGANISATIONS INTERNATIONALES QUI ONT TOUJOURS APPORTE LEUR SOUTIEN AUX PROGRAMMES NATIONAUX DE LUTTE CONTRE LES MALADIES TRANSMISSIBLES DE L'ENFANCE DANS DIVERS PAYS DU MONDE.

C'EST DANS CETTE OPTIQUE QUE L'U.S.A.I.D., PAR LE BIAIS DU PROJET CCCD INTERVIENT DANS DES PROGRAMMES DONT LE BUT VISE A REDUIRE LA MORBI- MORTALITE DES ENFANTS DE O A 5 ANS. CE SOUTIEN S'APPLIQUE ESSENTIELLEMENT A LA LUTTE CONTRE:

- LES MALADIES COUVERTES PAR LE (P E V) PROGRAMME ELARGI DE VACCINATION.
- LES MALADIES DIARRHEIQUES,
- LE PALUDISME.

LA REPUBLIQUE CENTRAFRICAINE EST L'UN DES PAYS OU LES TAUX DE MORTALITE INFANTILE ET JUVENILE RESTENT LES PLUS ELEVES EN AFRIQUE. NOUS AVONS RECAPITULE DES EXEMPLES SUR CE TRANSPARENT.

TRANSPARENT 1

COMMENTAITRES: CE TABLEAU PRESENTE LA SITUATION EN AFRIQUE OU LA MOYENNE DE DECES ENTRE 1980 ET 1985 EN RCA EST DE 142/1000 CHEZ LES MOINS D'UN AN ET DE 240% CHEZ LES ENFANTS DE O A 5 ANS.

DES METHODES D'ENQUETE ONT ETE MIS AU POINT DANS LE MONDE POUR MESURER CES TAUX DE MORTALITE CHEZ LE ENFANTS DE O A 2 ANS. JE CITERAIS PARMI LES METHODES CONNUES:

- LES REGISTRES D'ETAT CIVIL
- LES RECENSEMENTS
- D'AUTRES SOURCES D'INFORMATIONS

CES METHODES DITES TRADITIONNELLES PRESENTENT BEAUCOUP D'INCONVENIENTS CAR ELLES SONT SOUVENT INSUFFISANTES ET DIFFICILEMENT REALISABLES.

ON A ALORS CHERCHE A DEVELOPPER D'AUTRES METHODES PLUS SIMPLES.

C'EST AINSI QU'AU DEBUT DES ANNEES 1980, BRASS ET MACRE ONT MIS AU POINT UNE METHODE SIMPLE ET MOINS ONEREUSE PERMETTANT DE COMBLER CES LACUNES.

RECONAISSANT L'IMPORTANCE DU PROBLEME ET LA NECESSITE DE DISPOSER DES DONNEES FIABLES EN VUE DE SUIVRE L'IMPACT DU PROGRAMME EN RCA, LE MINISTERE DE LA SANTE PUBLIQUE ET DES AFFAIRES SOCIALES A ORGANISE UNE ENQUETE SIMILAIRE A BANGUI, AFIN D'APPRECIER LES TENDANCES DANS LA CAPITALE CENTRAFRICAINE. LES RESULTATS AINSI OBTENUS SERVIRONT DE DONNEES INITIALES POUR DES ETUDES AVENIR ET LA MISE AU POINT DES STRATEGIES DE LUTTE.

II. OBJECTIF DE L'ETUDE

TRANSPARENT 2

DETERMINER LES TAUX DE MORTALITE CHEZ LES ENFANTS DE O A 2 ANS, EN RECUEILLANT DES INFORMATIONS SUR LES NAISSANCES PRECEDENTES AUPRES DES MERES VENUES ACCOUCHER A LA MATERNITE DE CASTORS A BANGUI DE MAI A JUILLET 1989.

III. METHODOLOGIE

TRANSPARENT 3

L'ENQUETE S'EST DEROULEE A LA MATERNITE DE CASTORS.

C'EST L'UNE DES TROIS PRINCIPALES MATERNITES DE LA VILLE QUI ENREGISTRE ENVIRON 9000 ACCOUCHEMENTS PAR AN, SOIT 47% DU NOMBRE D'ACCOUCHEMENTS DANS LA VILLE.

L'ECHANTILLONNAGE A PORTE SUR TOUTES LES FEMMES VENUES POUR ACCOUCHER.

LA METHODE UTILISEE EST CELLE DE BRASS ET MACRAE.

POUR LA COLLECTE DE DONNEES, 6 ENQUETEURS 'ET 2 SUPERVISEURS ONT INTERVIEWE LES MERES SOIT AVANT SOIT APRES ACCOUCHEMENT.

TRANSPARENT 4

L'ANALYSE DES DONNEES A ETE FAIT SUR ORDINATEUR EN UTILISANT LA FORMULE CI-APRES:

TRANSPARENT 5

IV. RESULTATS

TRANSPARENT 6

SUR 1562 FEMMES INTERVIEWEES, 74,6% SONT DES MULTIPARES. ES PRIMIPARES QUI REPRESENTENT 25% DE L'ENSEMBLE SONT EXCLUES DE L'ETUDE AU MOMENT DE L'ANALYSE.

L'AGE MOYEN DES MERES AYANT ACCOUCHE PRECEDEMMENT SE SITUE A 23 ANS ALORS QUE LA MOYENNE DES INTERVALLES DE NAISSANCES EST A 29 MOIS AVEC UNE LEGERE HAUSSE ENTRE 18 ET 24 MOIS.

TRANSPARENT 7

S'AGISSANT DE LA REPARTITION DE CES MERES PAR AGE ET PARITE, NOUS CONSTATONS UNE FREQUENCE ELEVEE PARMI CELLES QUI SONT AGEES DE 20 A 24 ANS. LA PARITE MAXIMUM SE SITUE ENTRE 2 A 3 NAISSANCES, DONC PARMI LES JEUNES MERES. LES RESULTATS OBTENUS A BANGUI SONT COMPRIS DANS LA FOURCHETTE DES FREQUENCES PRECONISEE PAR BRASS ET MACRAE.

V. COMMENTAIRES ET RECOMMANDATIONS

TRANSPARENT 8

71,9 POUR 1000 COMME TAUX DE MORTALITE CHEZ LES ENFANTS DE O A 2 ANS A LA MATERNITE DE CASTORS EST PROBABLEMENT FAIBLE ET SE JUSTIFIE PAR LE FAIT QUE C'EST UNE POPULATION URBAINE AYANT ACCES FACILE AUX SERVICES DE SANTE.

NOUS NE DISPOSONS PAS EN CE MOMENT D'AUTRE RESULTATS PARMI CETTE TRANCHE D'AGE DANS LE PAYS POUR POURVOIR ESTIMER LES TENDANCES AU FIL DES ANNEES.

CLEST AINSI QUE NOUS SOUHAITERIONS QU'UNE ETUDE SIMILAIRE SOIT ENTREPRISE DANS CETTE MEME MATERNITE ET ENCORE DANS D'AUTRES MATERNITES DE BANGUI ET DES PROVINCES POUR DETERMINER LA FIABILITE DES TENDANCES A LONG TERME.

QUE CETTE ENQUETE SOIT COUPLEE A CELLE DE L'ENQUETE NATIONALE DE COUVERTURE VACCINALE QUI AURA LIEU AU COURANT DE CE MOIS D'AVRIL 1990 OU L'ON INTRODUIRA SUR LA FICHE D'ENQUETE LES DEUX PETITES QUESTIONS SUIVANTES:

- VOTRE ENFANT PRECEDENT EST-IL NE VIVANT OU MORT-NE?
- S'IL EST NE VIVANT, EST-IL ENCORE EN VIE?

MESDAMES ET MESSIEURS, JE VOUS REMERCIE DE VOTRE ATTENTION.

AIDS AND CHILD SURVIVAL IN THE 1990'S

(delivered by Dr. Biritwum)

The global summary of AIDS cases reported to WHO/GPA as of March 1990 shows a total of 222740 cases. 41,518 cases from Africa, 147,159 from the Americas, 588 from Asia,31,581 from Europe and 1894 from the Oceania. In all, there has been an increase of about 100,000 cases in the past one year. (slide 1). Reporting of AIDS from sub-saharan Africa is thought to be incomplete, the global data in comparison with projected AIDS cases show wide differences in the case of Africa. Based on data from serological surveys for HIV among population groups in African countries, it is estimated that only 12 % of the estimated AIDS cases in Africa had been reported by March 1990 compared to about 60% of the projected cases in the rest of the areas (slide 2). As you can see on this graph of projected cases (line) and reported cases (bars).

Recent studies in Africa and elsewhere have shown that there is an association between genital ulcerative disease (GUD) and HIV seropositivity; theoretically due to 2 reasons: increased blood transmission from open, blood exposed lesions or increased infection rates in persons with open blood exposed lesions; the implications of the association of GUD and HIV infection for sub-Saharan Africa are evident; syphilis alone has been shown to have a prevalence of 11%-33% among women in the reproductive age in certain African cities such as Yaounde and Lusaka. Compounded by shortages of penicillin and other antibiotics which result in incomplete treatment of GUD, HIV transmission rates may be higher in such settings than where effective GUD, treatment services are available.

In Africa, AIDS affects both males and females with almost equal frequency; the mean age among women is between 20 and 25 years or five to ten years younger than the mean age among men which is 30 -35 years. The prevalence of HIV infection among pregnant women attending antenatal clinics is < 1% in some countries in West Africa to 25% in East and Central Africa. With a growing number of women of childbearing age becoming infected with HIV through heterosexual

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transmission in Africa, the risk of perinatal HIV infection is increasing, and the consequence of this pattern of HIV infection in Africa is the emerging problems with paediatric AIDS, its treatment and support to those infected, its' impact on child mortality etc.

The transmission rate of HIV-1 from infected mother to child may vary between 25% and 50% as shown in recent studies in Kinshasa and Zimbabwe and it appears to be associated with the state of immunosuppression of the mother. The lower the CD4 count of a pregnant woman, the greater the possibility of transmission of the virus. HIV infection also affects the outcome of pregnancy. In a study in Kenya, HIV has been shown to be significantly and independently associated with preterm delivery, low birth weight and intra uterine growth retardation. Even though the diagnosis of HIV is difficult before the age of 18 months because of the presence of passively transfused maternal antibody and despite problems with diagnosing pediatric AIDS, infected and non-infected infants born to HIV-infected mothers become very early in life either because of low birth weight , improper care from a sick mother or immunosuppression itself.

Difficulties with paediatric AIDS case definitions include

(1) The spectrum of diseases and the natural history of HIV infection which is less well described and more variable in children than in adults. (HIV children often have severe bacterial infections and complicated childhood diseases such as measles making the indicator diseases seen in immunocompromised HIV-infected children overlap with diseases commonly seen in children not infected with HIV.

As I mentioned earlier, Infants born to HIV infected mothers pose particular problems; In addition to health problems directly related to HIV infection, children born to HIV infected mothers are thought to have an increased risk of low birth weight which in itself is associated with increased

mortality during the first year of life as well as more serious bacterial infections and childhood diseases such as measles.

Optimum health promotional care practices are crucial to the success of the preventive efforts. Safe blood transfusion both by HIV screened blood and by giving only when absolutely necessary, prevent transmission. The extent to which blood transfusions contribute to HIV-transmission in Africa is not known, but is thought to be much less than transmission through sexual intercourse and perinatal transmission. In one study among children who received blood transfusions in a hospital in Zaire, a strong relationship was shown between blood transfusion and HIV seropositivity. Recent reports from Elista in the USSR describes a chain of nosocomial transmission of HIV from infected hospital patients to uninfected patients. The spread of HIV infection in the paediatric ward was through the use of unsterilized syringes and needles and intravenous medication. 68 out of 75 children with antibiotics had an indwelling subclavian intravenous catheter during the month of hospitalization of the index case. It is suggested that medication was given to more than one child from one blood contaminated syringe. Similar modes of infection has been suggested for other paediatrics outbreaks in the Eastern countries. The potential exist as well Africa considering the limited health resources. Parenteral treatment and blood transfusions should therefore be kept to a minimum in all health care settings, and when used, appropriate sterilization must be adhered to. In the USSR outbreak, one of the hypothesis considered was transmission from infected infant to mother during breastfeeding in cases where there were breaks in the skin of the breast and bleeding oral thrush among children with HIV infection. However this has not been proved yet because many of the mothers had infections at same hospital as the child during the child's admission and others cannot be certified as not having had injections.

In GPA, a multicentre study to investigate the extent of nosocomial infections has been initiated among 9 countries in Africa. The first meeting was held in Geneva to assemble the investigators to discuss the implementation of the protocol which had been approved by the steering committee.

DEMOGRAPHIC AND ECONOMIC IMPACT OF HIV/AIDS

The demographic and economic impact of AIDS on women and children will depend on the numbers of disease and deaths due to HIV infections. The demographic impact of HIV/AIDS has been assessed through the use of mathematical models by using available HIV serologic data and observed and estimated annual progression rates from HIV infection to AIDS. The estimate of HIV infection using this method was 2.5 million for sub saharan Africa in 1987 and at present, the estimate is approximately 3 million or more [OVERHEAD]. The distribution of HIV infection in sub-saharan Africa in not uniform as shown in the graph [OVERHEAD], there is high concentration of infection in East and Central Africa as can be seen by the increased density of the dots in this overhead as well as in two countries in West Africa; see spot map (slide 3)

In estimates of the number of children with AIDS, the number of infected women, the birth rate, the percentage of transmission from mother to child and the annual progression from infection to development of AIDS must be considered. Using as the estimated number of infected women ..., a birth rate of 50 per 1000, a percent of transmission of 25% and an annual progression rate of 15% in the first year, it is estimated that by early 1990, close to 600,000 births will occur among HIV infected women and that approximately 150,000 of these infants will be infected. Using the same method of forecasting, it can be seen from the graph that the number of AIDS cases in women in sub-saharan Africa by 1992 will be 360,000 and over 160,000 pediatric cases. Slide 4 shows the estimated cumulative AIDS cases (paediatric and adult) for Africa. The first row of white bars shows estimated numbers of children with AIDS , the second row of bars for adult and the last row for the totals. The numbers for 1988 are expected to double by 1991.

Preliminary demographic projections suggest that there will be major increase in child mortality rate in areas with a high prevalence of HIV infection in women Infant mortality rates will be expected to increase as a result of the HIV epidemic, despite advances being made in immunization, diarrhoeal diseases control and other child survival initiatives. The projected child mortality as a result of mother to infant HIV transmission can be seen in slide 5, childhood mortality is expected to increase by about 20% in several African countries. Where the HIV prevalence in pregnant women is about 5%, the increase in child mortality will be about 5% and where the prevalence of HIV in pregnant women is 20%, the increase in child mortality will be about 40%.

The number of uninfected children born to HIV infected mothers must also be taken into account as they will be potential AIDS-related orphans in the future. Slide 6 describes the cumulative numbers of orphans due to maternal AIDS in sub-saharan Africa. In 1990, it is expected that 240,000 uninfected orphans and about 70,000 infected orphans will be expected. These figures will double by 1992. Calculations using data from Ugandan National Serosurey do support the above projections, the results indicate that, at the beginning of 1988 there could have been about 35,250 children born with HIV infection: 30,000 from the rural areas and 5,250 from urban areas.

Certain other epidemiologic aspects of HIV infection and AIDS in sub-saharan Africa are less well defined: The contribution to HIV transmission by improperly sterilized needles, syringes or implements such as those used for traditional scarification practices; and the role of chronic tropical diseases in altering susceptibility to HIV infection or progression to AIDS.

GPA has organized or participated in meetings discussing HIV/AIDS and children. The technical working group on HIV/AIDS in childhood (Geneva, 27 February - 1 March 1998 raised several

important issues, some of which included the difficulties in developing paediatric AIDS case definitions and the diagnosis of HIV infection.

In the Paris meeting held from 27 to 30 November 1989, AIDS in mothers and children was thoroughly studied in its scientific, health-related, social and political aspects. A declaration was issued containing 15 recommendations to promote safe motherhood and to accelerate the process of empowerment of women against AIDS.

This years's WORLD AIDS DAY activities will focus on AIDS in women and it is meant to also highlight transmission in children. Women at risk of HIV infection need safe and efficient method for preventing both HIV infection and pregnancy. However, women in many areas of Africa still have great difficulties in controlling their reproductive choices in the context of their relationship to their partners and society in general. If women can acquire the means to make safer choices with respect reproduction in the face of the HIV pandemic, then the problem with mother to child transmission may be lessened in Africa. (and as an African I can understand the situation).

[FINAL SLIDE OF FUNERAL PROCESSION]

This slide shows the result of HIV infection in Africa- mothers and fathers deceased, uninfected children remaining as orphans, younger infected children faced with a lifetime of repeated sickness and death.

Existing national programmes on maternal and child health, control of sexually transmitted diseases, family planning, and immunization should continue to be supported and strengthened; at the same time, AIDS control programmes activities should be integrated into these programmes.

There are certain activities that can be undertaken jointly with other child survival programmes, such as evaluation of programmes. Several countries are conducting HIV sentinel surveillance within antenatal services, Information on some of the indicators for programme effectiveness can be gathered during EPI or CDD programme evaluations. In view of the limited resources in Africa, I consider this meeting and the workshop very important and timely.

Many thanks.

AIDS CASES REPORTED TO WHO
1 MARCH 1990

Continent	Number of Cases	Countries reporting 1 or more cases
AFRICA	41518	48
AMERICAS	147159	44
ASIA	588	25
EUROPE	31581	29
OCEANIA	1894	7
TOTAL	222740	153

REPORTED AND PROJECTED AIDS CASES

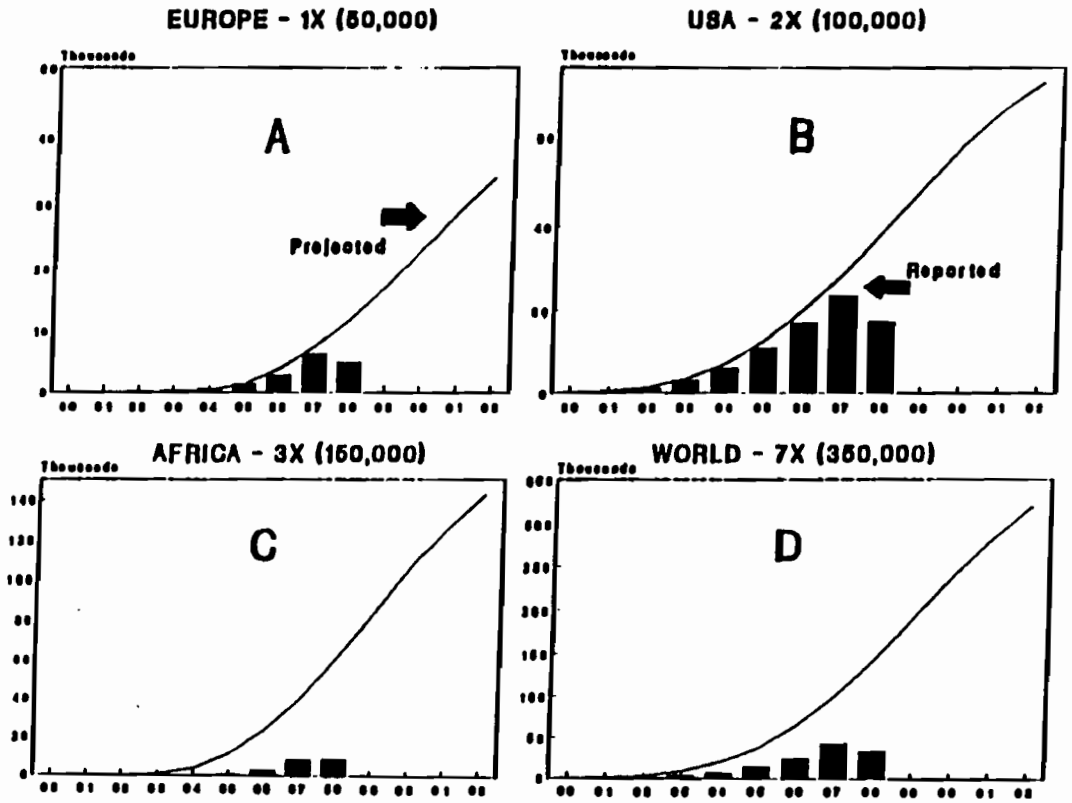

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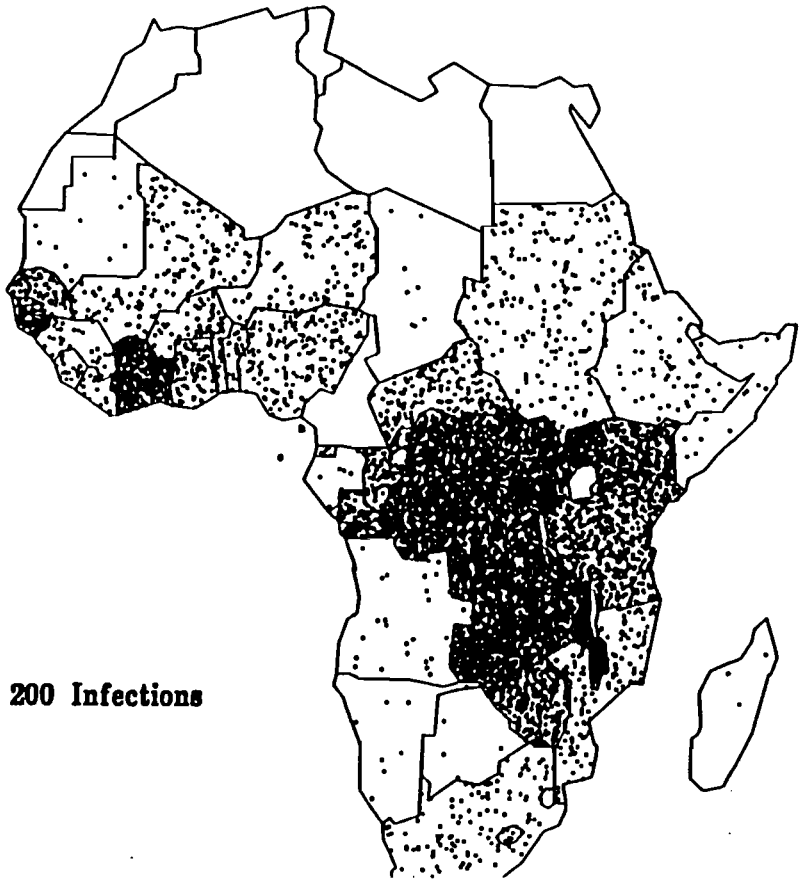
Figure 1

Cumulative HIV Infections

Sub-Saharan Africa, 1987



1 Dot = 200 Infections

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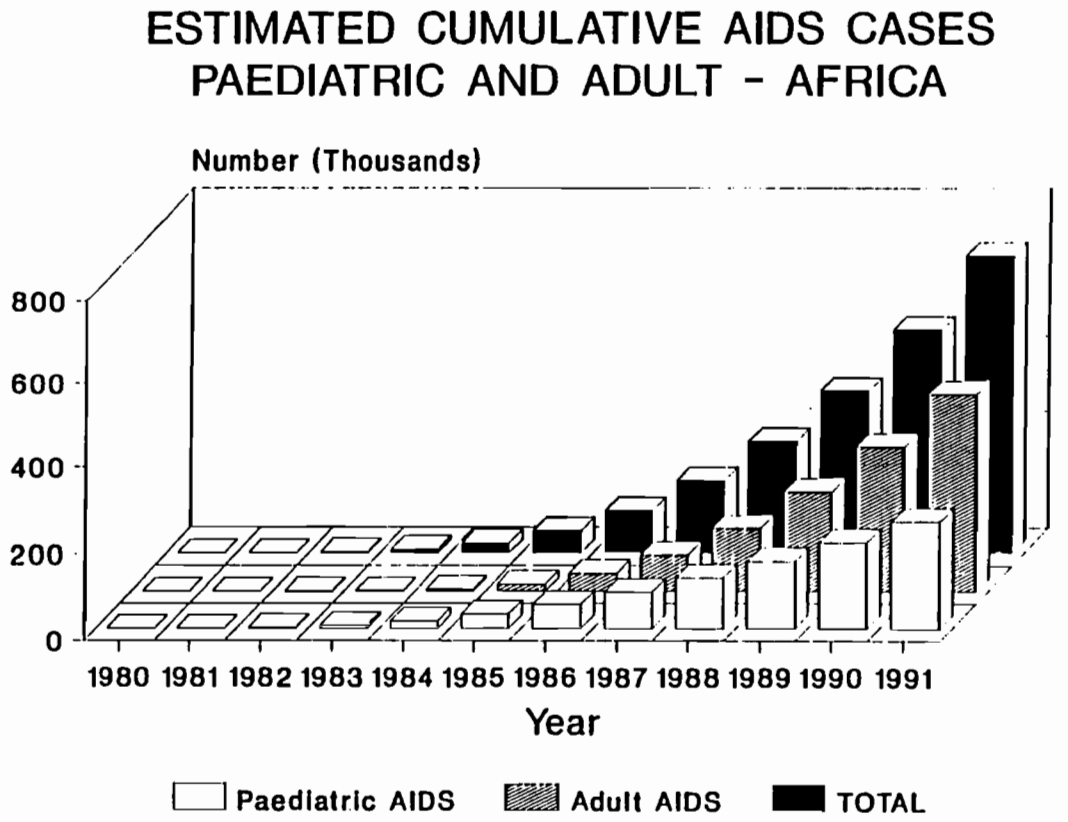
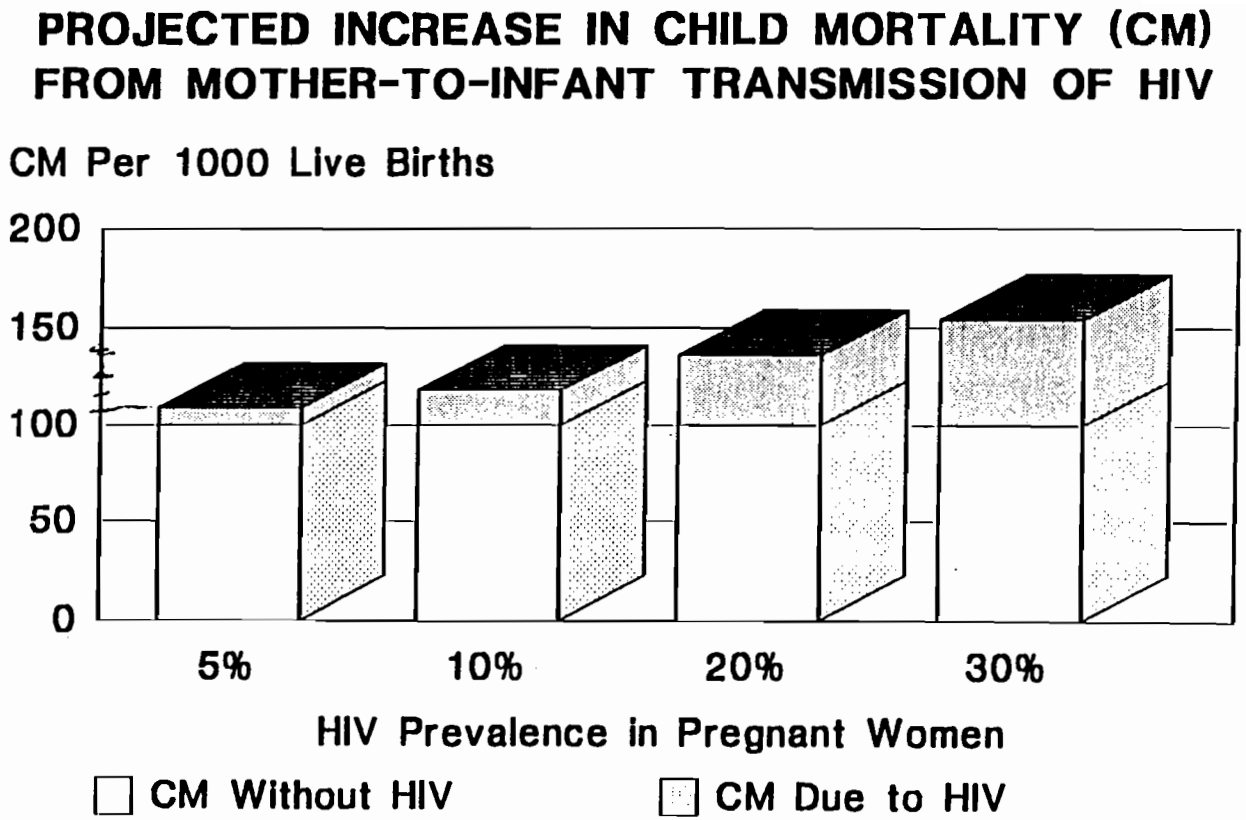
Figure 2



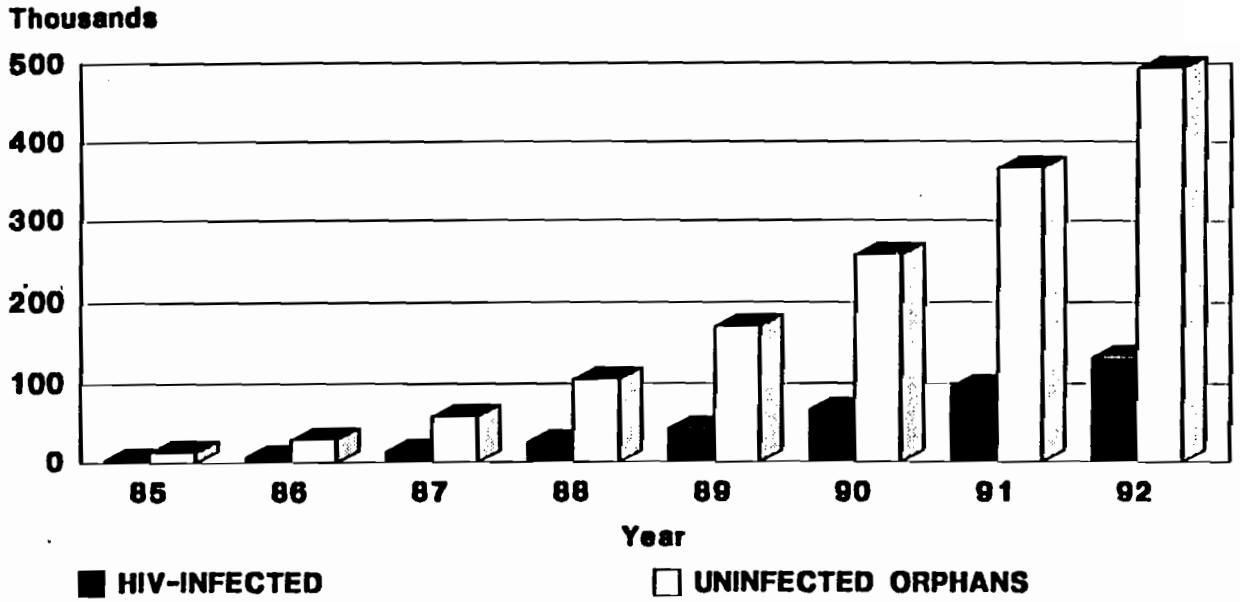
GPA/WHO-59H-AAC

Figure 3


PROJECTED INCREASE IN CHILD MORTALITY (CM)
FROM MOTHER-TO-INFANT TRANSMISSION OF HIV
CM Per 1000 Live Births
200
150
100
50
0
5%
10%
20%
30%
HIV Prevalence in Pregnant Women
CM Without HIV
CM Due to HIV

CUMMULATIVE NUMBERS OF ORPHANS DUE TO MATERNAL AIDS

Sub-Saharan Africa



Country Assessment Guidelines for Increased Collaboration
In Family Planning and Maternal and Child Health Programmes

A. Introduction:

1. Statement of Objectives
   -if the country has a 3-5 year plan for MCH/FP then the assessment team should review this to see if it is being followed and find out if USAID/CDC can assist either S-T or L-T
   -if there is no plan, then the team should organize the development of a five year plan which is a combination of a comprehensive assessment of the MCH and FP activities, with the development of needed activities to accomplish stated goals and the roles of interested donor agencies (See Section F)

B. Geographic and Demographic Data

1. -Geographic location, size
2. -structure and type of government
3. -population size, growth rate, % under 15 years, 5 years, % of women in childbearing years, urban/rural distribution
4. -male/female literacy rates, description of educational system
5. -per capita income, income distribution, economic base
6. -seasonal patterns of health and nutrition patterns
7. -crude birth rate
8. -crude death rate
9. -infant mortality rate
10. -under-five mortality rate
11. -life expectancy at birth

C. Official Government Health Policies (Commitment Statement)

1. -position of maternal/neonatal health and childspacing within the Ministry of Health structure

D. Health care delivery system/MOH structure and where MCH and FP fit in

1. -role of primary health care within the MOH
2. -NGO's and other organizations who are involved in maternal and neonatal/MCH health and childspacing
3. -short description of levels of care, (community, clinics, health centers, hospitals, etc.)
4. -short description of referral system
5. -birth and death registration
6. -source and availability of information (data, service statisitics, census data, survey data) relating to maternal and neonatal health and childspacing
7. -number of births and location (home, clinic/maternity, health center or hospital)
8. -number of maternal deaths
9. -number of neonatal deaths
   per capita expenditure for health, percapita expenditure for maternal health/childspacing or for MCH
10. -service delivery strengths
11. -service delivery problems
12. -short description of antenatal care, delivery/maternity care, postnatal care of mother and infant, childspacing services
13. -use of risk approach concept/clinic management
14. -three most common causes of maternal death
15. -five most common causes of stillbirths
16. -five most common causes of neonatal deaths

17. -extent of neonatal tetanus
18 -% of births at home with untrained attendant/ with trained attendant, at clinic naternity, health center/hospital
19 -past, current, future activities/projects related to maternal and neonatal health and childspacing
20.-% of low-birth weight infants

E. Childspacing/Family Planning and MCH/Child Survival Programme Achievements
(What works/ what can be tapped, repeated, expanded or further developed)

F. Develop or review the National 3-5 Year MCH/FP Plan or fit information of existing plan into the following categories in order to design/suggest a USAID/CDC project that would best suit this country's needs;

OUTCOME INDICATORS:
1.Long-term measurable targets for MCH
2.Long-term measurable targets for FP
PROCESS INDICATORS:
1.Description of complimentary activities to achieve above objectives for MCH
2.Decsription of complimentary activities to achieve above objectives for FP
3.Description of monitoring system
4.Description of evaluation system

G. Collaboration Opportunities/Expansion
(This could be part of the National MCH/FP plan)

Organize the interventions and activities into the following categories:
(a) past (what was the organization affiliation; USAID,UNICEF,WHO,IPPF,UNFPA, MSH,etc.)
(b) current (""")
(c) future

1. -General Program Managment
2. -IEC activities
3. -clinic services improvement projects
4. -sharing of facilities and staff
5. -drugs, pharmaceuticals, contraceptive supply management
6. -program evaluation
7. -operations research
list possible topics/ideas
8. -training; pre-and in- service training, (public health schools, etc.)
9. -supervision, facility surveys, on-the-job training
10. -surveys; demographic, KABP, coverage, mortality, etc.
11. -health information systems
12. -community/outreach activities

H. Expectations of Increased Collaboration of MCH/FP programmes, specifically the proposed project for USAID/CDC in this country
1.Assess the need for and define the format of CDC technical assistance
2.Assess the role and type of advisor needed, and needed host country national counterpart
3.Assess the availability of adequate internal and/or external funding to expand natinal program activities as an outgrowth of CDC technical assistance.
4.Assess the USAID's mission's interest as measured by buy-in commitment and the relative rank of this project to its other priorities
5.Assess the mission's own record regarding past utilization of external advisors/consultants, its reputation

for organizational effectiveness, and its perceived relationship with candidate country counterparts.

6. Assess probability of strengthening the candidate country's capacity to sustain increased collaboration.

Child Survival -- Challenges for the Next Decade

By: Dr. J. Davis

During the last decade, significant gains have been made in child survival. Still, eight of the 10 countries in the world with the highest infant mortality rates are in sub-Saharan Africa. Fertility rates are also high -- a doubling of the population is expected every 20-25 years, placing a further strain on limited resources and on already fragile environments. Malnutrition, after declining for almost three decades, is once again on the rise, perhaps spurred on by the global economic recession of the 1980s. National policy makers, faced with increasing demands from all sectors, have been unable to maintain their traditionally high investments in health infrastructure. To complete an already bleak landscape, epidemiologic conditions have also worsened. HIV infection and AIDS are becoming important causes of mortality and are bringing about an increased awareness of the need to implement control programs for sexually transmissible diseases and tuberculosis. The potential for HIV to be transmitted via blood transfusion makes the treatment of anemia due to increasingly severe P. falciparum malaria more difficult. These factors will tend to make further progress more difficult to achieve.

Many of the gains to date have been made in the context of a small number of specific programs, all of which were relatively self-contained. Although these programs were all aimed at disease problems of obvious priority, the control programs were designed in ways which maximize their aggregate logistic and managerial burdens. The Expanded Program on Immunization (EPI), the Control of Diarrheal Diseases program (CDD) and family planning programs for the most part developed independent systems of training, health education, management information, and commodity distribution, even though most health systems are designed such that a small number of health workers in peripheral facilities are the target of most of the training and other support and implement all of the interventions. Most recently, AIDS control programs and accelerated immunization programs have further contributed to managerial duplication, resource allocation problems, and to the workload of the health worker. A bright spot on the horizon is the potential for newer interventions, such as control of acute respiratory infections, vitamin A supplementation, more effective and acceptable contraceptive technologies, and so on, to contribute to the health of African children and mothers. These new technological developments will only be helpful, however, if programs to bring them to the most peripheral levels of the health structure, including the community, can be more efficiently managed and more effectively implemented by health workers throughout the health care system.

CCCD is another project which was designed to address the priority diseases of childhood. In cooperation with programs sponsored by WHO, UNICEF, and others, it has been largely successful. The more timely vaccination of a larger

proportion of the child population has been a major achievement. The development of diarrhea training units has resulted in significant reductions in case-fatality and in rates of hospital admission and in increased cost-effectiveness, in addition to providing supervised sites where health care providers are trained in new techniques. In malaria control, the spread of chloroquine resistance across Africa prompted studies which clarified the epidemiology of the disease and highlighted its pervasive effect on childhood mortality.

During the 1990s, it will be necessary to build upon the successes of 1980s. CCCD was not intended to be a comprehensive program and insufficient attention has been paid to important contributors to mortality such as the lack of effective family planning services. No provision was made for addressing the problem of HIV infection, which may increase child mortality by as much as 45% during the coming decade in parts of Africa. Perhaps more importantly, although CCCD helped to improve treatment for episodes of acute illness, it was not designed to deal with the long-term consequences of the diseases it sought to treat, viz., the chronic and sometimes severe anemia which developed from repeated malaria infection, the malnutrition which results, in part, from repeated episodes of diarrhea, measles, and other illnesses, and the unacceptably high proportion of low birth weight children, a consequence of diverse, incompletely explored causes.

Still, CCCD has clearly demonstrated the feasibility and desirability of an integrated approach to child survival issues in Africa and has established entry points which may facilitate the expansion of the number of interventions which are currently offered. Because of the limited resources available to most African nations and because of the relatively restricted access of large portions of the population to the formal health care system, the key to success in the future will lie on the degree to which money, personnel, and technical knowledge can be efficiently delivered from central levels to the periphery and on the extent to which communities are enabled to become responsible for preventive and early curative care.

In order to more efficiently address the needs of the population, disease-specific programs must be better integrated. One way to do so would be to place the emphasis on the problems of the individual, not on the control of specific diseases. In the case of children, care should be available as often and conveniently as possible, and caretakers should be made aware of prevention strategies for diarrhea, for malaria, and for sexually transmissible diseases, including HIV infection. The ability to assess, diagnose, and treat life-threatening diseases early in their course should also exist in the community, as should the ability to recognize when there is a need for more advanced care.

At the clinic, a wide range of services should be available more frequently than current practice provides. Curative care offered for acute illness should be combined with greater attention to the total health needs of the child and mother. Immunization services, counselling and commodities necessary for child spacing and the control of STDs should be routinely available, and health care personnel must be able to refer more severely ill children for appropriate care. The ability of the system to adapt itself to deal with the individual rather than with the diseases will bring about a more rapid and a more sustainable decline of what are still unacceptably high levels of mortality.

To move from a disease-specific to a child-oriented program which deals with many conditions simultaneously and seeks to combine, to the extent possible, the many intervention programs which exist, resources must be deployed in as efficient a manner as possible. Linkages between what are now essentially free-standing programs, such as EPI and many family planning programs must be developed and exploited, so that the strong points of each program are incorporated into every program and so that the flow of knowledge, commodities, and resources is reinforced at every level of the system.

Areas of potential linkage can be readily identified. They include the following:

1. **program management** -- at the central level, programs such as diarrheal disease control and control of acute respiratory infection may be merged. Both rely primarily on curative strategies involving clinical training and both will require strong rational drug policies. Undoing the division which has been created between family planning/child spacing programs and other child survival programs which share a common objective should be explored.

2. **health information systems (program monitoring and evaluation)** -- the collection of morbidity and service data provides an ideal example of an opportunity for program integration. A record of the health care received by a child can be recorded on a single "road to health" card, all clinic visits are recorded in a single register, and data are frequently collected and analyzed by a single statistical office. A HIS should ensure that the necessary information is seen by all those who need it.

3. **operational research** -- efforts to develop a more integrated system of health care provision will undoubtedly be met by many obstacles. Operational research is required in order to meld currently separate programs in such a way as to more adequately address the spectrum of child survival problems while maintaining the effectiveness of current programs.

4. **technical strategies** -- some interventions contribute to the control of diseases for which they are not the primary

target; for example, measles immunization is an essential feature of diarrheal disease control programs, the treatment of moderate pneumonia with cotrimoxazole may eliminate malaria parasitemia, and the promotion of condom use may help increase birth intervals and reduce the spread of sexually transmissible diseases including HIV infection.

5. **training and supervision** -- the separation of different child survival interventions is nowhere so blatantly reflected as in single-intervention training programs. Although minimum amounts of time for training in actually delivery of care (immunization practices, oral rehydration therapy, family planning counselling, etc.) are necessary in order to maintain a high level of quality which must not be sacrificed, other aspects of health care delivery, such as management, supervisory skills, and monitoring and evaluation are common to all programs. Consideration should be given to developing more efficient means of providing more comprehensive continuing education to health care personnel.

6. **health education** -- mothers and other child caretakers (including community health workers) need to learn and to be given the means to prevent disease from occurring. In addition, they must also be able to recognize all of the more common illnesses which afflict their children when they occur. Because of limitations on access to health centers, early treatment for many of these conditions is required at the community level. Mothers must be educated to deal appropriately with health problems when they arise and to avail themselves of preventive services. Local pharmacists, market women, and others involved in the dispensing of medications also should be involved in the health care system.

7. **health care personnel** -- at the peripheral levels of the health care system, personnel are already polyvalent and expected to provide competent preventive and curative care to all children who present to the health center. An integrated health care delivery system would result in their being better able to do so. Drugs and other commodities would be more frequently available in adequate quantity, training would be offered in a wider variety of interventions, and record keeping (form filling) tasks would hopefully be reduced.

8. **physical facilities** -- the maintenance of separate structures for curative, and maternal and child health services should be reviewed. Similarly, where specialized units for oral rehydration, for example, exist, they might be used for other purposes.

9. **commodity management** -- oral rehydration salts, antibiotics, family planning commodities, and so forth could all be distributed from central level to the community along with vaccines. Procurement and inventory control procedures could be similarly combined for the sake of improved efficiency.

If continued progress is to be made and further improvement of infant and childhood health is to occur, wasteful duplication of program activities must be eliminated; scarce executive, managerial, and technical manpower and other resources must be used more efficiently; multi-purpose clinic health workers must be trained, supplied, and supervised in the most effective manner; and mothers and community health workers must become knowledgeable of the means by which they might prevent or provide prompt treatment for important childhood illnesses. A great deal of further thought and discussion is warranted. We hope that the conference this week will provide the opportunity to more thoroughly explore some of the issues presented in this paper.

UPDATE ON THE EPI: GLOBAL PERSPECTIVE

Dr Susan E. Robertson

Expanded Programme on Immunization

World Health Organization, Geneva

Presented at the

ASCI/CCCD Consultative Meeting

2-6 April 1990, Swaziland

Based on the Report of the 12th Meeting of the EPI Global Advisory Group, 16-20 October 1989, Tokyo, Japan.

SLIDE 1

The Expanded Programme on Immunization (EPI) has achieved remarkable success by the close of the 1980's. For the first time in history, immunization coverage for the world has reached the two-thirds mark (67%) for a third dose of DPT and polio vaccine for children by 1 year of age. Immunization coverage stands at 72% for BCG and 59% for measles vaccine. Substantial progress is being seen in all Regions, despite many special social and economic problems. These accomplishments provide optimism that at least 80% coverage with these antigens can be reached by the end of 1990. Tetanus toxoid coverage continues to be the least satisfactory; in developing counties only 29% of pregnant women are reported as having received 2 or more doses.

SLIDE 2

At current coverage levels, it is estimated that the EPI is preventing some 2.2 millions death each year from measles, neonatal tetanus and whooping cough, as well as some 360,000 cases of poliomyelitis. The urgency for raising immunization coverage levels further is underlined by the continuing occurrence each year of some 2.8 million preventable deaths from measles, neonatal tetanus and whooping cough and over 200,000 cases of poliomyelitis.

SLIDE 3

Unprecedented cooperation in support of the EPI has developed at global and Regional levels among a wide spectrum

of organizations, including WHO, UNICEF, the World Bank, UNDP, Rotary International and other service organizations, bilateral development agencies and nongovernmental organizations. However, the future of the EPI is by no means assured. Social and economic problems are likely to constrain the further development of health services in developing countries, and application of existing technology is still from complete. Support from outside sources will be required for the foreseeable future to achieve and sustain high coverage. In the least developed countries, this will need to include recurrent costs. National programme managers are urged to develop detailed fiscal plans as part of their overall plans for the EPI, clearly identifying the resources required and specifying whether they will be provided by the government or by outside agencies. Government and collaborating agencies should formally approve these plans, with all parties committing themselves to providing the financial support indicated.

SLIDE 4

Basic health service needs for raising and sustaining immunization coverage include: (1) improving the management of the health services, decentralizing responsibilities and providing training/supportive supervision to the health workers who provide immunization; (2) making primary health cares services more accessible; and (3) informing and motivating the public, specifically recognizing that fathers, as well as mothers, have important health roles to play.

SLIDE 5

One priority action specific to immunization is immunizing at every opportunity. All health facilities seeing women and children should provide immunization services as frequently as feasible, with appropriate immunization schedules. False contraindications should be avoided so that immunizations are not withheld unnecessarily. Doses of TT needed by the mother should be offered at the time of immunization of the child.

SLIDE 6

A second priority action specific to immunization is reducing drop-out rates. Courteous services should be provided at times and places convenient for the users. Parents should be informed of the importance of immunization, the need to return to complete the immunization schedule and the time and place of the next appointment. Defaulters should be identified and actively followed-up, using individual names and addresses whenever feasible.

SLIDE 7

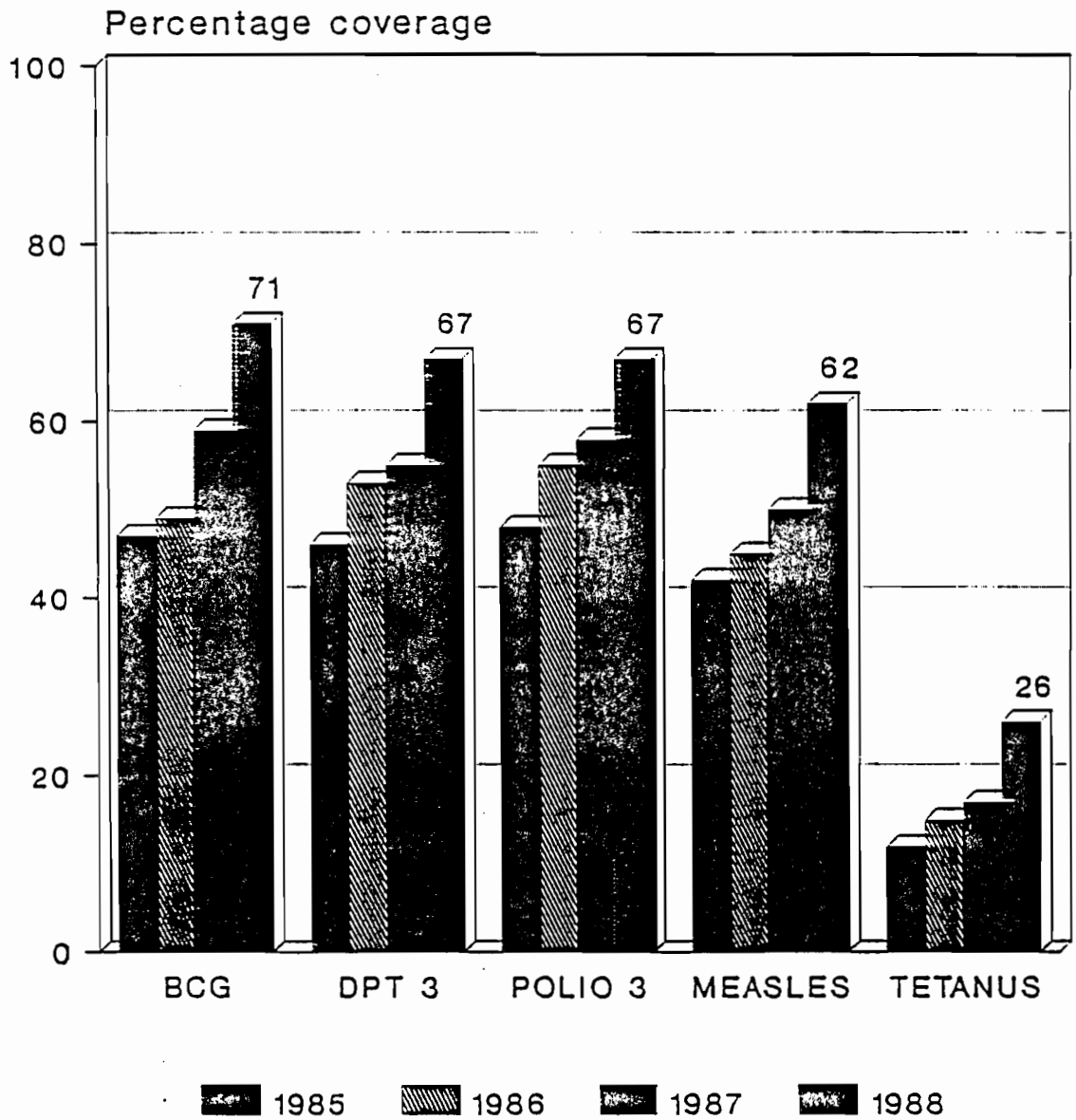
The central objective of immunization is to reduce mortality and morbidity. Three diseases have been identified by the World Health Assembly for initial emphasis at the global level and targets have been set for a 90% reduction in measles (from pre-immunization levels) by 1995, elimination of neonatal tetanus by 1995, and the eradication of poliomyelitis

by the year 2000.

SLIDE 8

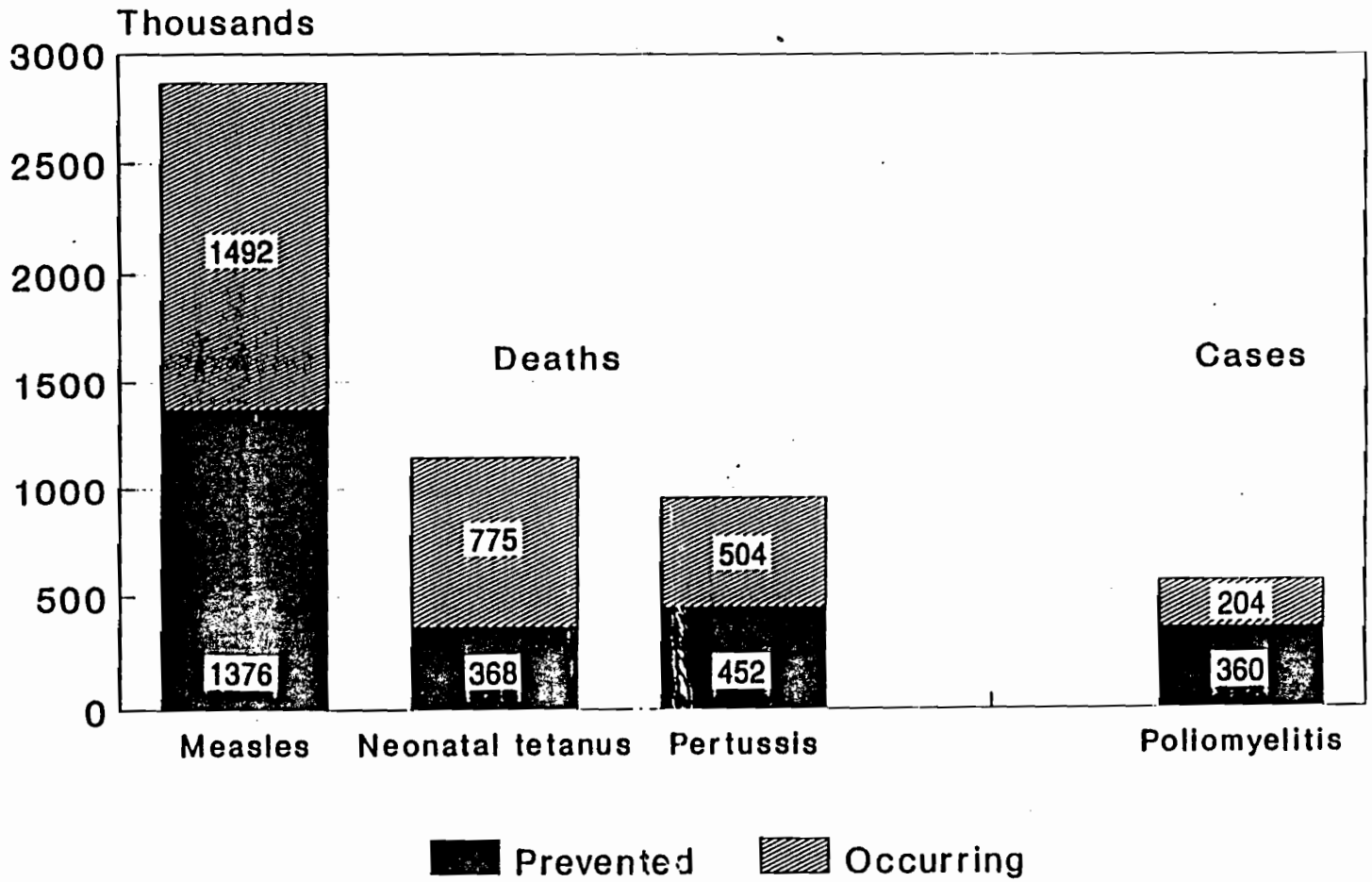
Main activities in support of disease control are those which will strengthen the primary health care infrastructure. High immunization coverage is necessary in every district. Surveillance must be strengthened so that there is regular reporting of cases of target disease from each district monthly. Management skills, including planning, training, and supervision, must be improved at the district level. Disease control should be seen as a way of consolidating the progress which has been achieved in EPI and of assuring that the programme resources now in place are being directed for the maximal benefit of those they are designed to serve.

Percent of children under 12 months immunized with EPI vaccines Global coverage 1985-1988



Data available as of December 1989

Cases and deaths occurring and prevented
Developing countries only



EPI Information system - December 1989

COOPERATION IN SUPPORT OF EPI

- WHO
- UNICEF
- WORLD BANK
- UNDP
- ROTARY INTERNATIONAL
- BILATERAL DEVELOPMENT AGENCIES
- NONGOVERNMENTAL ORGANIZATIONS

BASIC HEALTH SERVICE NEEDS TO RAISE AND SUSTAIN COVERAGE

- improved management/decentralization
- more accessible services
- informed/motivated public

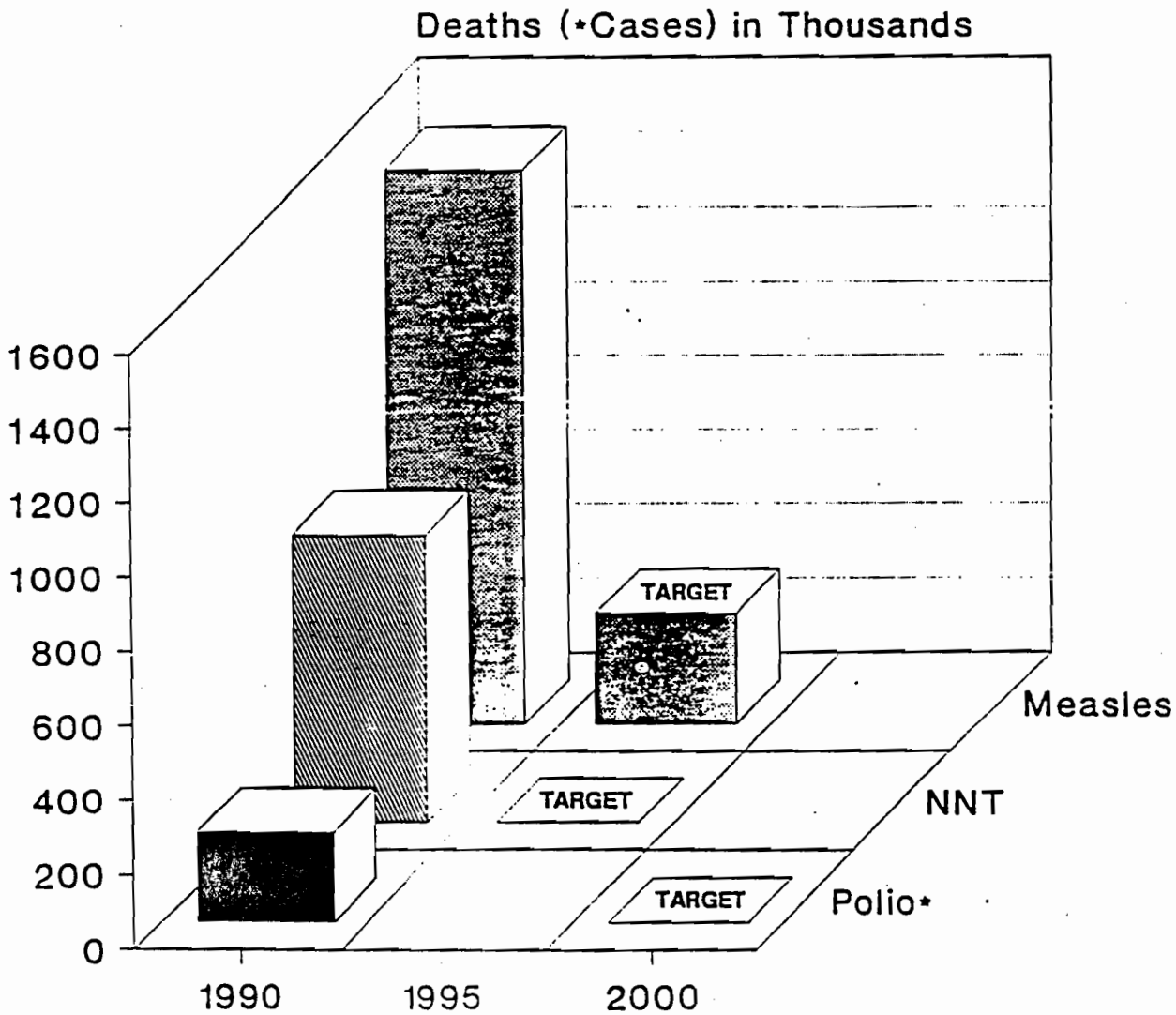
PRIORITY ACTION
IMMUNIZE AT EVERY OPPORTUNITY

- offer immunizations frequently
- use appropriate schedules
- avoid false contraindications
- immunize women and children

PRIORITY ACTION
REDUCE DROP-OUT RATES

- provide courteous services
- offer vaccines at times and places convenient to users
- inform/educate parents
- identify and follow defaulters

EPI Disease reduction targets, by 1995 and 2000



MAIN ACTIVITIES IN SUPPORT OF DISEASE CONTROL

- sustain and improve coverage
  all districts
- strengthen surveillance
  monthly reports
  all districts
- improve management
  district-level approach
- conduct training & supervision

ROUGEOLE
à
KINSHASA

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PROGRAMME DE VACCINATION à KINSHASA

- Kinshasa, grande ville du Zaïre avec une population de +/- 4.000.000 Hab (+/- 1/10 dela population du Pays)
- > 200 centres de santé vaccinent à Kinshasa
- Ces Centres sont supervisés par :
  1. L'Etat
  2. Les Eglises
  3. Les prives
- Une fois par mois, une réunion du Comité technique se tient (toutes ces agences sont membres).

  L'antenne du PEV kinshasa y est invitée.

PROGRAMME DE VACCINATION

à KINSHASA (suite)

- La couverture vaccinale pour la Rougeole était restée stationnaire depuis 1981 :

  50 % d'après les cartes seulement

  70 % cartes + histoire

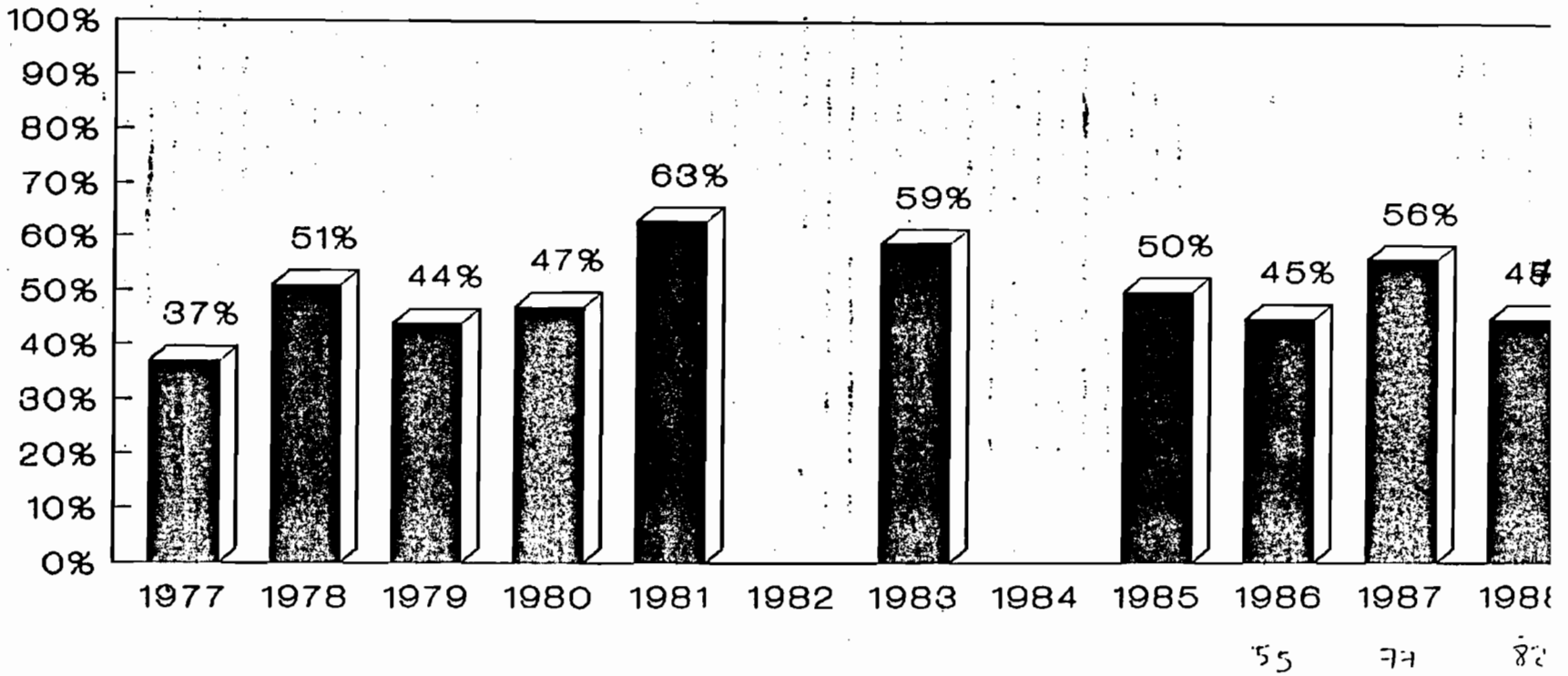
  Le Taux d'abandon entre la 1ère dose DTC et vaccin anti-rougeoleux est bas

- Il existe des poches de faible couverture dans la ville.

COUVERTURE VACCINALE POUR LA ROUGEOLE (1980 - 1988)
KINSHASA

ANNEE	1980	1981	1982	1983	1984	1985	1986	1987	1988
CV Calculée données de routine	61	79	72	63	58	81	63	62	64
CV par enquête de sondage (cartes)	47	63		59		50	45	56	47
CV par enquête (cartes+histoire)				83			59	77	82
Complètement vaccinés avec cartes							38	33	37

Couverture Vaccinale
Vaccin Antirougeoleux
Kinshasa, 1977-88



Sondages en Grappes
Enfants avec Cartes

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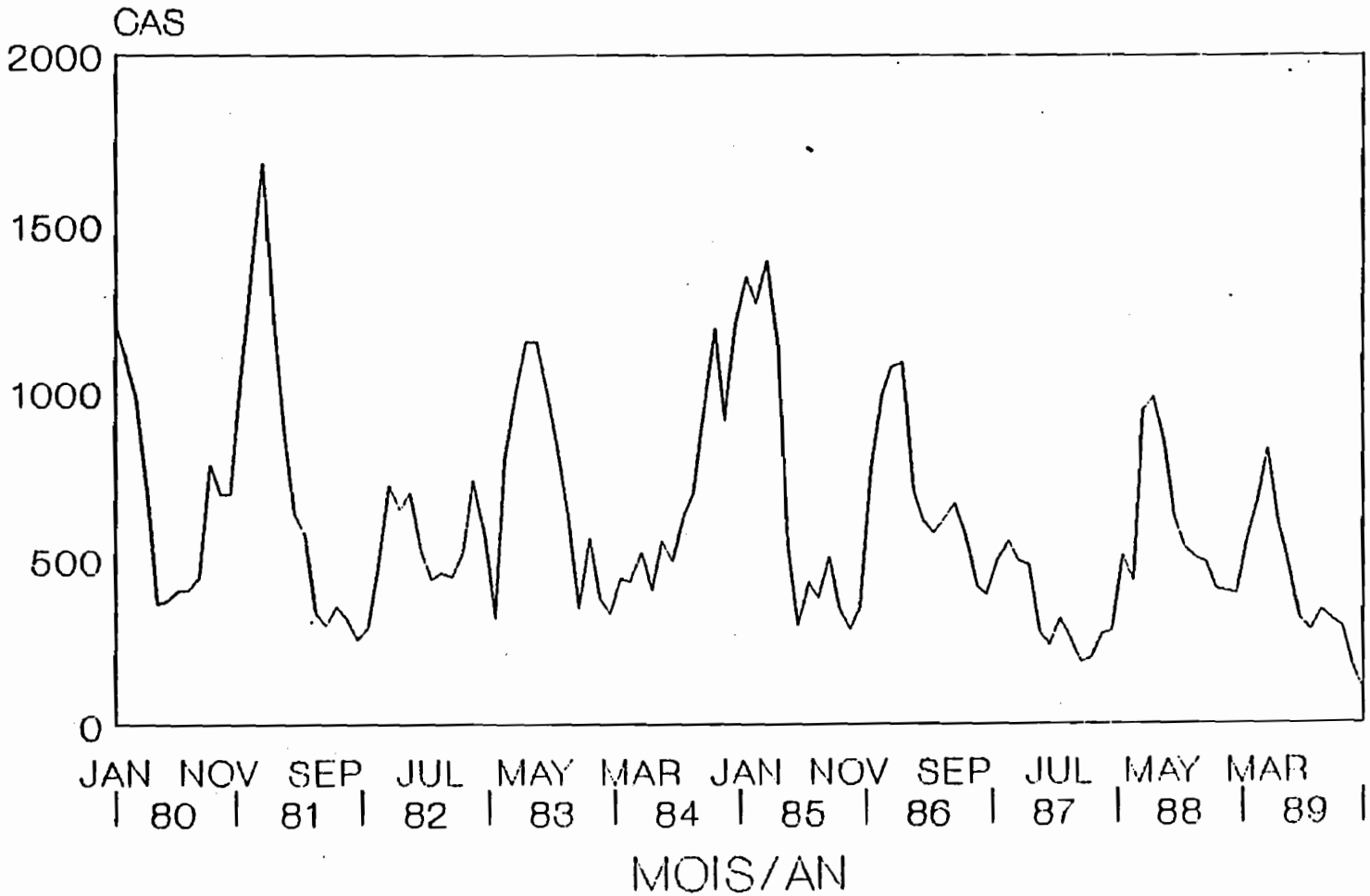
SURVEILLANCE DE LA ROUGEOLE A KINSHASA

Existence d'un système sentinelle depuis 1980 :

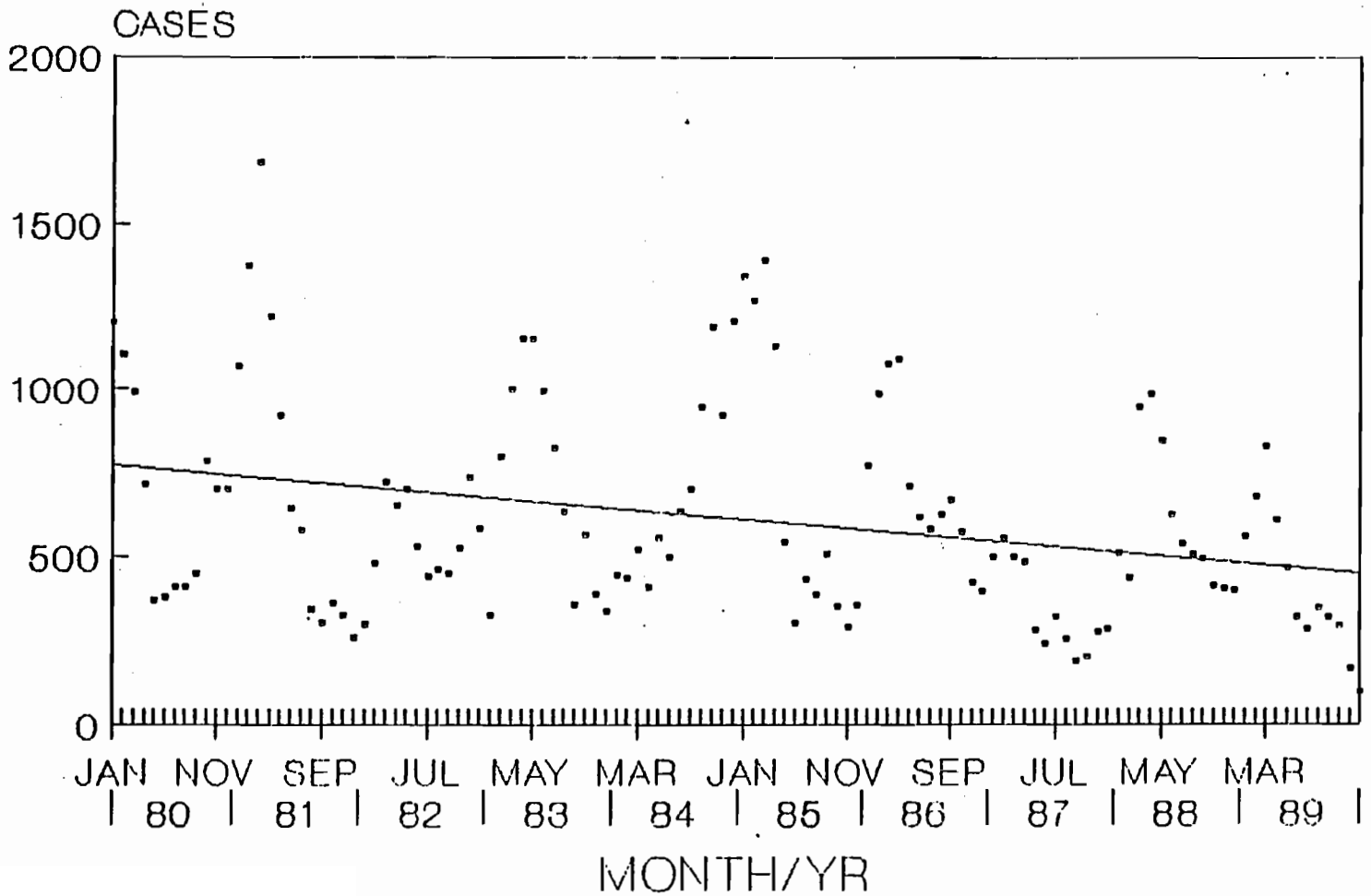
1. 4 Hôpitaux rapportent les cas hospitalisés ainsi que les décès parmi les cas hospitalisés.

2. 9 Centres de santé rapportent les cas ambulatoires
   - Il n'y a pas de distinction des cas d'après leur état vaccinal.

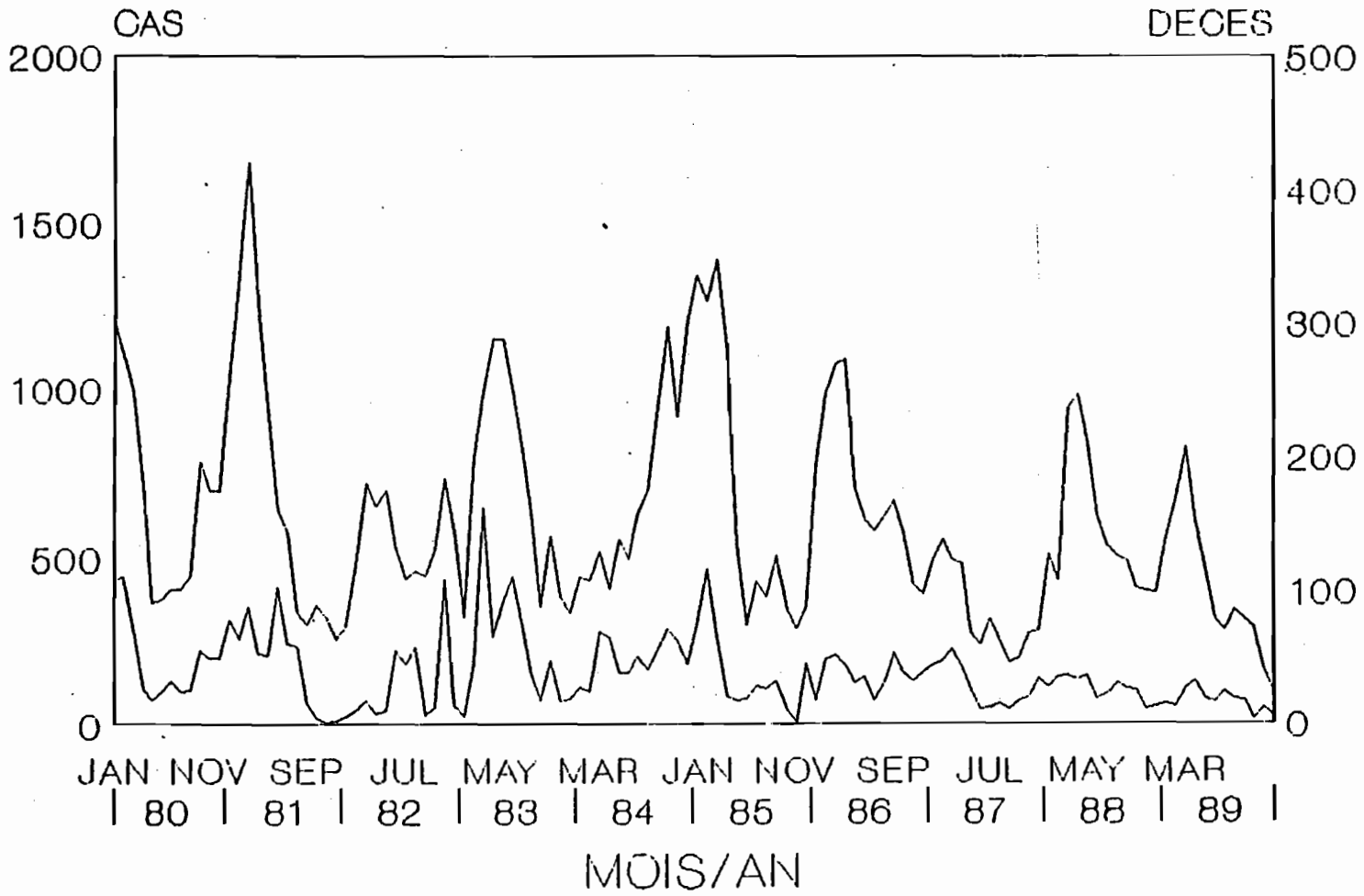
CAS DE ROUGEOLE DECLARES, 1980-89
POSTES SENTINELLES, KINSHASA ZAIRE



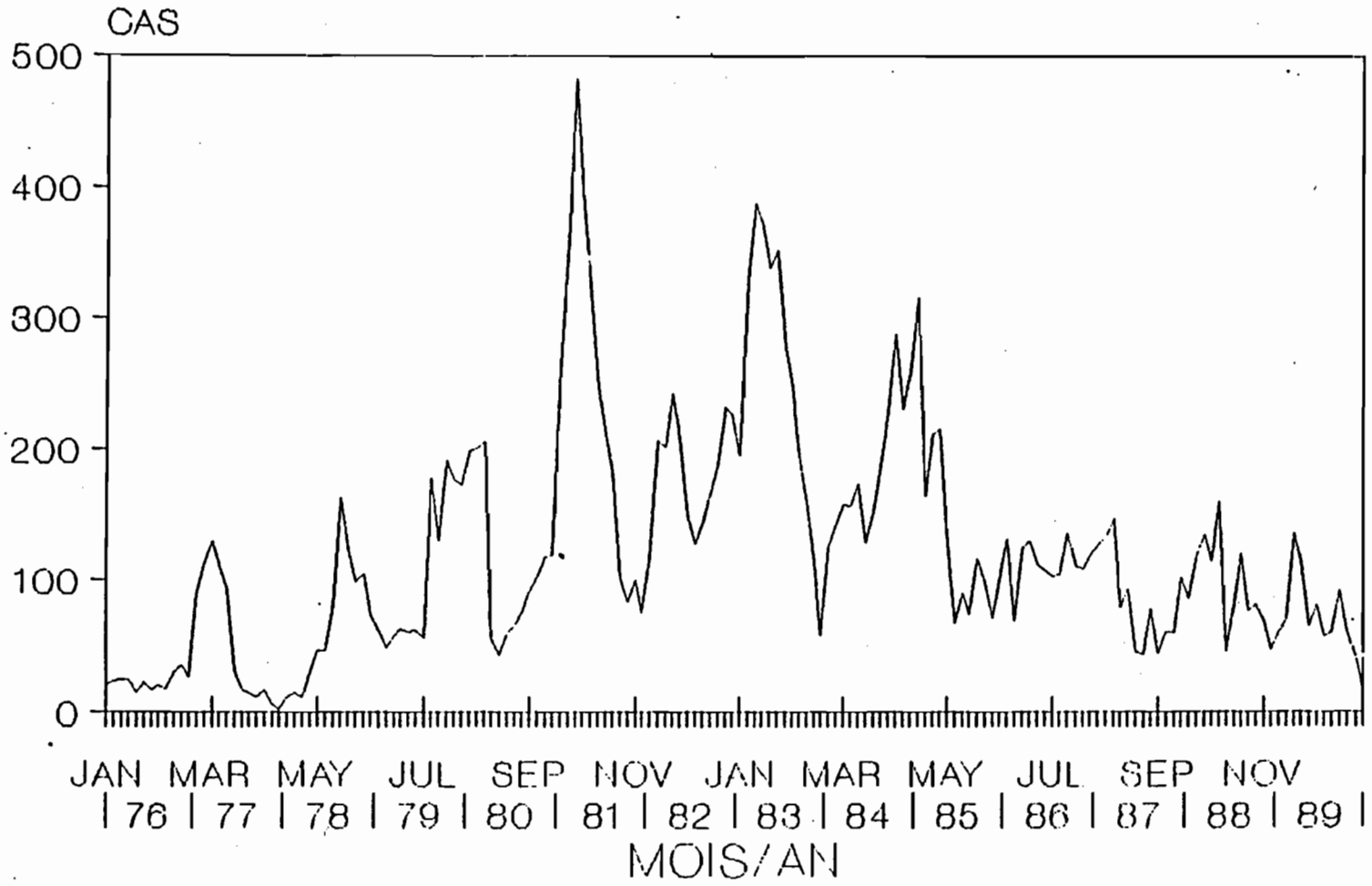
CAS DE ROUGEOLE DECLARES, 1980-89
POSTES SENTINELLES, KINSHASA ZAIRE



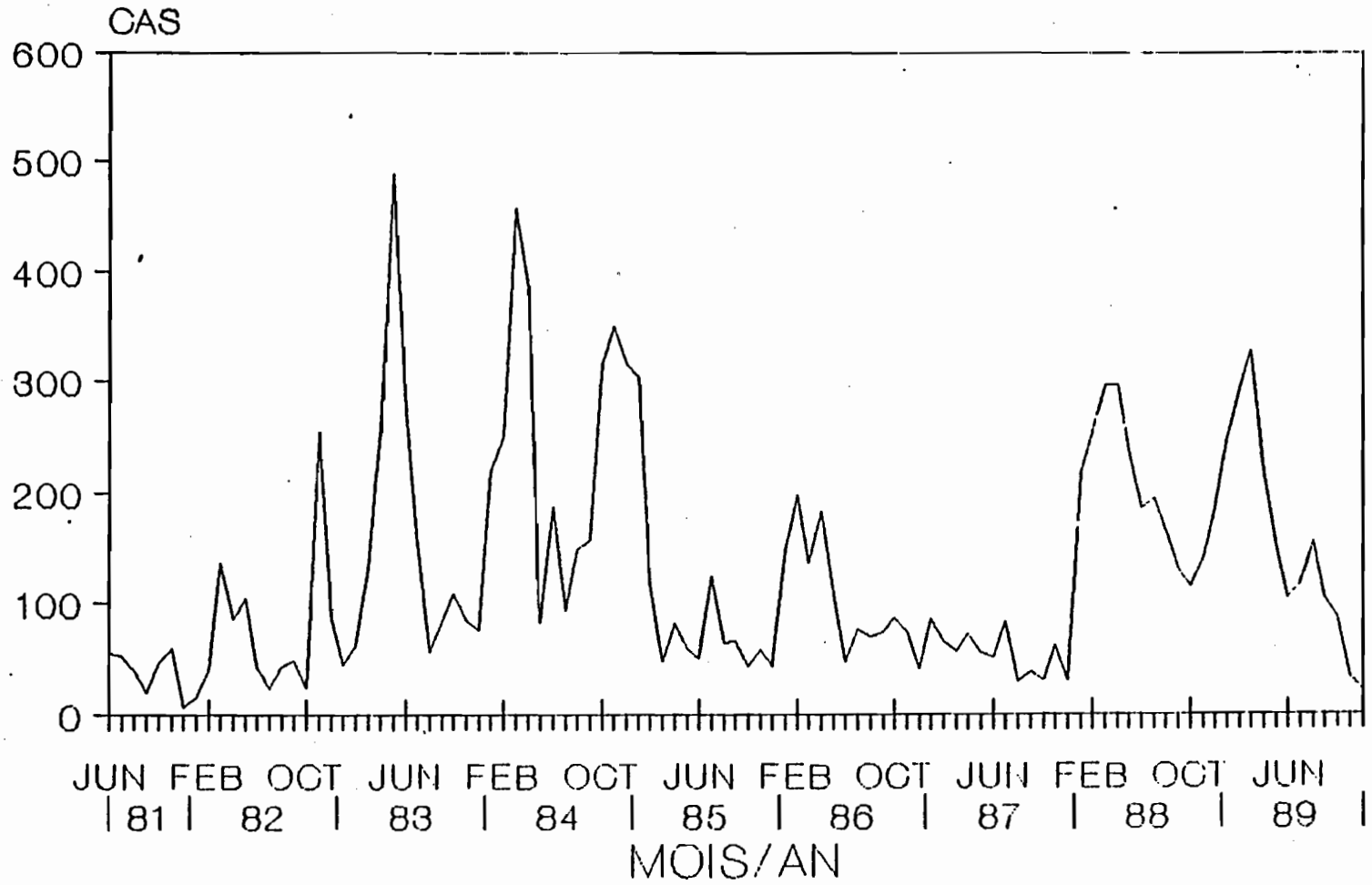
CAS ET DECES DE ROUGEOLE, 1980-89
POSTES SENTINELLES, KINSHASA ZAIRE



CAS DE ROUGEOLE DECLARES 1976-89
HOPITAL MAMA YEMO, KINSHASA



CAS DE ROUGEOLE DECLARES 1981-1989
CENTRE HOSPITALIER KINGASANI



DISTRIBUTION DES CAS DE LA ROUGEOLE PAR AGE, KINSHASA 1981-1989 (%)

Age	1981	1982	1983	1984	1985	1986	1987	1988	1989
0- 3m	27	27	28			31	33	33	29,5
9-23m	38	42	43	72	74	41	37	36	42
24m +	35	30	28	26	27	28	30	31	28,5
décès>23m	33	20	31	23	15	23	13		13

* Environ 30% des cas chez les enfants de moins de 9 moins

environ 30% des cas chez les enfants de plus de 2 ans.

IMPACT DU PROGRAMME

Assumptions :

1. Basse couverture = couverture selon les cartes de vaccination par enquête de sondage

2. Couverture élevée = couverture selon les rapports de routine 1983-1985 ou selon les enquêtes de sondage en ajoutant l'histoire verbale de la vaccination (1986-1987)

3. Faible efficacité vaccinale = 75% (Résultat d'une étude récente)

4. Grande efficacité vaccinale = 85% (Résultat attendu pour l'Afrique)

5. Dans l'absence de vaccination, 100% d'enfants vont contracter la rougeole.

6. L'incidence annuelle moyenne (cohort à la naissance): 5% de la population totale.

7. Taux de létalité totale des cas : 5%

De 1977 - 1987 :

- 534.761 à 813.156 cas de rougeole évités
- 26.738 à 40.658 décès aigus de rougeole évités
- Réduction de 41% à 61% des cas de rougeole attendus et décès.

PROJET DE CONTROLE DE LA ROUGEOLE A KINSHASA

Objectif global :

Réduire le nombre total des cas de rougeole rapportés et de ceux des enfants de moins de 9 mois. Pour cela, il faut :

(1) Introduire un nouveau vaccin anti-rougeoleux, capable de protéger les enfants dès l'âge de 6 mois : le vaccin Edmonston-Zagreb (E-Z).

(2) Augmenter la couverture vaccinale à 90% d'ici 1992.

Objectifs Spécifiques

- Réduire le Taux d'incidence de la rougeole de 30% à la fin de 1990 et de 45% à la fin de 1992.

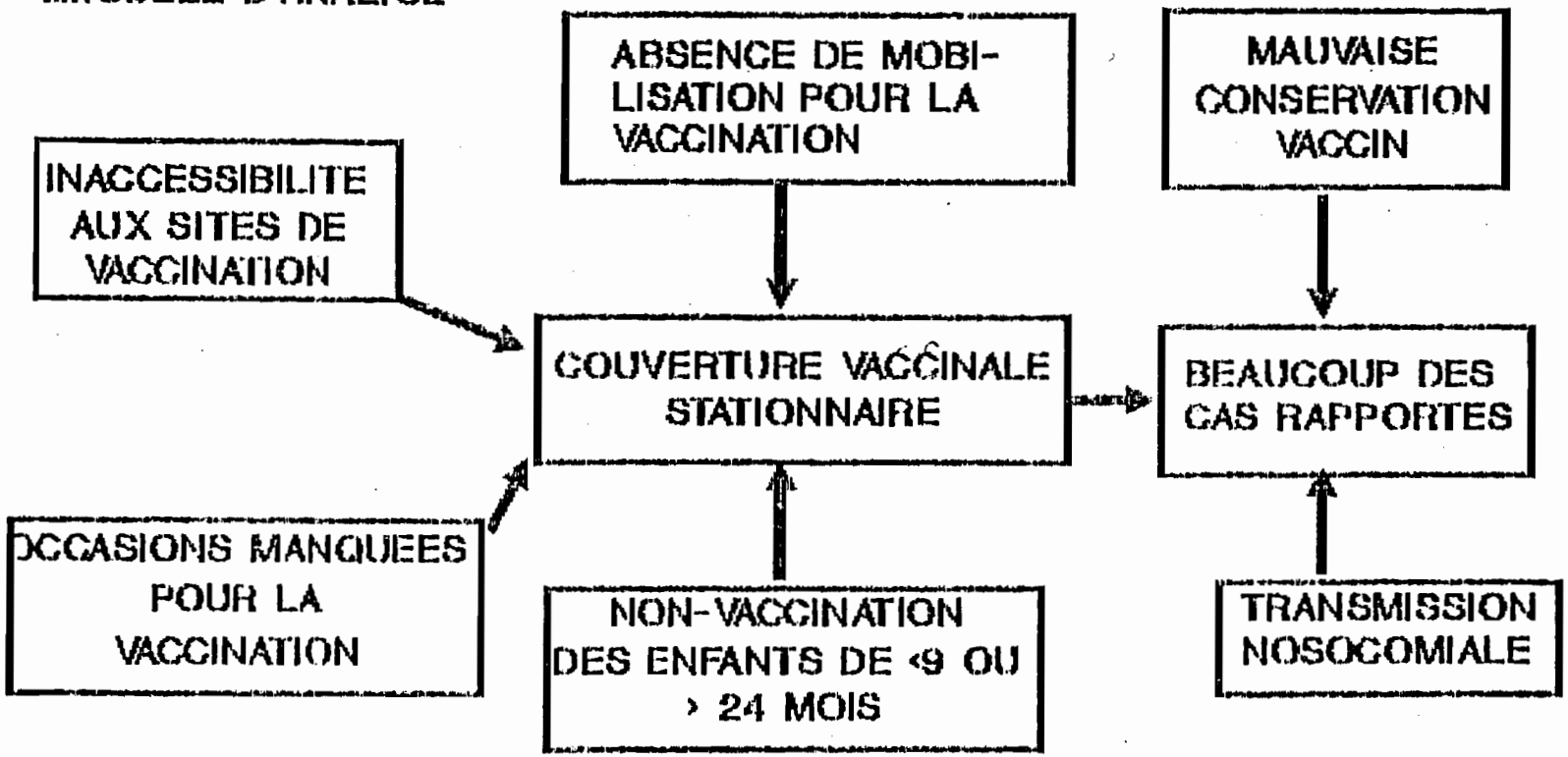
Année	CV	Efficacité Vaccinale
1989	60 %	90 %
1990	75 %	90 %
1991	85 %	90 %
1992	90 %	90 %

- La réduction attendue pour 1990 :
  (CV 1990 x EV enfants 6-8m)*30%+(CV*EV 1990-CV*EV 1987 enfants 9 mois et +)*70 %
  = 67,5 % * 30%+20% * 70%= 34 %

- La réduction attendue pour 1992 :
  81% * 30%+34%*70%= 48 %

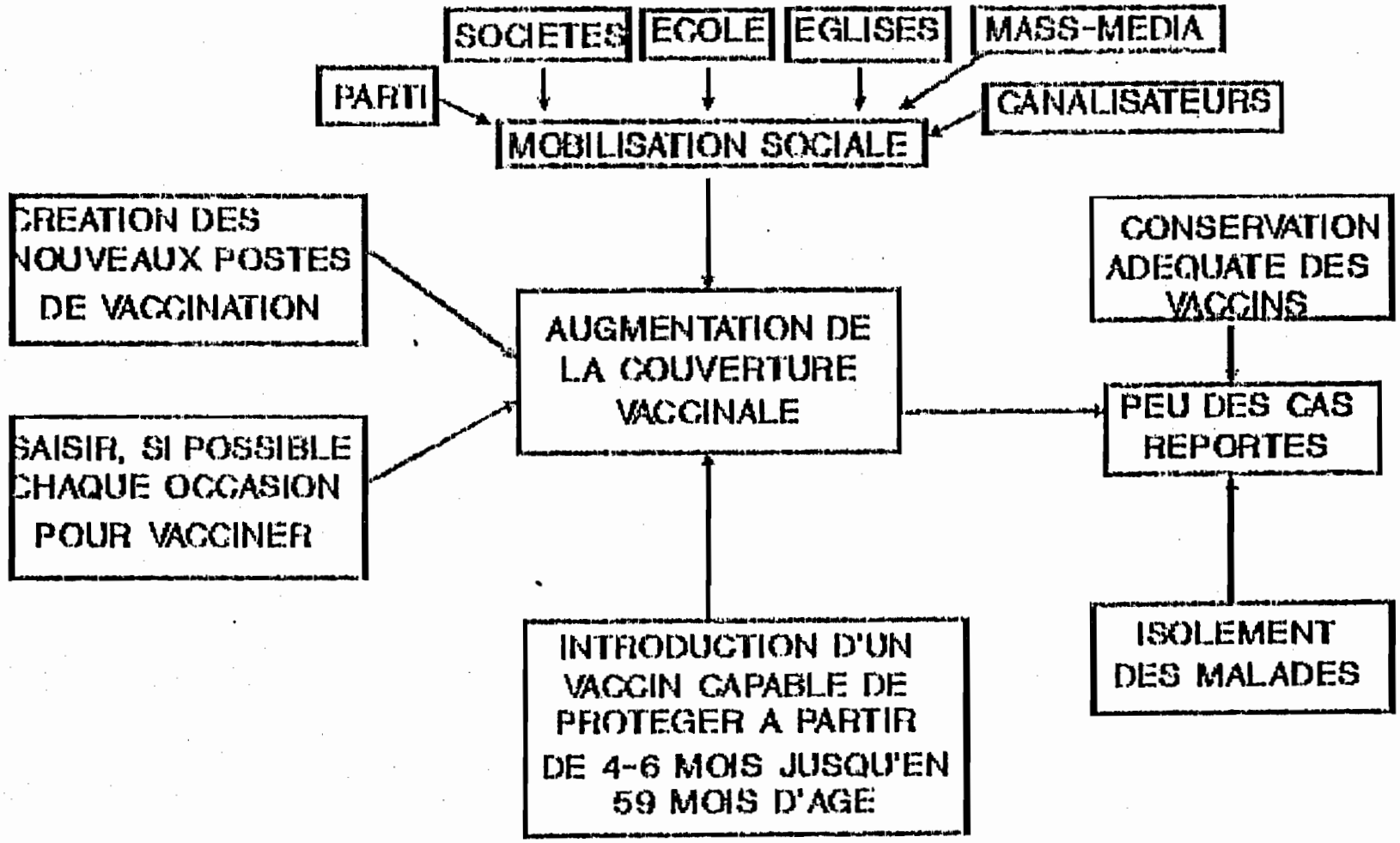
ROUGEOLE A KINSHASA
1.MODELE D'ANALYSE

1.MODELE D'ANALYSE



* LES OCCASIONS MANQUEES POUR LA VACCINATION ONT ETE IDENTIFIEES DANS PRESQUE TOUS LES CENTRES VISITES.
* * LES ENQUETES EFFECTUEES A KINSHASA ONT IDENTIFIE DES ZONES PEU COUVERTES AVEC LE PROGRAMME DE VACCINATION.

2. MODELE DE SOLUTION



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  = 67,5 % * 30%-20% * 70%= 34 %

- La réduction attendue pour 1992 :
  81% * 30%+34%*70%= 48 %

STRATEGIES

1. Augmenter la couverture vaccinale anti-rougeoleuse :

   a. Accroître la supervision pour s'assuer que les infirmiers saisissent tout contact avec les enfants pour les vacciner.

   b. Augmenter la disponibilité de vaccination :

      - Emettre les cartes de vaccination dans les maternités
      - Vacciner les enfants dans les pavillons de pédiatrie des grands hôpitaux
      - Organiser des activités avancées pour les Zones de faible couverture
      - Vacciner les enfants de 24 à 59 mois non vaccinés avant.

   c. Augmenter la mobilisation sociale

      - Les églises
      - A travers les CS/Mamans et Tata Bongisa
      - Mass média (?)

2. Introduction du vaccin E-Z à partir de 6 mois d'âge :

   a. Obtention du vaccin

      - 500.000 doses pour la 1ère année (mi-1989-mi 1990)
      - 300.000 doses pour la 2ème année (mi-1990-mi 1991)

   b. Mesure de l'efficacité du vaccin à travers le labo de l'OMS

   c. Indicateurs de vaccin pour le transport en utilisant la chaine de froid.

INTRODUCTION ET UTILISATION DU VACCIN E-Z A KINSHASA

- Arrivée de 300.000 doses de vaccin E-Z à Kinshasa en Août 1989.
- Début Septembre 1989, plusieurs réunions avec les gens du terrain (SPT, BDOM, etc...) pour expliquer :

    - Points de ressemblance des vaccins E-Z et Schwanz (dose, voie d'administration, réaction vaccinale,...)
    - Nécessité de remettre tous les flacons du vaccin Schwarz avant de prendre le vaccin E-Z.
    - L'identification des enfants cibles à vacciner (6-8 mois et de 9-59 mois pour les non vaccinés antérieurement).

- Prise de contact avec le personnel du CPF Kalamu pour l'étude de Séroconversion avec le vaccin E-Z.

- Le 15 Septembre 1989, distribution du vaccin E-Z aux différents centres qui vaccinent à Kinshasa.

Choix du CPF Kalamu pour l'étude de Séroconversion :

1. Distance : le centre est situé à environ 10 minutes de nos bureaux

2. Fréquentation : le centre est situé au centre et plusieurs mamans, de toutes les directions, le fréquentent

3. Possibilité du suivi dans le centre

Etude de Séroconversion :

1. Environ 183 enfants ont été enrolés dans l'étude

2. Il y a eu un suivi de 75%.

EVALUATION

1. Couverture Vaccinale

   - Données de routine
   - Enquête de CV (Avril 90)

2. Incidence et mortalité de la Rougeole

   - Surveillance sentinelle pour cas et décès
   - Nombre et % des cas chez les enfants de < 9 mois

3. Efficacité du vaccin anti-rougeoleux (E-Z)

   - % de la couverture et % des cas chez les enfants vaccinés
   - Etude de séroconversion au CPF Kalamu
   - Etude spéciale en cas d'épidémie.

CAS ET DECES ROUGEOLE (HOSPITALISES)
POSTES SENTINNELS, KINSHASA (JANVIER, FEVRIER 1989)

P.S.	MOIS	0-8 mois		9 - 23 mois		24 mois +		Inconnus	Total	
		cas	décès	cas	décès	cas	décès		cas	décès
Cliniques Universitaire Kinshasa	01	5	1	4	2	6	1	1	16	1
Cliniques Ngaliema	01	4	-	8	-	5	-	1	18	0
Hop. Kintambo	01	4	-	4	1	-	-	-	8	1
Hop. Mama Yemo	01	14	-	34	3	13	2	-	61	10
Cliniques Universitaire Kinshasa	02	1	-	4	-	2	-	2	9	0
Cliniques Ngaliema	02	5	-	9	-	8	-	-	21	0
Hop. Kintambo	02	10	1	19	-	1	-	-	30	1
Hop. Mama Yemo	02	27	6	27	4	17	2	-	71	12
Ville de Kinshasa	01	27	1	50	11	24	3	2	103	15
Ville de Kinshasa	02	43	7	58	4	28	2	2	131	13
		70	8	108	15	52	5	4	234	28

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CAS ET DECES ROUGEOLE (HOSPITALISES)
POSTES SENTINNELS, KINSHASA (JANVIER, FEVRIER 1990)

P.S.	MOIS	0 - 8 mois		9 - 23 mois		24 mois -		Total	
		cas	décès	cas	décès	cas	décès	cas	décès
Cliniques Universitaire Kinshasa	01	1	-	2	1	1	-	4	1.
Cliniques Ngaliema	01	-	-	-	-	2	-	2	-
Hop. Kintambo	01	7	-	-	-	-	-	7	-
Hop. Mama Yemo	01	4	1	8	3	16	1	28	5
Cliniques Universitaire Kinshasa	02	1	-	-	-	-	-	1	-
Cliniques Ngaliema	02	-	-	1	-	4	-	5	-
Hop. Kintambo	02	5	-	3	-	-	-	8	-
Hop. Mama Yemo	02	11	1	14	3	20	2	45	5
Ville de Kinshasa	01	12	1	10	4	19	1	41	6
Ville de Kinshasa	02	17	1	18	2	24	2	59	5
		29	2	28	6	43	3	100	11

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Epidemic Measles in Burundi: Implications for Maturing EPIs

Dr. R. Chen

- Slide -

Before I begin, I wish to acknowledge my collaborators from the the Ministry of Health, CDC, and UNICEF.

- Slide -

Health sector Muyinga is located in the north-east corner of Burundi. It is one of 24 health sectors in the country and has an estimated population of 350,000 persons.

- Slide -

Measles vaccine, targetted at children 9 to 23 months of age, was introduced into the Burundi EPI in 1981 (pointer). Measles vaccination was also introduced in Muyinga in 1981 by a mass campaign (pointer). Using the administrative method, measles vaccination coverages in Muyinga have generally exceeded the national average (pointer).

- Slide -

It was with some surprise, therefore, that a large measles epidemic occurred in Muyinga during late 1988, just when coverages have reached its highest levels since 1981. During the peak of the epidemic, approximately 1400 cases were reported during one month alone. The epidemic raised questions about its cause as well as the effectiveness of EPI in controlling measles.

- Slide -

To help answer these questions, a series of studies were conducted during 1989. First, the measles surveillance data was reviewed and analyzed. Next, to obtain a more accurate view of

three years (pointer). The marked reduction of measles morbidity and mortality nationally as a consequence of EPI is also well demonstrated on this graph, again with varicella incidence as a control. Using an average of the 1980 to 1982 reported incidence rates as the baseline (pointer),

- Slide -

measles vaccination has prevented over 177,000 cases and 3500 deaths in Burundi since 1981, and prevented over 12,000 cases and 240 deaths in Muyinga alone.

- Slide -

The surveillance data suggest also that a shift in the age distribution of the cases has occurred in Muyinga. The proportion of reported cases 24 months or older has increased from 30% in 1985 to 57% in 1988.

- Slide -

Turning to the results of the census. A total of 1902 children in 1216 households were studied. Three hundred twenty two (322) or 17% were reported by their guardian to have had measles during the epidemic.

- Slide -

This table shows age-specific measles incidence rates in the censused area. As expected, incidence increases with waning of maternal immunity, peaks for children 9-23 months old, then declines as some of the older children are immune from previous disease.

- Slide -

This slide examines the age-specific case-fatality ratio among

children with or without measles during the census in January and September of 1989. The difference between the two case-fatality ratios (pointer) is the excess mortality attributable to measles. In January, the excess mortality for children outside of the current 9-23 months target age group while less than that for children in the target age, is still considerable.

The followup census nine months later, shows that the total excess mortality has increased from 2.5% to 4.2% (pointer). Children outside of the current target age group continue to have significant mortality rates relative to children in the target age, especially the younger children.

- Slide -

One program measure examined in the census was vaccination card coverage. Coverage was greater or equal to 74% after 2 months of age. Another program measure is measles vaccine coverage. These analyses from the census correlate well with the coverage estimates for Muyinga obtained via the administrative method.

- Slide -

Vaccine efficacy stratified by age at vaccination for children 12-23 months old children during the outbreak are shown on this slide. While on initial inspection, these efficacies may appear to be low. Two methodologic biases were inherent in the study design. Children without vaccination cards were considered to be unvaccinated and secondly, the guardian's diagnosis of measles was accepted as true. Both biases tend to falsely lower vaccine efficacy. Taking these biases and the target age into account,

the vaccine efficacy is probably within the expected range.

- Slide -

Turning from the census to the retrospective cohort study of the primary school in Cumba. The attack rate in the school was 9%. But more importantly, 89% of the cases were index cases in their families and 90% of the secondary cases were in younger siblings.

Discussion

The occurrence of a large epidemic in Muyinga had raised questions regarding the impact of the EPI. The results of the subsequent investigations are reassuring.

- Slide -

The Muyinga EPI has achieved remarkable progress and success since its introduction in 1981. This success is evidenced by:

- Major reductions in measles morbidity and mortality rates.
- An increase in the inter-epidemic period.
- A shift in cases towards older age groups.
- High measles vaccine and vaccination card coverage.
- Vaccine efficacy within expected limits.

- Slide -

If the program has been successful, how do we explain the epidemic? The short answer is that for a highly infectious disease like measles, epidemics will occur whenever enough susceptibles accumulate. Even with a maturing EPI in Muyinga,

two sources of susceptibles exist: 1) less than 100% vaccine coverage and 2) less than 100% vaccine efficacy. Over a number of years, given low incidence of endemic disease, enough susceptibles accumulate for an epidemic to occur. Paradoxically, this epidemic is likely to hit just when the vaccine coverage and the disease has reached its historical highs and lows, respectively. Thereby raising concerns about the program and affecting the morale of the staff. For those interested, these issues will be further discussed during a workshop tomorrow afternoon.

The studies also confirm that the current measles vaccination strategy targetted at 9-23 months alone may need modification in Burundi. Children outside this target age group constituted over 50% of the cases during the epidemic and they had significant excess mortality rates. Finally, older school-age children may be important sources of transmission to younger siblings.

These then are the findings of the studies. I will now ask Dr. Bizimana to speak on the implications of these findings for the Burundi EPI.

NEW STRATEGIES FOR CONTROLLING MEASLES IN LESOTHO

MRS. M NKUEBE

Lesotho has made great efforts not only to increase measles immunization coverage, but also to control the disease.

The estimated coverage for children under age 1 year in 1985 was 65%, and increased to 69% in 1989. The percent coverage for children ages 12 to 23 months in 1988 was 78% according to the International EPI Evaluation in Lesotho. In addition to high coverage, measles incidence has decreased from 50 per 10,000 in 1985 to 7.7 per 10,000 in 1989.

The age distribution of reported measles cases has, in recent years, shifted from the under age 1 year target group to children ages 6 to 10 years. This shift is perhaps a result of relatively significant vaccination coverage in the target age group.

This new situation has raised some concerns in the country:

a) Outbreaks disrupt school attendance.

b) Infected children burden health facilities for curative services.

c) There is possible cross infection from these older children to infants who are not yet immunized.

The EPI Programme studied available data on measles in mid-1988 to identify what options there were, if any, that can be used to address the problem of measles in primary schools. The following options were identified:

a) Continue the current immunization programme.

b) Eliminate missed opportunities for immunization.

c) Increase immunization coverage in low-coverage areas, such as geographically inaccessible areas.

d) Begin a two-dose vaccine schedule, for example, vaccination at 9 months and later in childhood.

e) Begin vaccination at school entry.

f) Conduct one-time mass vaccination of primary school children.

The EPI central team made countrywide visits to discuss these options with the 19 Health Service Area (or HSA) teams, to find out which one or ones would be most feasible given the resources available. The strategies subsequently adopted were: 1) strengthening of the current programme and 2) the one-time immunization of primary school children to get rid of the susceptible pool.

The following steps were taken to implement these strategies:

(1) Continue to strengthen the current programme by:

a) requesting health workers to have vaccinations given on demand, rather than on specific days;

b) strengthening the cold chain by reviewing the system, training and monitoring health workers; and

c) creating public awareness to the dangers of measles and the benefits of vaccination.

(2) Immunize primary school children as part of the one-time mass vaccination option. Some HSA Public Health Sections integrated the activity into their school health programmes, while others with less resources conducted outbreak control only. 65,000 primary school children have been vaccinated to date in different HSAs, representing an estimated 20% of total primary school children. A future goal is to find the means of completing measles vaccination in the rest of the schools, especially in the urban and peri-urban areas.

The option of two-dose schedule raised the question: are children protected against measles at school entry, and if not, shall we begin compulsory school immunization at school entry? A study has just been done to determine the measles immune status of first school entrants. 610 children from 60 randomly-selected schools were bled during January and February 1990, and the Central Laboratory in Maseru used the ELISA test to analyze the samples.

The result available so far is: the total percentage of seropositive children was 84%. Further analysis is needed to determine whether the degree of protection is adequate to prevent outbreaks. Once the analysis is completed, the Programme will be able to decide what measles immunization schedule would be best for the country.

SURVEILLANCE ACTIVE DE LA POLIOMYELITE PARALYTIQUE
DANS LA VILLE DE KINSHASA, ZAIRE.
DR. OKWO, B.

TRANSPARENT D'INTRODUCTION

JE VAIS PRESENTER LES RESULTATS D'UN PROJET DE SURVEILLANCE ACTIVE SUR LA POLIO MENEE AU ZAIRE PAR L'EQUIPE DONT LES NOMS SONT PROJETES SUR CE TRANSPARENT. JE DOIS MENTIONNER LES DURS EFFORTS DE CELUI QUI A ETE CONSTAMMENT ACTIF SUR LE TERRAIN, L'INFIRMIER LUBAMBA ET LA CONTRIBUTION DU DR. VERNON, ALORS EPIDEMIOLOGISTS DU PROJET, TANT DANS LA SUPERVISION QUE DANS L'ANALYSE ET LA MISE EN FORME DES DONNEES QUE JE VAIS PRESENTER. L'ETUDE A DONC ETE MENEE PAR LE CCCD/ZAIRE ET A RECU UNE ASSISTANCE SUBSTANTIELLE DE ROTARY INTERNATIONAL ET DE L'UNICEF.

TRANSPARENT 1:

SUR PLUS DE 20 ANS, LES CAS DE POLIO PARALYTIQUE ONT ETE RAPPORTES PAR LE PLUS GRAND CENTRE DE REHABILITATION PHYSIQUE DE LA VILLE DE KINSHASA - CRHP/GOMBE.
CE TRANSPARENT PRESENTE L'INCIDENCE DE LA POLIO SUR BASE DES RAPPORTS DE CE CENTRE ET ON PEUT REMARQUER LA TENDANCE PROGRESSIVE ET CONTINUELLE A LA BAISSE DE L'INCIDENCE ESTIMEE DEPUIS LE LANCEMENT DU PROGRAMME.

TRANSPARENT 2:

CETTE BAISSE D'INCIDENCE FUT OBSERVEE POUR DES TAUX DE COUVERTURE VACCINALE SITUEE ENTRE 50 - 60%. LA COUVERTURE VACCINALE PRESENTEE EN ROUGE SUR CE TRANSPARENT A ETE DETERMINEE SUR BASE D'ECHANTILLONNAGE EN GRAPPES, CONSIDERANT SEULEMENT LES ENFANTS PORTEURS D'UNE CARTE DE VACCINATION.

TRANSPARENT 3:

NOUS AVONS ENTREPRIS CE PROJET DE SURVEILLANCE ACTIVE D'OCTOBRE 88 A SEPTEMBRE 89 AVEC LES OBJECTIFS SUIVANTS:

1. NOUS SOUHAITIONS DETERMINER QUELLE PROPORTION DE L'INCIDENCE REELLE DE LA POLIO PARALYTIQUE SURVENUE A KINSHASA ETAIT ENREGISTRE PAR NOTRE SYSTEME DE SURVEILLANCE SENTINELLE;

2. NOUS VOUDRIONS EGALEMENT IDENTIFIER LES FACTEURS DE RISQUE, Y COMPRIS LE ROLE DE L'INFECTION PAR LE VIRUS DU SIDA ET L'EFFICACITE VACCINALE, EN UTILISANT LA METHODE CAS-TEMOINS.

3. NOUS SOUHAITIONS ENFIN DETERMINER LES SEROPTYPES DE POLIOVIRUS SAUVAGE CIRCULANT DANS LA VILLE DE KINSHASA ET S'ASSURER DE LA CAPACITE DE LABORATOIRE NATIONAL DE VIROLOGIE A CULTIVER LE VIRUS.

TRANSPARENT 4:

EN VUE D'ETABLIR UN RESEAU DE SURVEILLANCE NOUS AVONS ENTREPRIS DE RENCONTRER LES MEDECINS ET INFIRMIERS RESPONSABLES

DE 27 FORMATIONS MEDICALES OU DES CAS DE HANDICAP MOTEUR PEUVENT ETRE VUS EN CONSULTATION, A SAVOIR,

- LES RESEAUX URBAINS DES CENTRES DE REHABILITATION APPELES "VILLAGE BONDEKO", CONCUS IL Y A QUELQUES ANNEES PAR DES ONGS POUR ASSURER L'EDUCATION ET L'ENCADREMENT PROFESSIONNEL DE JEUNES HANDICAPES PHYSIQUES;

- LES SERVICES DE KINESITHERAPIE DE TOUS LES HOPITAUX DE LA VILLE

- LES SERVICES DE PEDIATRIE ET

- LE CENTRE NATIONAL DE NEUROLOGIE ET DE PSYCHIATRIE.

AU TOTAL, 27 FORMATIONS SANITAIRES ONT ETE RETENUES COMME SITES SENTINELLES. UN INFIMIER, EMPLOYE A PLEIN TEMPS POUR CETTE ETUDE, A SILLONNE TOUTES LES FORMATIONS SANITAIRES CHAQUE SEMAINE OU TOUS LES 15 JOURS POUR RECUEILLIR LES RAPPORTS SUR LES CAS. LES RESPONSABLES DES FORMATIONS SENTINELLES ONT RECU DE KITS POUR LA COLLECTE ET LA CONSERVATION DES SELLES DES CAS SUSPECTS.

TRANSPARENT 5:

CE TRANSPARENT PRESENTE LES DEFINITIONS DES CAS UTILISES DURANT L'ETUDE:

- UN CAS SUSPECT FUT DEFINI COMME TOUT CAS DE PARALYSIE CHEZ UN ENFANT DE MOINS DE 15 ANS;

- UN CAS PROBABLE FUT DEFINI COMME AYANT UNE PARALYSIE FLASQUE, AIGUE, ASYMETRIQUE, SANS PERTE DE SENSIBILITE, CHEZ UN ENFANT DE MOINS DE 15 ANS, EN L'ABSENCE DE TOUTE AUTRE CAUSE EVIDENTE;

- UN CAS CONFIRME FUT DEFINI COMME TOUT CAS SUSPECT OU PROBABLE AVEC UNE PARALYSIE TYPIQUE DE POLIO 60 JOURS APRES LE DEBUT DE LA MALADIE OU UNE CULTURE DE POLO POSITIVE OU DECEDE OU ENCORE PERDU DE VUE. CES DEFINITIONS, SONT A QUELQUES DIFFERENCES PRES, SEMBLABLES A CELLES DE L'OMS.

TRANSPARENT 6:

PENDANT LES 12 MOIS DE CETTE ETUDE 159 CAS SUSPECTS ONT ETE NOTIFES DONT 44% DES CAS PAR LE PLUS GRAND CENTRE DE REHABILITATION PHYSIQUE (EN BLEU SUR LE TRANSPARENT).

TRANSPARENT 7:

22 CAS SUSPECTS ONT ETE EXCLUS; LES DIAGNOSTICS RETENUS POUR CES CAS ETANT: PARALYSIE CHRONIQUE DUE A UNE INFECTION POLIO REMONTANT A QUELQUES ANNEES; PARALYSIES SPASTIQUES DUES A DES CAUSES VARIABLES; ET PARALYSIES TRANSITOIRES DUES A DES INJECTIONS INTRAMUSCULAIRES A LA FESSE.

132 CAS ONT ETE INCLUS DANS L'ANALYSE ET SONT INDIQUES SUR CE TRANSPARENT. ON REMARQUE QUE UN PEU PLUS DE LA MOITIE SONT RAPPORTES PAR LE CRHP 53%), NOTRE CENTRE SENTINELLE DE ROUTINE ET 22% PAR L'HOPITAL MAMA YEMO, LE PLUS GRAND HOPITAL DE LA VILLE AVEC 2000 LITS, SITUE A QUELQUES 5 MINUTES DE MARCHE DU CRHP. LES AUTRES SITES ONT RAPPORTE 26% DU TOTAL. CEPENDANT, QUELQUES CAS ONT ETE VUS DANS PLUSIEURS SITES SENTINELLES; DANS CE CAS, ILS SONT RAPPORTES COMME ETANT VUS PAR LE CRHP OU L'HOPITAL MAMA YEMO.

TRANSPARENT 8:

LA DISTRIBUTION DES CAS DE POLIO PENDANT L'ANNEE DE L'ETUDE EST PRESENTEE ICI EN TENANT COMPTE DU MOIS DU DEBUT DE LA MALADIE EST PRESENTE ICI. PLUS DE LA MOITIE DES CAS, SOIT 53%, SONT SURVENUS ENTRE LES MOIS DE MARS ET DE MAI, CORRESPONDANT A LA PERIODE PLUVIEUSE DANS LA VILLE DE KINSHASA.

TRANSPARENT 9:

CE TRANSPARENT PRESENTE LA DISTRIBUTION DES CAS PAR AGE TANT POUR LES CAS RETENUS QUE POUR LES CAS EXCLUS: L'AGE MEDIAN FUT DE 20 MOIS ET LA MOYENNE 25 MOIS POUR LES CAS RETENUS COMME POLIO. 25 CAS SOIT 20% SONT DE MOINS D'UN AN ET 25% DU TOTAL SONT AGES DE PLUS DE 3 ANS.

TRANSPARENT 10:

LE CALCUL DE L'INCIDENCE SPECIFIQUE PAR ZONE DE RESIDENCE DANS LA VILLE MONTRE QUE L'INCIDENCE LA PLUS ELEVEE SE RETROUVE DANS LA ZONE DE NSELE, OU UN NOMBRE REDUIT DE CAS S'EST PRODUIT DANS UNE POPULATION RELATIVEMENT PETITE).

TROIS AUTRES ZONES, MASINA, KIMBASEKE ET KINSHASA COMPTENT 44% DES CAS TOTAUX. ET CES ZONES ONT EFFECTIVEMENT UNE COUVERTURE BASSE, SELON UNE SERIE D'ENQUETES DE COUVERTURE MENEE A LA FIN DE L'ANNEE 1988 ET DEBUT 1989.

TRANSPARENT 11:

56 ECHANTILLONS DE SELLES ONT ETE OBTENUS DE NOS CAS SUSPECTS, SOIT 36% DE TOUS LES CAS NOTIFIES. A CE JOUR, 50 CULTURES SE SONT REVELEES POSITIVES SELON LES ANALYSES FAITES TANT DANS NOTRE LABO DE VIROLOGIE DE KINSHASA (INSTITUT NATIONAL DE LA RECHERCHE BIOMEDICALE) QUE DANS LE LABORATOIRE DES ENTEROVIRUS DU CDC/ATLANTA.

DE CES 50 ECHANTILLONS POSITIFS, 4 SONT POSITIFS POUR DES ENTEROVIRUS AUTRES QUE LA POLIO ET 13 SONT POSITIFS POUR LE POLIOVIRUS SAUVAGE TYPE 1.

TRANSPARENT 12:

CE TRANSPARENT RESUME LES DELAIS ENTRE LE DEBUT DE LA MALADIE ET LA NOTIFICATION DES CAS: POUR LES CAS CONFIRMES, LE DELAI MOYEN FUT DE 21 JOURS ET LA MEDIANE DE 14 JOURS; POUR LES CAS EXCLUS LA MOYENNE EST DE 9 JOURS ET LA MEDIANE 51 JOURS.

TRANSPARENT 13:

VOICI LES RESULTATS DES EVALUATIONS DE PERFORMANCE DE NOTRE SYSTEME DE SURVEILLANCE ACTIVE, BASEES SUR DES INDICATEURS TIRES DU GUIDE POUR L'ERADICATION DE LA POLIO DANS LES AMERIQUES: LES BARRES EN BLEU INDIQUENT LES PERFORMANCES DE NOTRE SYSTEME TANDIS QUE LES BARRES HACHUREES EN ROUGE INDIQUENT LES CIBLES PROPOSEES, CAD EN GENERAL 90%.

- NOUS AVONS RECU 90% DE TOUS LES RAPPORTS ATTENDUS DE MANIERE REGULIERE ET A TEMPS;
- PLUS DE LA MOITIE, SOIT 55% DE TOUS LES RAPPORTS ONT ETE OBTENUS DANS LES 2 SEMAINES SUIVANT LE DEBUT DE LA MALADIE (ET LE DELAI LE PLUS LONG FUT DE 4 MOIS DANS CETTE ETUDE);
- NOUS AVONS OBTENU DES ECHANTILLONS DE SELLES CHEZ 37% DE NOS CAS;
- ENFIN SEULEMENT 30% DES CAS PROBABLES ONT PU ETRE REVUS AU 60E JOUR DU DEBUT DE LA MALADIE.

TRANSPARENT 14:

EN CONCLUSION,

- CETTE ETUDE A DEMONTRE QU'UN SYSTEME DE SURVEILLANCE ACTIVE DE LA POLIO PARALYTIQUE EST FAISABLE DANS NOS PAYS;

- ELLE SUGGERE QUE LE SYSTEME DE SURVEILLANCE DE LA POLIO DANS LA VILLE DE KINSHASA PEUT ETRE BASE SUR 1 OU 2 SITES SENTINELLES DE REFERENCE;

- ELLE A PERMIS L'IDENTIFICATION DE POCHES DE FAIBLE COUVERTURE VACCINALE;

- ELLE CONFIRME LA CIRCULATION DU POLIOVIRUS TYPE 1;

- ELLE DEMONTRE QU'EFFECTIVEMENT LA VACCINATION EST EN TRAIN DE DIMINUER LA MORBIDITE DUE A LA POLIO PARMI LES ENFANTS AFRICAINS.

Notes for presentation on tetanus toxoid and tetanus seroprevalence survey in Burundi

Dr. O. Nshimirimana

Overhead 1

Dear colleagues: As you are aware, the first EPI target disease reduction target facing us in the 1990s is the elimination of neonatal tetanus. Herd immunity will not come to our aid in reaching this goal. It can be reached only by ensuring that every newborn is protected by maternal antibodies or by safe cord care, or, preferably, by both. The subject of this presentation is a study undertaken to improve our understanding of how to monitor the level of protection achieved by our tetanus toxoid vaccination programs.

The study was a national survey of tetanus toxoid coverage and tetanus seroprevalence among recent mothers in Burundi in February, 1989. It was conducted by the EPI Division of Burundi's Ministry of Health, which is under the direction of Dr. Fidele Bizimana. Technical assistance was furnished by consultants from CDC/Atlanta, the CCCD Project/Burundi, UNICEF/Burundi, and the WHO Regional Office in Bujumbura. Although I did not participate in the survey, I have offered to present the findings to you because of their importance to me as the Director of Hygiene and Prevention in Burundi.

Overhead 2

Burundi's EPI began in 1979. During the first 10 years of the program, the target group for tetanus toxoid was pregnant women. The recommended schedule was two doses of tetanus toxoid during each pregnancy.

In the second quarter of 1988, in response to WHO's recommendations, the target group was changed to women of childbearing age and schoolgirls, and the five-dose schedule was adopted which culminates in life-long immunity. In addition, a tetanus toxoid vaccination card was issued which is meant to be kept for life.

Overhead

Some of the problems of monitoring tetanus toxoid coverage can be described by reviewing calculations for the estimate of tetanus toxoid coverage in 1988 by the administrative method. This estimate is called "administrative" because it is based on service statistics and census projections. It is assumed that each dose of TT2, TT3, TT4 and TT5 given to a pregnant women in 1988 resulted in a "covered" newborn. Therefore, the proportion of newborns in 1988 "covered" by the TT vaccinations their mothers received, is taken to be the total number of doses of

TT2, TT3, TT4 and TT5 given to pregnant women divided by the estimated number of newborns. As you can see, this method yields a coverage estimate of 58% for Burundi in 1988. All countries report their coverage by this method to WHO annually.

We see several major potential problems with the accuracy of this method. First, it assumes that the newborns of pregnant women who did not receive TT2, 3, 4, or 5 in 1988 were not protected. However, many of these women may still have been protected by the tetanus toxoid doses they received in earlier pregnancies. Second, some of the pregnant women reported to have received only TT1 (and hence considered to be unprotected) may in fact have received a dose which should have been reported as TT2 or higher, if they had received one or more doses previously. Third, as women increasingly receive TT doses outside of pregnancy, it will be more and more likely that they will be better immunized than the doses they receive during pregnancy indicate. Fourth, the administrative method will not take into account doses of DPT received by young mothers during their infancy.

We face other problems in attempting to measure tetanus toxoid coverage by surveys. In Burundi, as in many other African countries, women have not received and kept records of vaccinations received during prenatal visits as consistently as they receive and keep the vaccination records of their children. Therefore, surveys based on documents at home run the risk of providing gross underestimates. Do mothers remember their history of tetanus toxoid injections well enough so that surveys based on mothers' histories provide reasonably accurate results? To our knowledge, this question has not been answered before because their has been no "gold standard" for the level of protection or coverage with which to compare coverage results based on history.

The "gold standard" used in survey was a competition ELISA developed by the State Serum Institute in Denmark which was shown in a series of published studies to correlate closely with the results of mouse neutralization testing. Blood was collected on filter paper, and women with an anti-tetanus toxoid titer of 0.01 international units or higher were considered seropositive and immune.

Overhead

The first objective of the survey conducted in February 1989 was to estimate the percentage of newborns in Burundi who are protected serologically against tetanus. This was done by obtaining filter paper blood specimens from recent mothers to see if they had the level of antibodies that would have protected their newborns. The second objective was to correlate this level of protection with estimates of coverage by the "administrative

method", by survey (based on cards), and by survey (based on mothers' histories). The third objective was to measure the seropositivity rate for tetanus among women who had received two doses of tetanus toxoid.

Overhead 5

The survey was conducted concurrently with a national EPI coverage survey of children 12-23 months of age. The target population was women who had delivered during the previous 10-11 months (since Easter 1988). The survey was conducted at 30 clusters in Bujumbura and 30 clusters in the rest of the country, and 7 women were included from each cluster. Standard EPI sampling was used except that a sampling frame of all households in each rural cluster was constructed, and a special survey was conducted in Bujumbura to estimate cluster populations since the census projections were too inaccurate to use.

For each of her last pregnancies, each mother was asked if she had been seen at a prenatal consultation, and, if so, if she had received one or more injections when she was not sick, and if so, how many. Each of these reported injections was assumed to be tetanus toxoid. In addition, interviewers asked to see all of her vaccination papers, and all tetanus toxoid vaccination dates on these papers were recorded.

Overhead 6

To determine the vaccination status of each mother, the number of valid doses of tetanus toxoid she had received were counted. This was separately based on her history and on documents at home. Doses were considered valid if they respected the minimum interval requirements, which are shown here.

Next, the period of protection conferred by the last valid dose was added to the last dose to determine until when she could be considered protected. For example, if she received TT1 and TT2 during a pregnancy in 1988, she was assumed to be for 3 years beginning in 1988. If this period of protection extended past the birth of her child, the child was considered "covered" against neonatal tetanus.

Overhead 7

The next overhead shows characteristics of the mothers in the sample. All but 7 mothers agreed to have blood drawn. More than half of the mothers had been pregnant 3 or more times. As you can see, utilization of prenatal care is very high in

Burundi. 98% of mothers in Bujumbura and 84% of mothers outside of Bujumbura reported that they had been seen for prenatal care during their last pregnancy. However, only 66% of mothers in Bujumbura and 37% in the rest of the country had any written record at home of having received a tetanus toxoid injection.

Overhead 8

The next overhead compares coverage and serological results. The lowest estimate of coverage, as expected, was that based on documents kept at home. Using this method, only 21% of newborns in the rural stratum, 51% in Bujumbura and 21% nationally were considered protected against neonatal tetanus at the time of their birth.

The next highest result is the administrative estimate for the period April 1988 - February 1989, the period of recall of the survey. This is the administrative estimate of coverage that should be compared with the survey results.

The serological results are next in the chart. At the time of the survey, 67% of women in the rural stratum, 84% in Bujumbura, and 67% in the country as a whole were immune to tetanus. In interpreting these results, it is important to remember that this seroprevalence is not exactly the same as the percentage of newborns who were protected. Some mothers may have become seronegative since their delivery, and 18 mothers, according to their records, had received a tetanus toxoid injection since their delivery.

Finally, coverage based on mothers' histories was 72% in the rural stratum, 95% in Bujumbura, and 73% in the country as a whole. This estimate of coverage correlated best with seroprevalence.

Overhead 9

In this overhead, we stratified our analysis by the number of doses of tetanus toxoid they had received by history. We would like to bring two main findings in this table to your attention. First, the seropositivity rate increases steadily and sharply. Only 66% of women with a history of two doses were seropositive, as compared to 86% and 94%, respectively, of women who, by history, had received 3 and four doses. Second, the median titer of anti-toxoid antibodies also shows a sharp rise up to 3 doses. In particular, the median titer for women who reportedly had received 3 doses (1.7 iu/ml) was 21 times higher than the median titer of women who reported having received only 2 doses.

Overhead 10

Next, we tried to look as rigorously as possible at the "seroefficacy" of two properly-spaced doses of tetanus toxoid. By "seroefficacy" we mean the percentage of women who are seropositive during the 3 years following their second valid doses. To do this, we restricted the analysis to women who, according to their documents at home and their history, had received two valid doses and two only by the time of their last delivery, and who, at the time of the survey, we still in the 3-year period of protection conferred by the second dose. In addition, we required that they be women who had been pregnant no more than twice, to eliminate the possibility that they may have received tetanus toxoid during a preganancy in the early years of the EPI. Third, we removed from the analysis any woman with a record of having received an injection of tetanus toxoid since her delivery. The seropositivity rate in this group of 37 women was 70%.

Overhead 1

I would like now to share with you the conclusions we have drawn from this work.

First, we have confirmed that our years of vaccinating women have not been in vain. Two-thirds of neonates in Burundi are currently protected against neonatal tetanus. We are doing ~~better~~ in our efforts to protect children against other EPI diseases.

Second, the administrative method does not appear to fully measure the level protection we have achieved, although their are still some details in the analysis to be worked out in this regard. With 84% of pregnant women being seen in prenatal consultation, Burundi is a country where the administrative method should not greatly underestimate coverage. A greater underestimation could be expected in countries where a substantial proportion of pregnant women come for prenatal care in one pregnancy but not in another. In all countries, the extent to which the administrative estimate of coverage is an underestimate can be expected to increase as women are vaccinated outside of pregnancy and as young women who received DPT as infants begin having babies.

Our third conclusion is that tetanus coverage by history correlates reasonably well in Burundi with seroprevalence. We think this method should be used in our coverage surveys until women have the habit of keeping their lifetime cards and until these cards represent a nearly complete history of tetanus toxoid vaccination.

Fourth, we are concerned that 30% of women remain unprotected after 2 valid doses of tetanus toxoid. We think this finding confirms the importance of vaccinating women before their first pregnancy whenever possible.

The recommendations made as a result of this study are: 1) To continue estimating tetanus coverage by history in our survey s during the next few years; 2) To promote and monitor the extent to which the lifetime cards we are using are kept and used to record all tetanus toxoid doses; and 3) To redouble our efforts to vaccinate young women in schools and women of childbearing age at every clinic contact, so that mothers will be protected by more than two doses at the time they give birth.

DEVELOPPEMENT D'UNE POLITIQUE D'AUTOFINANCEMENT DES SOINS DE SANTE

DR. JEAN BAPTISTE ROUNGOU

L'UN DES HERITAGES DE LA COLONISATION DANS LES PAYS FRANCOPHONES EST LE SYSTEME DE SANTE BASE SUR L'ASSISTANCE PUBLIQUE. L'ETAT PREND EN CHARGE TOUS LES FRAIS DE SANTE DE TOUTE LA POPULATION.

EN CETTE PERIODE DE CRISE ECONOMIQUE MONDIALE, LA PRISE EN CHARGE DES SOINS DE SANTE PAR L'ETAT SEUL CONSTITUE UN LOURD FARDEAU QUAND ON SAIT A QUEL POINT LES ECONOMIES DES PAYS EN VOIE DE DEVELOPPEMENT ONT ETE DUREMENT TOUCHEES.

LA PARTICIPATION DE LA POPULATION AU FINANCEMENT DES FRAIS DE SANTE CONSTITUE UNE POSSIBILITE PERMETTANT D'ALLEGER LE FARDEAU QUI PESE SUR LES GOUVERNEMENTS ET D'AMELIORER LA QUALITE DES PRESTATIONS.

MAIS CECI NE VA PAS SANS MAL CAR, L'ON SE TROUVE RAPIDEMMENT DEVANT UNE CONTRAINTE MAJEUR, CELLE DE LA FAIBLESSE DES REVENUS DE LA POPULATION: EN REPUBLIQUE CENTRAFRICAINE LE PNB PAR HABITANT EST ESTIME A $260/AN, SOIT 72800 FCFA SOIT ENVIRON 6000 FCFA/MOIS.

PAR AILLEURS, EN 1974, IL AVAIT ETE INSTITUE UN SYSTEM DE PARTICIPATION SOUS FORME DE PAIEMENT OBLIGATOIRE A L'AVANCE D'UN MONTANT DE 500 F/AN POUR LES ADULTES ET 200 FCFA PAR LES ELEVES, LES ETUDIANTS ET LES ENFANTS. CE SYSTEME QUI AVAIT CONNU UN ECHEC SUITE A UNE MAUVAISE UTILISATION DES FONDS COLLECTES, CEUX-CI ETANT REVERSES AU TRESOR PUBLIC, EST RESTE UN MAUVAIS SOUVENIR POUR LA POPULATION EN CONSTITUAIT AUSSI UNE CONTRAINTE.

MAIS LA PRTICIPATION DE LA POPULATION DEVENAIT DE PLUS EN PLUS INCONTOURNABLE. AUSSI, LE GOUVERNEMENT A-T-IL DECIDE D'ABORDER LA QUESTION MAIS DE FACON PRUDENTE ET PROGRESSIVE ETAPE PAR ETAPE.

LA PREMIERE ETAPE CONSISTA EN DEUX ETUDES QUI VISAIENT A OBTENIR DES INFORMATIONS SUR L'OPINION DES UTILISATEURS DES SERVICES ET L'AVIS DES DIFFERENTES COUCHES DIRIGEANTES DU PAYS. LA REALITE DU TERRAIN A AUSSI INVESTIGUEE AU COURS DE CES DEUX PREMIERES ETUDES. LES DEUX ETUDES ONT ABOUTI, PARTICULIEREMENT CELLE MENEE EN 1987, AUX CONCLUSIONS SUIVANTES:

1. ON A CONSTATE QUE PRATIQUEMMENT TOUTES LES CATEGORIES SOCIALES DE LA POPULATION CENTRAFRICAINE PAIENT DEJA LES SOINS DANS LES ETABLISSEMENTS PRIVES ET SE DECLARENT SATISFAITES DES PRESTATIONS EN CE QUI CONCERNE LA DISPONIBILITE DES RESSOURCES ET LA QUALITE DES SOINS.

2. LA PLUPART DES PERSONNES INTERROGEES SE DECLARENT PRETES A PARTICIPER A LA PRISE EN CHARGE DES SOINS DANS LES ETABLISSEMENTS PUBLICS A CONDITION QUE L'ON AMELIORE LA QUANTITE ET LA QUALITE

3. LES AUTORITES DU MINISTERE DE LA SANTE PUBLIQUE ET DES AFFAIRES SOCIALES PENSENT QUE LA PARTICIPATION DE LA POPULATION A LA PRISE EN CHARGE DES FRAIS DE SA SANTE EST INEVITABLE.

4. LES DECIDEURS POLITIQUES PENSENT QUE LA PARTICIPATION DE LA POPULATION A LA PRISE EN CHARGE DES FRAIS DE SANTE EST POSSIBLE, MAIS ILS N'ONT AUCUNE IDEE PRECISE DE LA FACON DONT CELA POURRAIT ETRE MIS EN OEUVRE.

L'UNE DES RECOMMANDANTIONS FORMULEES PAR LES AUTEURS DES ETUDES EST L'ORGANISATION D'UNE TABLE RONDE A L'INTENTION DES HAUTS RESPONSABLES POUR MIEUX LES INFORMER ET LES SENSIBILISER AU PROBLEME DE L'AUTOFINANCEMENT DES SOINS DE SANTE. FORT DES RESULTATS DE CETTE ETUDE, LE GOUVERNEMENT EST PASSE A L'ETAPE SUIVANTE: CELLE DE L'ETABLISSEMENT D'UN CADRE JURIDIQUE. C'EST AUSSI QU'UN PROJET DE LOI A ETE SOUMIS A L'ASSEMBLEE NATIONALE QUI L'A VOTEE PUIS ELLA A ETE PROMULGUEE PAR LE CHEF DE L'ETAT. IL S'AGIT DE LA LOI 89/003 DU 23 MARS 1989 FIXANT LES PRINCIPES GENERAUX RELATIFS A LA SANTE PUBLIQUE EN REPUBLIQUE CENTRAFRICAINE.

CETTE LOI STIPPULE EN ARTICLE 3 JE CITE: LES DROITS VISES AUX ARTICLES 1 ET 2 CI-DESSUS SONT ASSUJETIS A LA PARTICIPATION FINANCIERE DU CITOYEN, POUR LA DIFFERENTES PRESTATIONS DE SANTE QUI LUI SONT PROPOSES PAR L'ENSEMBLE DES FORMATIONS SANITAIRES PUBLIQUES. FIN DE CITATIONS.

L'ARTICLE 5 DE LA MEME LOI PRECISE QU'AFIN DE GARANTIR LE FONCTIONNEMENT REGULIER DES ETABLISSEMENTS DU SECTEUR PUBLIC, LEUR GESTION SERA ASSUREE SOIT DANS LE CADRE NORMAL DU REGIME FINANCIER DU SECTEUR PUBLIC SOIT EN AUTONOMIE PARTIELLE DE GESTION.

LA TROISIEME ETAPE DE LA DEMARCHE FUT CELLE D'ORGANISATION D'UN ATELIER A L'INTENTION DE TOUS LES REPRESENTANTS DE LA SOCIETE CENTRAFRICAINES POUR LES INFORMER SUR LES TENANTS ET LES ABOUTISSANTS DE LA LOI ET RECHERCHER ENSEMBLE LES MEILLEURS FORMULES DEVANT PERMETTRE LA MISE EN APPLICATION DES DISPOSITIONS DE LA LOI. CET ATELIER A ETE ORGANISE EN AVRIL 1989 AVEC LE CONCOURS DE L'USAID ET DE REACH ET JE VOUDRAIS SALUER ICI LE DOCTEUR MARTY MAKINEN QUI A ETE LE PRINCIPAL ANIMATEUR DE CET ATELIER DONT VOICI LES PRINCIPALES CONCLUSIONS.

CONCLUSIONS

QUATRIEME ETAPE: CE FUT LES DISPOSITIONS PRATIQUES POUR LE DEMARRAGE DE L'APPLICATION DE LA LOI:

A. UNE CELLULE D'ECONOMIE DE LA SANTE A ETE CREE AU SEIN DE LA DIRECTION DES ETUDES DE LA PLANIFICATION ET DE STATISTIQUES.

B.. UNE COMMISSION D'ELABORATION DES TEXTES REGLEMENTAIRES A ETE CONSTITUEE ET EST A PIED D'OEUVRE DEPUIS 6 MOIS.

CONCLUSION:

LE DEVELOPPEMENT D'UNE POLITIQUE DE FINANCEMENT DE LA SANTE AVEC LA PARTICIPATION DE LA POPULATION EST UN PROCESSUS LONG QUI NECESSITE PLUSIEURS ANALYSES ET DE LA CONCERTATION.

ACCELERATED VACCINATION CAMPAIGNS: A SUSTAINABLE STRATEGY?

Dr. Tchasseu Karsa
Director,Division of Epidemiology - TOGO

Author discusses Togo's experience with UNICEF generated accelerated vaccination campaigns. He presents advantages and disadvantages of such efforts and provides alternative strategies which provide long term benefits instead of short-term increases in vaccine coverage with subsequent declines in utilization of service.

Les campagnes de vaccinations accelerees: Une strategie a perenniser?

Par: Dr. Tchasseu KARSA

1.INTRODUCTION:

Histoire d'implantation du PEV au Togo

Savanes - 1980
Kara - 1981 - 1982
Centrale - 1982
Plateaux - 1983
Maritime - 1984

En 1987, une enquete de couverture vaccinale par region a ete effectuee a l'echelle nationale. La couverture variait plus ou moins selon la date d'implantation du PEV dans la region.

Savanes:	*DTCoq 1/Polio 1*	*= 78%*
	Rougeole	*= 64%*
	ECV	*= 42%*
Kara :	*DTCoq 1/Polio 1*	*= 58%*
	Rougeole	*= 46%*
	ECV	*= 30%*
Centrale:	*DTCoq 1/Polio 1*	*= 64%*
	Rougeole	*= 54%*
	ECV	*= 38%*
Plateaux:	*DTCoq 1/Polio 1*	*= 50%*
	Rougeole	*= 35%*
	ECV	*= 17%*
Maritime:	*DTCoq 1/Polio 1*	*= 58%*
	Rougeole	*= 37%*
	ECV	*= 25%*
Nationale:	*DTCoq 1/Polio 1*	*= 59%*
	Rougeole	*= 43%*
	ECV	*= 27%*

2. QUESTIONS: Est-ce que les campagnes de vaccination atteignent les resultats escomptes?

Est-ce que les resultats obtenus valent le cout des telles campagnes?

Est-ce que les campagnes sont une strategie qu'on peut continuer a l'avenir?

3. AVANTAGES:

1. La couverture vaccinale a considerablement augmente.

		1987	1988
DTCoq/Polio 1	=	59%	92%
DTCoq/Polio 3	=	36%	62%
Rougeole	=	43%	74%
ECV	=	27%	48%

2. La campagne de vaccination a sensibilise et mobilise les politiciens et decideurs. Le President de la Republique a administre une dose symbolique de vaccin.

3. La campagne a sensibilise et informe une grande partie de la population cible.

Evaluation 1987 - 59% des meres "au courant" de l'existence des vaccinations.

Evaluation 1988 - 86% des meres "au courant" de l'existence des vaccinations.

4. La campagne a implique d'autres agences et ministeres dans les activities de vaccination.

4. DESAVANTAGES:

1. La campagne a coute cher. Presque $1 million US.

2. La campagne a paralyse d'autres activites et programmes prioritaires du Ministere de la Sante.

3. Les bonnes techniques d'administration des vaccins ont ete abandonnees par le personnel vaccinateur du a l'affluence des populations au postes fixes.

4. *La population croyait que la campagne de vaccination etait quelque chose de nouveau. Beaucoup deja vaccines sont venus sans les cartes de vaccination anterieures et on etait oblige de recommencer a zero avec eux. Ceci avait de serieuses repercussions sur la consommation des vaccins et la qualite du travail des agents vaccinateurs.*

5. *Une augmentation de l'activite des equipes mobiles avait un effet demobilisant sur les populations qu'on essayait d'attirer vers les postes fixes.*

6. *Les doses administrees par mois apres la campagne etaient moins qu'avant le commencement. Donc le rythme d'acceleration n'a pas ete maintenu.*

5. ALTERNATIVES

1. *Renforcement des strategies existentes:*

   a) *Postes fixes*

      Vaccination au quotidien.

      Reduction des occasions manquees.

      Amelioration des prestations de service et reduction des erreurs de vaccination par les agents.

   b) *Strategie avancee des postes fixes pour reduire le taux de deperdition entre les doses.*

   c) *Utilisation rationnelle des equipes mobiles.*

FACTEURS DETERMINANTS DE SOUS

UTILISATION DES SERVICES DE VACCINATION A CONAKRY (GUINEE)

DR. SOULEYMAME DIALLO

DE NOMBREUX EFFORTS ONT ETE MENEE POUR L'AMELIORATION DE LA COUVERTURE VACCINALE DANS LES GRANDES AGGLOMERATIONS URBAINES DANS LE CAS SPECIFIQUE DE CONAKRY (CAPITALE GUINEENNE) DES TAUX DE COUVERTURE ELEVES ONT ETE OBTENUS GRACE A L'ORGANISATION D'UNE CAMPAGNE. MAIS CES TAUX N'ONT PU ETE MAINTENUS APRES LES CAMPAGNES ET LES TAUX D'ABANDON SOUT RESTEE TRES ELEVES.

UNE PREMIERE SOLUTION, A ETE DE MULTIPLIER LES CENTRES DE SANTE QUI VACCINENT. CEUX CI SONT PASSES DE 5 EN 1985 AT 19 EN 1989. LES RESULTATS OBTENUS N'ONT PAS REPONDUS AUX ATTENTES. LA PRESETE ELUDE A ETE FAITE POUR IDENTIFIER LES PROBLEMES LES PLUS IMPORTANTS QUI EMPECHENT LES MERES D'AMENER LEURS ENFANTS A LA VACCINATION.

L'ETUDE AVAIT POUR OBJECTIF

- D'ESTIMER LA COUVERTURE VACCINALE A CONAKRY
- D'IDENTIFIER ET DE PRECISER LE PROFIL DES ENFANTS QUI COURAIENT LE RISQUE DE NE PAS COMPLETER LEUR SERIE VACCINALE
- DE SERVIR DE BASE POUR L'ELABORATION D'INTERVENTIONS VISANT A AMELIORER LA COUVERTURE VACCINALE.

LE GROUPE CIBLE DE L'ETUDE ETAIT LES ENFANTS DE 12 A 23 MOIS LA METHODE D'ECHANTILLONNAZE CHORSIE ETAIT L'ECHANTILLONNAGE EN GRAPPES AVEC UNE PROBABLITE PROPORTIONNELLE A LA TAILLE.

40 GRAPPES D'ENVIRON 10 ENFANTS ONT ETE IDENTIFIEES, SOIT EN MOYENNE 400 ENFANTS, COMME L'EFFECTIF DESIRE. L'EFFECTIF REEL DE L'ECHANTILLON A ETE DE 377 ENFANTS. LE QUESTIONNAIRE DE L'ENQNETE A ETE ELABORE SUR LA BASE DES RESULTATS D'ETUDES ANTERIEURES, TESTE ET ADAPTE AUX BESOINS DE L'ETUDE. LES INFORMATIONS SUR L'ETAT VACCINAL DES ENFANTS ONT ETE TIREES DE LA CARTE DE VACCINATION OU DU CARNET DE SANTE LORSQUE CES DOCUMENTS ETAIENT DISPONIBLES.

RESULTATS DE L'ETUDE

I. LA COUVERTURE VACCINALE

LA COUVERTURE DES ENFANTS COMPLETEMENT VACCINES ETAIT DE 19% AVEC LA CARTE DE VACCINATION. ELLE SERAIT DE 36% SI ON TENAIT COMPTE

DES DECLARATIONS DES MERES ET DES VACCINATIONS RECUES AVANT L'AGE RECOMMANDE.

CETTE DIFFERENCE EST IMPORTANTE ET POSE LE PROBLEME DE LA CONSERVATION PAR LES MERES DES SUPPORTS DE DONNEES.

COTTE DIFFERENCE EST ENCORE PLUS GRANDE POUR LE VAT
- 64% CONTRE 28% POUR LE VAT (1)
- 56% CONTRE 23% POUR LE VAT (2)

EN COMPARANT LES TAUX DE CONVENTURE OBTENUS DEPRUS 1983, ON NOTE UNE TRES FAIBLE ARMELIORATION, EXCEPTION FAITE POUR 1987 QUI CORRESPOND AUX RESULTATS DE LA GRANDE CAMPAGNE DE VACCINATION.

ON NOTE AUSSI QUE MOINS DE 2 ANS APRES CETTE CAMPAGNE DE VACCINATION, LE TAUX DE COUVENTURE VACCINALE A BAISSE POUR AVOISINER CELUI AVANT LA CAMPAGNE.

II. LES OCCASIONS MANQUEES

1. POUR LES ENFANTS AVEC CARTE DE VACCINATION
   - 42% AVAIENT EU AU MOINS UNE OCCASION MANQUEE DE VACCINATION
   - 17% AVAIENT RECU TOUS LES VACCINS MAIS A UN AGE PRECOCE ON AVEC UNE INTERVALLE TROP COURT ENTRE LES DOSES
   - 78% DES ENFANTS AURAIENT PU ETRE COMPLETEMENT VACCINES AU LIEU DE 35% SI CES 2 FACTEURS AVAIENT ETE CORRIGES.

2. POUR LES ENFANTS SANS CARTE DE VACCINATION
   - 11% N'ONT JAMAIS ETE VACCINES ALORS QUE 62% DE CEUX CI ONT EU AU MOINS UN CONTACT AVEC LE CENTRE DE SANTE
   - 64% DES ENFANTS SANS ANTECEDENT DE VACCINATION ANTIROUGEOLEUSE AVAIENT EU UN CONTACT AVEC LE CENTRE DE SANTE A L'AGE DE 9 MOIS OU PLUS.

LA COUVERTURE POTENTIELLE, EN TENANT COMPTE DES OCCASIONS MANQUEES ET DE RESPECT DU CALENDRIER DE VACCINATION SERAIT DE:

- DTCP (1) 94%
- DTCP (2) 84%
- DTCP (3) 65,5%
- ROUGEOLE 81%
- COMPLETE 78%

POUR LES FACTEURS QUI INFLUENCENT LA COUVENTURE VACCINALE, NOVS AVONS ETUDIE L'ASSOCIATION ENTRE LES FACTEURS DE RISQUE ET

-L'ADMINISTRATION DE DTCP (1) DANS L'ECHANTILLON TOTAL
-L'ADMINISTRATION DE DTCP (3) PARMI LES ENFANTS QUI AVAIENT UNE CARTE DE VACCINATION ET QUI AVAIENT RECU LE DTCP (1)

POUR LE DTCP (1) LES FACTEURS DETERMINANTS SONT DE 2 ORDRES:

A) SOCIO ECONOMIQUES:
- LA MERE PARLE FRANCAIS
- LA MERE LIT FRANCAIS
- LA MERE TRAVAILLE

B) CONNAISSANCES ET ATTITUDES
- LA MERE CONNAIT LE CALENDRIER DE VACCINATION
- LA MERE PENSE QUE LA VACCINATION EST CHERE
- LA MERE PENSE QUE LA VACCCINATION ANTIROUGEOLEUSE EST EFFICACE
- LA MERE A ACCOUCHE A L'HOPITAL
- LA MERE A RECU ELLE MEME AU MOINS UNE DOSE DE VAT

LE PROFIL DE L'ENFANT QUI A LE PLUS DE CHANCE DE RECEVOIR LE DTCP (1) SE PRESENTE DONC DE LA FACON SUIVANTE:

- LA MERE PARLE FRANCAIS
- LA MERE EST AGEE DE MOINS DE 35 ANS
- LA FAMILLE POSSEDE UNE TELEVISION
- L'ENFANT EST NE A L'HOPITAL
- LA MERE NE TROUVE PAS LA VACCINATION COUTEUSE

ON NOTE EN PLUS DES FACTEURS LIES A L'ORGANISATION DU CENTRE DE SANTE:
- LA LONGUE ATTENTE AU CENTRE DE SANTE
- LE FAIT QUE LA MERE SOIT RENTREE A LA MAISON SANS AVOIR

VACCINE L'ENFANT ALORSQUELLE EN AVAIT L'INTENTION. DONC, L'EXPERIENCE ANTERIEURE DES MERES AVEC LE CENTRE DE SANTE A ETE UN FACTEUR DETERMINANT.

CONCLUSIONS

LES PROBLEMES ESSENTIELS DE SOUS UTILISATION DES SERVICES DE VACCINATION SONT LIES A L'ORGANISATION DES CENTRES DE SANTE.
L'ACCESSIBILITE GEOGRAPHIQUE DES CENTRES DE SANTE EST BONNE POUR LA MAJORITE DE LA POPULATION DE CONAKRY.
LES SERVICES DE VACCINATION NE SONT PAS TOUJOURS DISPONIBLE POUR DES RAISONS DIVERSES.
L'INFORMATION DES MERES SUR LA VACCINATION N' A PAS ETE DE BONNE QUALITE.

RECOMMANDATIONS

1. RESPECTER LA POLITIQUE DE VACCINER A CHAQUE CONTACT AVEC LA MERE ET L'ENFANT.

   A. SENSIBILISER LE PERSONNEL POUR VERIFIER L'ETAT VACCINAL ET VACCINER CEUX QUI N'ONT PAS TERMINE LEUR SERIE VACCINALE.
   B. VACCINER CHAQUE JOUR
   C. VACCINER LES ENFANTS MALADES
   D. APPROVISIONNER CORRECTEMENT LES CENTRES DE SANTE EN VACCINS POUR EVITER LES RUPTURES DE STOCK
   E. OUVIVIR UN FLACON DE VACCIN MEME S'ILN'Y A QU'UN ENFANT
   F. EQLUGRIER LE MERES POUR ARNENER LES CARTES DEV VACCINATION A CHAQUE CONTACT AVEC LE CENTRE DE SANTE.

2. AMELIORER LES TECHNIQUES DE STERILISATION DU MATERIEL ET D'ADMINISTRATION DU VACCIN (SURTOUT POUR LE BCG) EN RESPECTANT LE CALENDRIER DE VACCINATION.

3. RESPECTER LES TARIFS POUR LA CARTE DE VACCINATION, LA VACCINATION ELLE MEME ETANT GRATUITE.

4. INFORMER LES MERES POUR LES DATES DES PROCHAINS RENDEZVOUS.

5. CONCENTRER L' E.P.S. VERS LES MERES QUI NE PARLENT PAS FRANCAIS OU QUI NE TRAVAILLENT PAS, OU QUI N'ONT PAS DE TELEVISION A LA MAISON.

6. METTRE EN PLACE UN MECANISME DE COORDINATION DES DIFFERENTS NIVEAUX DE SUPERVISION. A LONG TERME, IL FAUT ENVISAGER LA CONSTRUCTION DE NOUVEAUX CENTRES DE SANTE A CONAKRY. I EXISTE

DES CENTRES QUI ONT EN CHARGE PLUS DE 100,000 HABITANTS. POUR 100% DE COUVERTURE DES ENFANTS CONCERNES, CHAQUE CENTRE DEVRA VACCINER ENVIRON 50 ENFANTS DE 0-11 MAIS PAR JOUR. SI ON INCLUE LES RATTRAPPAGES, CE CHIFFRE POUNAIT ETRE PORTE A 100. LI ON TIENT COMPTE DES AUTRES ACTIVITES DES CENTRES DE SANTE ET DE L'ETAT DE L'INFRASTRUCTURE, LES CENTRES SERONT ENCOMBRES ET CET OBJECTIF DE COUVERTURE NE SERA JAMAIS ATTEINT. CEPENDANT, LE PERSONNEL NECESSAIRE EXISTE ET EST DISPONIBLE.

ENQUETE DE COUVERTURE VACCINALE ET OCCASIONS MANQUEES DE VACCINATION: RESULTATS D'UNE ETUDE REALISEE EN RCA DU 23 JANVIER AU 15 FEVRIER 1989

JEAN BAPTISTE ROUNGOU

AFIN DE SUIVRE LES PROGRES ACCOMPLIS PAR LE PROGRAMME, UNE ENQUETE DE COUVERTURE VACCINALE A ETE REALISEE DU 23 JANVIER AU 15 FEVRIER 1989 SUR TOUTE L'ETENDUE DU TERRITOIRE NATIONAL. LA METHODE UTILISEE EST CELLE DE 30 GRAPPES DE 7 INDIVIDUS. LA POPULATION INVESTIGUEE EST CONSTITUEE DES ENFANTS DE 12 A 23 MOIS ET LES FEMMES AYANT ACCOUCHE DANS LES 12 DERNIERS MOIS. L'ENQUETE A DISTINGUE TROIS MILIEUX: RURAL, URBAIN ET BANGUI LA CAPITALE. UNE ETUDE DES OCCASIONS MANQUEES A ETE FAITE SUR TROIS VISITES EN DEHORS DE CELLES DE VACCINATION.

VOICI LES RESULTATS

A. LES ENFANTS

1. CARNETS

LES CARNETS ONT ETE PRESENTES DANS 78,1% DANS L'ENSEMBLE DU PAYS. CE RESULTAT ETAIT DE 71,6% EN MILIEU RURAL, 86,5% EN MILIEU URBAIN ET 97.2% A BANGUI.

2. TAUX DE COUVERTURE

LES TAUX DE COUVERTURE SELON CARNET POUR L'ENSEMBLE DU PAYS CHEZ LES ENFANTS DE 12 A 23 MOIS SONT DE:

BCG: 85,6%
DTC1: 70,9%
DTC3: 43,0%
ROUGEOLE: 57%
8 DOSES: 33,2%

LES RESULTATS POUR POLIO1 ET POLIO3 SONT TRES SIMILIAIRES A CEUX DE DTC1 ET DTC3 SANS DIFFERENCE SIGNIFICATIVE.

LES RESULTATS PAR MILIEU INDIQUENT DES TAUX PLUS BAS EN MILIEU RURAL ET PLUS ELEVES A BANGUI. LE DTC3 EN MILIEU RURAL A LE TAUX LE PLUS FAIBLE 21,5% TANDIS QUE LE BCG EN MILIEU URBAIN A UN TAUX DE 96,4%.

3. TAUX D'ABANDON

LE TAUX D'ABANDON EST DE 40% POUR L'ENSEMBLE DU PAYS, AVEC UNE GRANDE DISPARITE SELON LE MILIEU:

RURAL: 63%
URBAIN: 24%
BANGUI: 12%

4. TEMPS D'ACCES

LE TEMPS D'ACCESS EST LE TEMPS MIS PAR UN INDIVIDU POUR ATTEINDRE UN CENTRE DE VACCINATION DEPUIS SON DOMICILE A PIED. L'ANALYSE A DIVISE LE TEMPS D'ACCES EN TROIS CATEGORIES:

INFERIEUR OU EGAL A UNE HEURE
1 A 5 HEURES
PLUS DE 5 HEURES

LA REPARTITION SELON MILIEU MONTRE QUE DANS LE MILIEU URBAIN ET A BANGUI, PLUS DE 85% DE LA POPULATION SE TROUVENT A MOINS D'UNE HEURE DE MARCHE A PIED D'UN CENTRE DE VACCINATION ALORS QU'EN MILIEU RURAL 61% SE TROUVENT A MOINS D'UNE HEURE, 23% SONT DISTANTS DE 1 A 5 HEURES ET 16% HABITENT A PLUS DE 5 HEURES.

LE TAUX DE COUVERTURE EN MILIEIU RURAL EST INVERSEMENT PROPORTIONEL AU TEMPS D'ACCES POUR DTC1, DTC3 ET ROUGEOLE, MAIS PAS POUR BCG. EN MILIEU URBAIN LE TEMPS D'ACCESS N'INFLUE PAS DE FACON SIGNIFICATIVE LE TAUX DE COUVERTURE.

LE RETARD D'ADMINISTRATION DE DTC1 EST DEUX FOIS PLUS ELEVE CHEZ LES ENFANT QUI HABITENT A PLUS DE 5 HEURES D'UN CENTRE PAR RAPPORT A CEUX QUI EN SONT DISTANTS DE MOINS DE 5 HEURES.

5. IMPACT DES JOURNEES DE VACCINATION

L'IMPACT DES JOURNGES DE VACCINATION SUR LA COUVERTURE ENREGISTREE VARIE DE 1 A 4% POUR BCG, DE 3 A 14% POUR DTC1 ET DE 11 A 31% POUR LA ROUGEOLE. L'IMPACT EST PLUS IMPORTANT EN MILIEU URBAIN.

6. VACCINATION CORRECTE

EN SE REFERANT AUX 6 CRITERES ETABLIS PAR L'OMS DANS LE LOGICIEL COSAS, EN TENANT COMPTE DE LA PRATIQUE NATIONALE DE VACCINATION, L'ANALYSE DES DONNEES DE L'ENQUETE MONTRE QUE LA PROPORTION D'ENFANTS CORRECTEMENT VACCINES EST DE MOINS DE 5% DANS LES 3 MILIEUX.

B. LES FEMMES

1. CARNETS

LES RESULTATS POUR LA CONSERVATION DES CARNETS CHEZ LES FEMMES SONT PRESQUE IDENTIQUES A CEUX DES ENFANTS.

2. TAUX DE COUVERTURE

LES TAUX DE COUVERTURE POUR L'ENSEMBLE DU PAYS SONT

VAT1 57%
VAT2 39%
VAT2 41%

3. TAUX D'ABANDON

LE TAUX D'ABANDON ENTRE VAT1 ET VAT2, POUR L'ENSEMBLE DU PAYS EST DE 32%. EN MILIEU RURAL, URBAIN ET A BANGUI, CE TAUX EST RESPECTIVEMENT DE 37%, 27% ET 25%.

C. LES OCCASIONS MANQUEES DE VACCINATION

L'ANALYSE A PORTE SUR 574 SUJETS QUI AVAIENT UN CARNET. TOUTES LES VISITES EN VUE D'UNE VACCINATION (MAIXIMUM 10) ET TROIS AUTRES VISITES AUX FORMATIONS SANITIARES POUR D'AUTRES MOTIFS DE CONSULTATIONS ENREGISTREES DANS LES CARNETS DE SANTE ONT ETE EVALUEES POUR ESTIMER LE POTENCIEL DE VACCINATION.

LE TAUX DE COUVERTURE EN TENANT COMPTE DE TOUTES LES VISITES AUX FORMATIONS SANITAIRES ONT ETE PLUS ELEVES QUE DES TAUX REELS OBSERVES. L'AUGMENTATION DE COUVERTURE ETAIT DE:

10-13% POUR BCG
1-14% POUR DTC1
13-24% POUR DTC3
12-18% POUR ROUGEOLE
15-15% POUR L'ENSEMBLE DES 8 DOSES EXIGEES

IL A ETE NOTE PENDANT L'EVALUATION DE LA PERFORMANCE DU PERSONNEL QUE DES PROGRES ETAIENT ACCOMPLIS APRES LA FORMATION PAR RAPPORT A LA REDUCTION DES OCCASIONS MANQUEES DE VACCINATION MAIS DES EFFORTS RESTENT A FAIRE.

RECOMMANDATIONS

1. APPLICATION DE LA POLITIQUE DE VACCINATION QUOTIDIENNE

2. REDUCTION DU TAUX D'ABANDON

3. EXTENSION DES CENTRES FIXES EN ZONES RURALES

4. MEILLEURE GESTION DES EQUIPES MOBILES ET AVANCEES

The Global Status of Malaria and Issues for the 1990's
P. De Raadt, WHO
(delivered by Dr. O. Kivo)

SITUATION GLOBALE DU PALUDISME

Introduction

Le paludisme est un problème de santé majeur dans plus de 100 pays dans le monde, et environ 2 100 millions de personnes - presque la moitié de la population mondiale - habite dans des zones à risque de paludisme.

L'OMS estime qu'il y a environ 110 millions de cas cliniques de paludisme et 270 millions d'infections palustres par an dans le monde. Il faut néanmoins souligner que 82% de ces cas cliniques et 93% de ces infections se situent en Afrique au sud du Sahara.

Assemblée mondiale de la Santé (AMS) Conseil exécutif (CE) de l'OMS

Depuis un certain temps, la situation épidémiologique de l'endémie palustre est perçue par les autorités nationales ainsi que par les organismes internationaux et par l'OMS comme un problème de santé très préoccupant.

La dernière Assemblée mondiale de la Santé a recommandé formement de renforcer et de développer la lutte antipaludique.

Lors de la 85ème session du Conseil Exécutif de l'OMS qui s'est tenue à Genève, en janvier 1990, le problème du paludisme dans le monde et le Programme de la lutte contre cette maladie ont été largement discutés.

La détérioration de la situation paludéenne, l'impact de la maladie sur la santé, l'apparition d'épidémies et l'augmentation des cas graves et compliqués de paludisme ont été mentionnés. On a également constaté la préoccupation des pays endémiques face à ce problème dans un contexte socio-économique difficile et avec les ressources financières disponibles, plutôt rares, pour les Programmes de la lutte antipaludique. Les ressources financières allouées, aussi bien au niveau national que régional ou international, sont considérées nettement insuffisantes.

La reconnaissance globale de l'importance du paludisme comme problème majeur de santé publique et comme obstacle pour le développement socio-économique, en particulier dans les pays les moins avancés, a aussi été soulignée.

Mention a été faite également que les pays donateurs étaient plus attirés par le Programme SIDA que par celui de la lutte contre le paludisme. C'est pourquoi il est très important d'attirer l'attention du public et des autorités sanitaires sur la gravité du problème paludéen afin d'obtenir les ressources financières nécessaires à combattre et éliminer réellement ce fléau.

Il a été demandé à l'OMS de sensibiliser les Etats Membres à ce problème et d'essayer de mobiliser des ressources extra-budgétaires.

Conférence au sommet sur le paludisme

Après analyse de la situation du paludisme dans le monde le Conseil Exécutif de l'OMS a proposé au Secrétariat de l'OMS l'organisation d'une conférence au sommet sur le paludisme au niveau ministériel des Etats Membres de l'Organisation et qui devrait avoir lieu en 1992. On pourrait ainsi mettre en évidence le problème réel du paludisme dans le monde, proposer des solutions, et promouvoir la volonté politique et l'action en y faisant participer les pays donateurs.

L'OMS s'est donc engagée dans la voie de l'organisation de cette importante conférence sur le paludisme et la lutte antipaludique en accord avec les directives de l'AMS et du CE et avec la participation de ces différents Bureaux régionaux. Pour cela sont prévus quelques étapes intermédiaires et certains réunions de contact préliminaires qui pourraient déjà débuter lors de la prochaine AMS.

La conférence au sommet pourrait comprendre deux parties, la première consacrée aux discussions techniques et la deuxième aux considérations politiques et aux décisions.

Division de la Lutte contre les Maladies tropicales (CTD). Lutte antipaludique (MAL)

Pour répondre mieux aux besoins d'action antipaludique, une restructuration des services spécialisé de l'OMS a été faite. Les responsibilites ont été concentrées dans une unité fonctionelle, l'Unité de la Lutte antipaludique, qui fait partie de la Division de la Lutte contre les Maladies tropicales (CTD).

Cette division a comme mandat de collaborer, aux niveaux mondial, régional et à celui des pays, à l'élaboration de stratégies de lutte contre les maladies tropicales suivantes: paludisme, trypanosomiases et leishmanioses schistosomiase, lèpre et filariose. Une collaboration très étroite avec le Programme spécial de Recherche et de Formation concernant les Maladies tropicales (TDR) a été établie afin de bénéficier du résultat de recherches de ce Programme. Le CTD sera donc chargé d'évaluer, d'adapter et de mettre à la disposition des pays intéressés les technologies de lutte existantes et de collaborer à l'établissement de stratégies pratiques, réalisables et durables.

La Division se compose des Unités suivantes:

- Recherche opérationnelle
- Formation
- Lutte contre les trypanosomiases et les leishmanioses
- Lutte contre la schistosomiase
- Lutte contre la lèpre
- Lutte contre la filariose, et
- Lutte antipaludique.

L'Unité du paludisme sera responsable du développement et de la coordination des Programmes de lutte contre le paludisme au niveau du Siège, en étroite collaboration avec les Bureaux régionaux et les pays concernés.

D'autre part, il faut mentionner que le Programme du paludisme a réuni à Genève en novembre 1989 le 19ème Comité d'Experts pour le Paludisme qui a établi des directives techniques et des recommandations concernant les stratégies sur la lutte antipaludique qui doivent être regulierement revues.

Collaboration

L'Unité de Lutte antipaludique souhaiterait collaborer avec des organismes internationaux, non gouvernementaux et, bien entendu, avec le Programme CCCD au développement et à la mise en oeuvre des stratégies concernant la lutte antipaludique au niveau des pays.

Formation et recherche

Parmi les activités de la lutte antipaludique identifiés pour les pays concernés par le paludisme on peut mentionner plus particulièrement la formation du personnel, la préparation de matériel de formation et la recherche opérationnelle.

En ce qui concerne la formation du personnel il est essentiel de former un groupe de personnel avec connaissances de l'épidémiologie et de lutte contre le paludisme au niveau central des services de santé, nécessaire pour la planification, la mise en oeuvre et l'évaluation de la lutte antipaludique. Il est aussi nécessaire de former les autres catégories de personnel des services de santé dans le diagnostic, le traitement, en particulier le traitement des cas graves de paludisme, la chimio-résistance et la surveillance.

Le Programme du Paludisme a contribué à la formation du personnel national en collaborant à des cours internationaux de paludisme avec la Turquie et l'Italie, le Burkina Faso et la France, l'URSS et la Tanzanie, la Thailande et l'Italie et, enfin, avec le Zaire. En effet, pendant la période de 1982 à 1989 250 malariologistes provenant des différentes Régions de l'OMS ont été formés dans le monde.

En ce qui concerne la recherche opérationnelle il faut dire que celle-ci, ainsi que le "développement", doit être une composante essentielle de tout programme de lutte antipaludique. Un programme de lutte efficace doit pouvoir s'appuyer sur des connaissances épidémiologiques et sur un processus d'évaluation systématique des interventions pour connaitre son impact sur la maladie. Le personnel chargé de cette recherche pourrait être basé dans le propre programme de lutte antipaludique. Ceci faciliterait l'application des connaissances et résultats obtenus lors de la recherche.

Dans le passé une grande importance a été donnée à la recherche fondamentale. Actuellement il faudrait renforcer le développement de la recherche sur l'épidémiologie générale et la recherche operationnalle dirigé à trouver des solutions aux problèmes rencontrés sur le terrain.

* * *

The Current Status of Malaria Control in the ACSI-CCCD Project

Joel Breman, M.D.
Malaria Branch, Centers for Disease Control, USA

Fifth Consultative Meeting ACSI-CCCD
Ezulwini, Kingdom of Swaziland, 4 April 1990

Summary

Since the ACSI-CCCD project began in the early 1980's a variety of malaria activities have occurred that have addressed the main components of the control strategy which is based upon drug use to protect the pregnant woman and her fetus and to prevent infant mortality. At the time the project began over 1.2 million children were dying annually from malaria; this was due, in part, to lack of malaria control objectives and clear guidelines for treating and preventing malaria in the groups at highest risk. The control strategy began with the use of chloroquine for treatment and chemoprophylaxis, and is now focusing on development of much broader treatment and prevention schemes that consider patient referral and alternative drug use. Drug use policies have been developed with the data acquired from in vivo studies and surveys of drug use practices. Hospital-based clinical studies have been useful in indicating risk factors for severe illness and death. Evaluation and monitoring mechanisms have only recently begun to be employed systematically, and sentinel hospital surveillance of mortality has been very important for following trends. Malaria admissions and deaths are increasing in some areas and questions arise as to whether the strategy is being implemented properly and if it is helping to achieve overall goals. As part of our continuing need to expand options for the control of malaria, studies have begun on the use of pesticide impregnated bed nets and curtains for personal protection against malaria. Operational research has been the cornerstone of malaria activities in ACSI-CCCD countries and has allowed policy development to be based on a scientific foundation. African colleagues have worked closely with international collaborators in the field allowing national malaria coordinators to gain and refine the experience needed to design and implement successful control programs.

The Epidemiology of Malaria in Pregnancy

Richard Stehetee, M.D.

SLIDE

For this talk, I will draw from our own work over the past 3 years in Malawi and for that work I would particularly like to acknowledge Dr. Jack Wirima and Mr. Charles Khoromana and the team of approximately 30 field workers from the Ministry of Health in Malawi. I would like to thank David Heymann, Larry Slutsker, and Joel Breman for their work and the CCCD staff for their encouragement and support.

There are several messages with this talk: The first is that malaria in pregnancy is a problem,, but a very specific one in African women, and it is one of the few problems that is amenable to intervention during pregnancy. The second is that preventing or treating malaria in pregnancy appears to be followed by a reduction in the amount of low birth weight in the population.

SLIDE

This slide shows previously described effects of malaria on the mother, the fetus and the newborn. However, it is not possible for all of these manifestations to be present in one setting; the effects are determined by mother's previous exposure to the parasite.

In sub-Saharan Africa, the majority of women have frequent exposure and high levels of immunity to malaria. While infection is common and pregnant women have a high prevalence of parasitemia and associated maternal anemia, mothers do not experience clinical

malaria illness and other morbidity. Fetal effects including abortions, stillbirths and congenital illness are rare. Far and away, the important issue is the low birthweight and the attendant risk of neonatal and early infant mortality in babies born to malaria infected mothers.

SLIDE

Let me move to discuss maternal infection and anemia. The prevalence of parasitemia is higher in pregnancy but this is principally true in primigravidas, that is, women in their first pregnancy. This slide demonstrates that, in 8 African country settings, primigravidas (shown in red) consistently had high rates of placental infection compared to multigravidas (shown in blue).

SLIDE

Maternal anemia was associated with parasitemia, but again, particularly in primigravidas. On this slide, we see results from 3 countries where mean hemoglobin levels were lower in parasitemic (red) primigravidas but not in multigravidas.

SLIDE

Anemia tends to be a silent actor in pregnancy. But as this slide shows, data from our current study in Malawi suggests that in primigravidas with hematocrits less than 30% during labor, 41% delivered a low birthweight baby compared to 24% low birthweight in babies born to non-anemic women.

To summarize, where peripheral and placental infection are common, fever illness is not linked to parasitemia, but, anemia may be an important consequence of maternal infection. Regardless, the first pregnancy is at particular risk.

SLIDE

The majority of interest in malaria in pregnancy in Africa has been directed to the effect on birthweight or delivery of babies weighing less than 2500 grams.

A number of factors are important determinants of birthweight, including nutritional factors manifested as short women or women with low pre-pregnancy weight or low weight gain during pregnancy. malaria, anemia and to a lesser extent, some other infections, make up the remaining risk factors which are amendable to intervention during pregnancy.

SLIDE

Why the concern about low birthweight? This slide shows the rate of neonatal mortality by birth weight group. Compared to babies born weighing >2500 grams, LBW babies in successively lower 500 gram intervals have 2.4, 11.7 and 31 times the risk of dying in the neonatal period.

SLIDE

In addition, the type of LBW is an important determinant of neonatal mortality. In rural Malawi, where 18% of babies have low birthweight, approximately 40% are premature (born before 37 weeks) and the remaining 60% exhibit intrauterine growth retardation (IUGR), that is, term but small. The neonatal mortality associated with prematurity is five-times greater than the neonatal mortality associated with IUGR which is twice that associated with normal birth weight.

SLIDE

When we examine the association between placental malaria infection and LBW, we see that in primigravidas the two bars on the left with malaria infection compared to those without infection, IUGR (in yellow) was markedly increased while the rates of prematurity (in red) were unchanged. This was true in multigravidas although the proportion of IUGR and prematurity were smaller than in first-borns.

To summarize then, the effect of malaria on birthweight is on IUGR and not prematurity. Thus it increases the component of low birthweight that has a lower risk of

mortality. However, malaria prevention is one of only 2 major intervention areas available during pregnancy which might altar the rates of low birthweight (the other being nutritional and vitamin or trace element supplementation).

SLIDE

Despite this compelling evidence, there was no data to support the widely believed idea that a prevention program would actually lead to an improvement in birth weight in the population. There was actually a fair amount of evidence that poor drug distribution and poor patient compliance would make the intervention relatively ineffective. And in the face of spreading chloroquine resistance, there was appropriate concern about the effect of low dose chloroquine.

In 1987, we went to Malawi with a question: "Will prevention of malaria during pregnancy be accompanied by a decrease in the incidence of low birth weight in sub-Saharan Africa?"

SLIDE

In a rural district at the southern and of Lake Malawi with intense malaria transmission and high levels of chloroquine resistance, we established a longitudinal study of pregnant women from 120 villages and attending one of four antenatal clinics. Women were enrolled at their first antenatal clinic visit and placed on one of four antimalarial regimens. The regimens are shown here: regimen A (the WHO policy for chloroquine=initial treatment followed by weekly prophylaxis; regimen 3 = monthly treatment to effect a pulsed cure; regimen C = Malawi national policy which is the same as WHO but without the initial treatment; and regimen D = mefloquine as initial treatment followed by weekly prophylaxis.

SLIDE (results)

Because each of the three chloroquine groups turned out to be similar, we evaluated the antimalarial effect on birthweight in chloroquine groups (1312 women) and the mefloquine group (468 women), all of whom had been in the study for at least 45 days prior to delivery.

SLIDE (parasitemia at enrollment)

This slide shows that the prevalence of parasitemia at enrollment was similar between the two groups for women of each gravidity. More than 60% of primigravidas were infected at the time of enrollment.

SLIDE

However, this next slide shows that placental infection rates were markedly lower in the mefloquine treated group compared to chloroquine treated groups; and this was true in each gravidity. And still more than 40$ of the chloroquine treated primigravidas had placental infection at delivery.

SLIDE

Finally, the incidence of low birth weight was lower in the mefloquine treated group in each gravidity.

Because malaria and birthweight both vary between rainy and dry seasons, we examined the relationship within season. This finding of less low birth weight on t he MX treated group was true within each season for primigravidas, but was more variable in multigravidas.

SLIDE

Finally, when we compared women on chloroquine who didn't clear their parasitemia (in solid yellow) to women on chloroquine or mefloquine who did clear (in batched yellow and red), we see a strong effect of parasite clearance on the reduction of low birthweight, particularly in first borns. That is, there was a 33% reduction of low birthweight in

primigravidas who were parasite free at delivery regardless of which drug cleared the infection. The difference was still significant in second borns, but not so in third and subsequent pregnancies.

SLIDE

In conclusion, if we return to our question: "can treatment and prevention of placental malaria infection effect a reduction in low birth weight?" the answer is yes.

The question then is: "what does the program look like?"

Does that mean that the question is:

"What drug?";

"How do we deliver the drug?"

"What about compliance in the pregnant woman?"

I think that misses the point. We went into this with a malaria question, but we must come out of this with a concern about reproductive health: a concern about the woman's health and the viability of her newborn.

We cannot come out of this with an answer like the EPI program has for neonatal tetanus. The approach that says that neonatal mortality will be decreased if neonatal tetanus is prevented, therefore get that immunization into women's arms, period. That too misses the point.

We are now talking about a low birth weight prevention program because malaria infection in pregnancy is one, albeit important, quantifiable, and preventable cause. But it is a problem in primigravidas, the same women who are affected by anemia and the same women who may be still growing themselves if they are only 15 years old. We are talking about a program that empowers young women to be able to chose to delay that first pregnancy

so that they have finished growing themselves, have a better chance at an education, more opportunity to be well nourished, less anemia. They will get their tetanus immunization and their malaria prevention. That is a vision, but a vision worth going for.

So, what is the Malaria specific aspect of this program?

· First of all, its not everywhere - it where malaria and low birth weight coexist.

· Its a program that focuses on primigravidas, starting before and soon after they become pregnant. It does not ignore women in their second pregnancy or subsequent pregnancies -that may not be feasible or it may be unwise, but it stresses the effort for primigravidas.

· It is part of the same program that delivers tetanus toxoid and iron and folic acid and the program that examines the woman for anemia, syphilis and other problems.

· It is part of a program that offers health education messages - messages which make sense, are culturally relevant and deal with the womans own interest in having a healthy newborn.

· The program delivers a drug which cleans the placenta and frees her red blood cells from the breakage caused by the parasite. In some places it may not be chloroquine and mefloquine may not be ready programmatically, but 6 months ago we couldn't use mefloquine and now many of you have it in your blood - so some things will change.

And its a program that we will need to hold and nurture - it won't necessarily start out health, but it will be able to improve with experience.

We look forward to working on that program with you.

EVOLUTION DE LA CHIMIOSENSIBILITE DU P.FALCIPARUM AUX ANTIPALUDIQUES AU ZAIRE. RESULTATS PARASITOLOGIQUES ET CLINIQUES.

Dr. Paluku

INTRODUCTION.

Dans le but de prevenir et de reduire la mortalite liee au paludisme ,le Zaire a adopte la strategie consistant a traiter presomptivement , precocement et correctement tout acces febrile chez les enfants de moins de cinq ans et une chimioprophylaxie hebdomadaire des femmes enceintes.Parmi les objectifs qui soutendent cette strategie ,la surveillance de l'efficacite d'antipaludeens vis a vis de P.falciparum est capitale.Ainsi ,un systeme de surveillance active basee sur les zones de sante sentinnelles a ete instaure depuis 1985.Ces zones doivent suivre regulierement l'evolution de la sensibilite de P. falciparum aux antipaludiques usuels.En 1989, pour repondre aux differents rapports signalant une augmentation de baisse de sensibilite de P. falciparum aux antipaludiques notamment la chloroquine a travers le pays ,le PEV/LMTE a entrepris deux etudes,test in vivo,aux deux extremites du pays pour evaluer le degre de sensibilite de P. falciparum aux antipaludiques usuels.Le but de ces etudes etait d'epprouver la validite de la strategie compte tenu de l'efficacite de l'antipaludique de premier ligne qu'est la chloroquine et surtout de voir une autre facon d'utiliser plus rationnellement les resultats issus des etudes ,test in vivo.Ces endroits ont ete l'objet d'etudes de sensibilite depuis 1983.

METHODES.

La methode est generalement la meme que celle anterieurement utilisee dans les etudes similaires au zaire.

SITES: Les etudes etaient respectivement conduites a Kinshasa a l'ouest du Zaire et dans la zone rurale de Katana a l'est du Zaire.A Kinshasa,les enfants etaient recrutes au centre hospitalier et au centre de sante de kingasani,centre periurbain servant une population de 150.000 habitants a plus ou moins 20 kilometres de du centre ville.A Katana, les enfants etaient recrutes dans 7 differents centres de sante servant chacun 10.000 a 15.000 personnes.

RECRUTEMENT:A tous les deux endroits les enfants de moins de cinq ans ont ete selectionnes parmi ceux qui se sont presentes soit aux consultations prescolaires soit aux consultations curatives.Seuls les enfants porteurs d'infections pures a P.falciparum a une densite parasitaire superieure ou egale a 1000 parasites au mm3,un test d'urine au Dill-Glazko negatif pour la prise de chloroquine,pas d'histoire de prise d'antipaludiques dans les 7 jours precedents et un etat clinique ne neccessitant pas la voie parenterale ont ete incorpore dans les etudes.

Les antipaludiques suivants ont ete admnistres aux doses suivantes:

chloroquine :25 mg/kg administre en 3 jours (10-10-5) sucessifs.

Fansidar:dose equivalente a la dose unique adulte de 3 comprimes

Quinine:20 mg/kg enprise unique par jour pendant 7 jours successifs.

Un suivi de la densite parasitaire s'est effectue au jour 0,2,7et 14.
L'appreciation du succes therapeutique s'est effectue au jour 2 pour les echecs precoces et au jours 7 et 14 pour les echecs tardifs.Une dimunition au jour 2 de la densite parasitaire inferieure a 75% de la densite initiale du jour 0 est considere comme echec precoce.Toute persistance d'un ou plusieurs parasites au jour 7 ou jour14 est un echec tardif.
Sur le plan clinique ,c'est la temperature axillaire egale ou superieure a 37,5 qui caracterise l'etat clinique.Etait considere comme un echec clinique le cas febrile du jour initial qui le restait jusqu'au jour 7 ou jour 14.

RESULTATS.

Nous allons plus discuter les resultats concernant la chloroquine que les autres antipaludiques,parce c'est plus d'elle que concerne la strategie de traitement presomptif.

A Kinshasa, 40 enfants ont complete le test sur 7 jours.Il y a eu 5 echecs precoces et 15 echecs tardifs.Au total 20 echecs sur 40 soit 50%(diapo n 1) .
Comme nous le remarquons sur ce diapo n.2 il semble y avoir une amelioration dans l'efficacite de la chloroquine sur le plan de proportion en 1989 a Kinshasa comparativement a 1986.Mais si gegardons de plus pres la tendance est a l'augmentation.La meme tendance se retrouve a Katana a l'est du Zaire.(diapo n.3).
Ce qui est plus interessant est le devenir des succes du jour 7 au jour 14.Le diapo n.1 montre que plus d'un quart des succes du jour 7 sont des echecs au jour 14.En definitive ,il y a plus de la moitie d'echecs des cas traites a la chloroquine.
Sur le plan clinique (diapo n.4)il y a eu a Kinshasa 23 enfants febriles au jour 0.2 soit 9% des cas a Kinshasa sont des echecs cliniques au jour 7.Et tous sont ds echecs tardifs.Parmi ces echecs 13 % sont du type R3 c'est

a dire une dimunition de la densite parasitaire au jour 7 ou 14 inferieure a 75% de la densite parasitaire initiale,jour 0 .A Katana 45 enfants ont completes l'etude sur 7 jours.7 etaient des echecs precoces et 27 des echecs tardifs soit un total d'echecs de 34 sur 45,76%.Il y a eu au jour 0, 13 enfants febriles .17% d'entre eux sont des echecs cliniques au jour 7.Parmi les echecs tardifs 48% sont du type R3.

Pour les autres antipaludiques,le fansidar et la quinine leurs efficacites parasitologiques sont de l'ordre de plus de 98%. Cliniquement efficace a 100%. Il faudrait cependant faire remarquer que les quelques echecs parasitologiques constates avec ces medicaments ont des densites parasitaires tres faibles de l'ordre de 6 parasites au mm3,soit 1 parasite sur 1000 globules blancs.Des lors il devient difficile d'apprecier des tels echecs.

CONCLUSIONS.

La baisse de sensibilite de P.falciparum a la chloroquine est en augmentation sur le plan parasitologique d'annee en annee.

Pour la premiere fois dans 9 ans d'etudes menees au Zaire nous constatons des echecs cliniques au jour 7.

Ces echecs sont tous du type R3

Avec ce qui precede une reflexion s'impose:La strategie de traitement presomptif reste t-elle valable compte tenue du comportement actuel de l'antipaludique d epremiere ligne,la chloroquine?Il faudrait alors definir clairement les strategies d'utilisation d'antipaludiques si l'on doit satisfaire a la double exigence, celle de prevenir,d'une part, la survenue rapide de la resistance a d'autres antipaludiques de recours et d'autre part,celle de reduire et de prevenir la mortalite liee au paludisme.

La microscopie devient alors un element indispensable pour l'infirmier et le medecin quant a la decision d'un traitement antimalarien en particulier alternatif a la chloroquine.

Serait-il alors une remise en question du traitement presomptif des cas febriles?

Aussi,nous proposons que dans l'avenir soit redefini la facon d'interpreter les resultats de test in vivo,en ciblant plus sur les enfants malades que sur les non malades.

Enfin,il faudrait ,en plus de l'utilisation des medicaments qui n'a d'ailleurs aucune influence sur la transmission,entrevoir dans la mesure du possible d'autres strategies additionnelles pour mieux controler le paludisme.Nous pensons a l'utilisation des moustiquaires et ecrans impregnes d'insecticide.

Avant de terminer je voudrait remercier tous ceux qui ont contribuer a la realisation de ce travail notamment le professeur Ngimbi du service de parasitologie de l'universite de Kinshasa,les citoyens Manenga et Feza du Pev/LMTE Zaire,Les medecins chefs des zones ou se sont menees les eudes ainsi que leurs laborantins,les docteurs Vernon et Breman du CDC pour les analyses et la lecture du texte.

Je vous remercie.

MALARIA OPENING REMARKS

CARLOS CAMPBELL, M.D.

Welcome to sessions on Malaria.

The themes for this session are the evolving themes for malaria control activities in Africa. Progress is being made - encouraging all concerned - malaria is approaching crises proportions in many areas of the continent.

Today we will consider the progress, question how to enhance and sustain, and stress that great challenges and hard work are in the future.

The decade of the 1980's have emphasized several general trends in health programming in Africa - and certainly these are obvious to those of us concerned about malaria and child survival.

1. We have invested heavily in interventions in developing programs, but it is clear that we have not understood the health problem well - that is, it is possible to support vaccines or drugs as solutions to an inadequately characterized problem

2. Child Survival and its component programs have created programs that are understandable (at times) to funders and technicians, but how well do the clients/consumers understand our particular strategy - are they relevant to the operational/and biologic realities.

3. The potential and real proliferation of initiative in Child Survival programs has become the epitome of vertical programming - EPI, CDD, MALARIA, VITA, HIV all have their strategy, need trained staff, we're competing for the Child illness, and the minds and time of the few health workers.

These are strong words, not to be critical, but to challenge, and to open malaria session acknowledging that Africa has malaria problems that require a great deal of thought and to solve rather than contribute to program obstacles

Malaria - The Problem: To develop context, the evolving understanding of malaria in operational and public health terms.

Malaria a complex of three disease problems each with distinct epidemiology and program priorities:

*Acute febrile illness - in some individuals can progress to a severe and fatal illness. While generally thought of as childhood problem, increasingly in many parts of Africa, older population, adults experiencing malaria.

Several important questions have arisen recently:

- The epidemiology of severe disease - who is at risk very short course - 48 hours.

- Can prompt recognition of malarial illness prevent these deaths?

* Chronic parasitemia - immunity is gained by repeated malaria parasitemia, leading to the capacity to keep parasites in check, though being parasitemic. In areas of intense malaria transmission, persons must acquire immunity to survive; in areas of Africa with lower transmission - persons may never gain stable immunity, and remain at risk of move severe disease for life.

The consequence of malaria is anemia - resulting from rbc destruction. During past decade increasing problem of severe anemia has been documented in much of Africa, associated in time with the extension of chloroquine resistance. In many area parasitemia has been strongly associated with very severe anemia - leading to greatly increased use of blood transfusion. With the risk of HIV transmission by blood, it is critical that very effective prevention strategies for severe anemia be defined, and implemented rapidly.

* Malaria during pregnancy. CCCD has made a major contribution to the understanding of the impact of P. fallopian infection in the pregnant woman. Low birth weight results from infection of the placenta. Material anemia is compounded by malaria. Strategies for prevention have relied heavily on malaria drug prophylaxis; drug resistance is a foundably obstacle.

Health inspect of malaria:

Based on very conservative data - following estimate of at risk and mortality. Each disease complex carries sizable risk of death.

Malaria is not static - epidemiology is changing - to mention three trends.

* Urbanization - malaria is becoming a city problem as Africa's population urbanizes. Persons, as adults, are now at risk of infection.

Vector very adaptable:

* Economic development. Progress in agriculture and other sphere involves water - often making potential for transmission: breeding sites for mosquitoes and concentration fo humans.

* Deforestation/or Changing Climate:

  - Malaria in areas or in epidemic proportions:
    Madagascar
    Rwando

As you see:

* Malaria is not just a problem for under 5's but for their mothers, and increasingly for everyone.

* Malaria has a major, though not well documented role in African attempts at development.

* Drug distribution is not in itself an adequate response to this complex of health issues.

<u>Programme Today:</u>

1. Contribution from WHO:

   - Valuable, new working relationship with the CCCD initiative.

2. Critical assessment of the status of CCCD efforts in malaria.

3. Assess the future and challenges

   - How to find the common themes

   - To work not to build malaria programs, but to build the capacity of African communities to deal with malaria, capitalizing on a common, effective health system.

Current Problems Confronting the Control and Prevention of Malaria

Carlos C. Campbell, M.D., M.P.H.

Malaria Branch

Centers for Disease Control

The development of malaria drug therapy policies in Africa demonstrates vividly the importance of adequately characterizing the biologic and epidemiologic aspects of malaria as a basis for defining effective malaria control. The intensity of exposure of humans to malaria in Africa varies greatly: in extensive rural areas transmission is intense, whereas in some urban areas and regions at higher elevations or with low rainfall, the human population experiences low or episodic risk of malaria infection. Immunity to malaria can be acquired by repeated infection, which confers protection from severe disease and a clinical tolerance to parasitemia. In areas of intense, perennial P. falciparum transmission, clinical immunity is gained by survivors of infection in early childhood. Where transmission is less intense or highly seasonal, effective clinical immunity may not be gained, resulting in a population at risk for severe malaria at all ages. In Africa south of the Sahara, Plasmodium falciparum accounts for over 90% of malaria transmission. Resistance of P. falciparum to malaria drugs is a critical factor in malaria control in Africa. Chloroquine resistance now affects all malarious areas of Africa, and resistance to other drugs, notably pyrimethamine-sulfadoxine, is evolving. However, chloroquine continues to be the primary malaria drug available in most Africa communities.

Efforts to prevent and control malaria in Africa are faced with a constellation of three distinct disease problems. Acute febrile illness is the clinical hallmark of malaria, which can progress to severe disease and death. Recent data suggest that the evolution of fatal malaria may be as short as 36-48 hours. Research on cerebral malaria has implicated the pathologic release of immune mediators as a critical mechanism. The principal strategy to limit fatal P. falciparum infections has been early recognition of the illness and institution of malaria drug therapy. Whether drug therapy aimed at killing or suppressing parasitemia once illness is present can prevent life-threatening consequences is now a central issue for malaria control. The second facet of malaria illness in Africa concerns the consequences of chronic and repeated parasitemia. It has been assumed that an individual benefits from parasitemia being sustained in the absence of overt illness to reinforce clinical immunity. However, severe anemia and increased susceptibility caused by immune suppression appear to be formidable risks to survival even in the apparently well, parasitemic child. Malaria drug therapy which suppresses parasitemia and illness without eliminating infection may permit the reinforcement of immune response but render the child more susceptible and anemic. The third aspect of malaria in Africa concerns the impact of P. falciparum infection during pregnancy. In areas of intense transmission, maternal anemia and the infection of the placenta are frequent, resulting in intrauterine growth retardation. Chemoprophylaxis during

pregnancy has been advocated, with chloroquine being one of the few drugs acceptable for use during pregnancy. However, experience in recent years reveals limitations to the policy of broad chemoprophylaxis. The risk of fetal growth impairment attributable to malaria occurs largely in first and second pregnancies. Resistance has made chloroquine ineffective in preventing placenta infection. Effective interventions will be more costly and carry some risks, and currently available drugs may be of limited use. Targeting at-risk pregnancies will be the key, and research on the biology and epidemiology of P. falciparum and pregnancy must precede more effective interventions.

In summary, the variations in the immune capacity of the human host to control malaria infection and the rapidly changing susceptibility of P. falciparum to malaria drugs has mandated reevaluation of the epidemiology and biology of malaria in Africa to develop more effective chemotherapy interventions.

"ANEMIA"

CARLOS CAMPBELL, M.D.

As a group we have learned a great deal about what constitutes effective malaria therapy: there is general agreement that the objective is to reduce the risk of dying and to minimize malaria disease. Yet what is the range of "Malarial disease with which we should be concerned"?

We will consider anemia for a few moments: even in its more advanced forms it may be silent, and one might not consider it a disease. Consideration of anemia in CS programs has proven important because it is a problem to which many components of important because it is a problem to which many components of CCCD contribute and co-ordinated attention by various program components is required. Furthermore, evidence suggests that more severe anemia is increasingly prevalent in many area of Africa.

The World Health Organization has defined anemia as a Hemoglobin c gm% (roughly equivalent to hematocrit of 25%). To illustrate the magnitude of the problem of anemia, consider the age stratified populations in rural Kenya, whereas in adults, particularly males less than 10% are anemia almost 3/4 of under 2's have a hemoglobin less than 10% and over 50% are under 8 gm%. Strikingly, almost 1/4 are "severely" anemia, with a hemoglobin less than 6 gm%.

In Maiyochi, there is very strong association between anemia and P. falcepaim parasitemia in children 1 - 6 months of age; yet in the same setting, the overall prevalence of more severe anemia and association with malaria parasitemia has essentially disappeared by 24 - 36 months of age.

This is on the surface, a disastrous amount of anemia; yet in western Kenya comparison of children randomly sampled in the community and attending sick child clinic shows that these two groups are undistinguishable in terms of their hematologic status. Furthermore, mothers do not bring their children for health care because of "anemia" or "paleness". Do those very anemic "apparently well" children in the community have a disease. That is a difficult question, yet the answer appears to be "yes".

Anemia in children in the tropics has many causes - nutrition, infections, celile-cell disease. Consider the relationship with malaria parasitemia: Red blood cells are destroyed by the parasite, and some amount of anemia occurs with malaria. Malaria drugs kill the parasites and limit red blood cell destruction.

As chloroquine resistance has spread across Africa, we have understood that the acute symptoms of malaria (fever, etc.) will go away, even though a child may continue to have a low level of parasitemia. This response is actually beneficial, since the parasitemia stimulates the immunity which the child needs. For most children this balance overall is serving the child; yet as resistance has spread, increasingly the very young, not yet adequately immune may not be able to tolerate that parasitemia and become progressively anemic.

Humans have a great capacity to compensate for anemia which evolve slowly - consequently, these children can appear well - therefore what is the problem: It is two fold:

Look at some representative statistics from Kenya: these young children presenting ill andananic face very poorly. They represent 31% of all pediatric admissions, and 65% of all hospital mortality. What do they die of - not cerebral malaria generally, but respiratory disease, dehydration.

How are they treated: this is the problem: In wide areas of Africa: blood transfusion. 27% of children are admitted expressly for blood transfusion and 3/4 are children under 12 months of age.

As you all know transfusion represents probably the second most important mode of HIV transmission:

- and the most common in children after birth. Many strategies to limit Banking, screening, donor selection

- all theoretically important

- restriction of transfusions

- increasingly practiced to extreme lengths

- Anemia, however, must be prevented

- better recognition and therapy.

So, is anemia a disease?

- certainly it is a tremendous risk.

  The problem is that a child can compensate only so far

- the mild pre-anemia in a severely anemic child become the stress leading to rapid decomposition or the 5% dehydration or the fever of a malaria attack can not be accommodated for.

A new anemia initiative for child survival:

NO -anemia is a powerful example of a silent problem

- it is indoubtedly a great example of how malaria and other disease compound then results to kill and to impair the survivors. All of us need to be concerned.

Secondly:

- therapy for severe anemia in hospitals can be a killer -
- we have to prevent.

MALARIA CONTROL BY A SELECTED ANTI-VECTOR AND DRUG USE STRATEGY IN SWAZILAND

J J P LA GRANGE S P KUNENE

Approximately 9 000 km^2 of Swaziland are considered Malarious and the lives and health of +/- 300 000 people are at risk.

Malaria transmission is unstable and seasonal occurring mainly in summer, with a peak in April/May. In years of above average rainfall, creating conditions particularly favorable for transmission, the spread of Malaria can reach epidemic proportions.

Vector Control based on house spraying with residual insecticides was initiated in 1949. The results were spectacular and within a few years Malaria was firmly under control and was kept that way be a programme of focal spraying and active

surveillance.

Towards the late seventies, attention shifted towards other diseases and consequently the Malaria Control Programme no longer received adequate financial and administrative support. The early eighties also saw a shift in emphasis from Vector Control in favour of Anti-Malarial drugs.

When Cyclone Domoina hit Swaziland in 1984, the Malaria Control Unit could not act effectively. This coupled with an uncontrolled influx of thousands of refugees from highly Malarious areas, signalled the final collapse of effective Malaria control.

Increased focal spray in the worst affected areas failed to improve the Malaria situation: Morbidity and Mortality figures soared in 1987-88 there were 5 495 laboratory confirmed cases and 43 deaths due to Malaria.

This obviously led to a rethink of the situation. Intervention strategies had to be determined on the basis of set priorities. These were:

-to prevent the spread of Malaria to other susceptible areas in Swaziland;

-to reverse the upward trend in Morbidity and Mortality or at least to contain it.

The urgency of immediate action left little time for anything else but practical considerations. Therefore the Ministry of Health opted for an entirely vertical programme, a policy that will have to be reviewed when Malaria prevalence drops to a manageable level making meaningful decentralization possible.

A multi-faceted approach was adopted and the following intervention strategies have been in force since 1 July 1988:

1. Vector Control

Spray coverage was extended to cover the entire accepted Malarious areas.

D.D.T. 75% W.P. remains the insecticide of choice as the vectors are still susceptible to it, its long residual life and comparatively low cost.

Houses with painted surfaces are sprayed with a synthetic Pyrethroid.

In 1988/89 68 330 structures were sprayed and during 1989/90 spray coverage was further extended and a total of 108 482 structures were sprayed.

2. Drugs, Chemotherapy and Chemoprophylaxis

In Vivo studies indicated Chloroquine Resistance in the order of 70% - 80% in certain areas.

With some trepidation it was decided to restrict the general availability and thereby incorrect use of Chloroquine except at Hospital and Clinic level. Chemoprophylaxis was discouraged except for pregnant women. This was done to relieve pressure on the parasite in selecting out resistant strains.

For treat of uncomplicated Falciparum Malaria, Chloroquine was replaced by a Chloroquine/Pyrimethamine combination. In the absence of evidence of Pyrimethamine resistance it was felt that the drug's sporontocidal action inhibiting gametocyte development in the mosquito, warranted the additional cost.

Since the Malaria Control Unit took over the responsibility for ordering and distributing Anti-Malarial drugs, no shortages have occurred.

3. Active Case Detection

Active Case Detection activities were stepped up by implementing more mass and epidemiological surveys.

Positives are traced and treated. In 1988/89, field staff took 49,455 bloodsmears and 1,734 positives (mostly asymptomatic) were detected.

In this manner we aim to reduce the parasite reservoir in the population with special attention being given to refugees an migrant labour.

4. Passive Case Detection

Although most hospitals and clinics treat for Malaria on the grounds of clinical diagnosis, they are still required to take a bloodsmear of every patient treated. In 1988/89, 11 450 smears were examined at our laboratory. Of these, 2 694 (23,5%) were positive.

The information thus obtained reflects more accurately the true Malaria situation in the country.

5. Case Investigations and Follow-up Smears

Particulars of all laboratory confirmed cases are recorded in a National Malaria Register. All cases are then investigated to determine where infection took place. This information is also recorded in the Register. The data thus obtained is essential for the satisfaction of the Malarious areas and planning control activities.

At the time of investigation, a follow-up smear is taken to determine whether radical cure had in fact been achieved. Treatment failures are treated with Fansidar. This

procedure also serves as a continuing Monitoring System for Chloroquine efficacy.

6. Health Education

As Chloroquine is only available from Health Facilities, people at risk are educated as to the signs and symptoms of Malaria and that they should report promptly at the nearest Health Facility for treatment and not to consult traditional healers.

The total impact of the combined strategies were studied in July 1989, 12 months after implementation. For comparative purposes we were compelled to use the available data for 1987/88 which grossly under-reflected the true Malaria situation.

It was however, immediately clear that the upward trend in Malaria Prevalence had been reversed:

- Morbidity down by 25%

  Contributing factors that need be considered here:

  a) Reduced vectorial capacity of vector mosquitoes due to residual spraying;

b) The sexual development of gametocytes in the mosquito impaired by the Pyrimethamine combined with Chloroquine for treatment resulting in fewer mosquitoes becoming infective;

c) A programme of Active Case Detection and treatment reducing the infective reservoir in the population.

- <u>Mortality down by 75%</u>

Contributing factors:

a) Through Health Education, the population at risk are more aware of the sign and symptoms of the disease and the importance of seeking early treatment;

b) A regular supply of all the necessary drugs and the correct use thereof.

- Chloroquine Resistance

The most important observation was, however, an apparent dramatic drop in the prevalence of Chloroquine Resistance. This was determined by the results of 1 115 follow-up smears of passive cases whereby an overall rate of 24% resistance was shown.

This is in strong contrast to the high level of Chloroquine Resistance found by consultants in 1987 (80%) and our own in Vivo study in 1988 (70%).

Chloroquine Resistance, determined by follow-up smears from 1 July 1989 - 31 December 1989 is less than 15%.

We suspect that the combination of our control efforts are responsible for this phenomenon and that the actual reversal in Chloroquine Resistance was stimulated by the absence of drug pressure on the parasite due to the restricted use of drugs for full treatment only by qualified medical staff.

HOUSEHOLD CURTAINS AND BEDNETS

PREVENT MALARIA IN KENYA

JOHN SEXTON

In recent years, there has been increased interest in alternative measures that communities might employ to help protect themselves from malaria. Bed or mosquito nets have been used for centuries to reduce man-vector contact, and now may be made more effective when impregnated with a synthetic pyrethroid. Numerous small-scale studies, primarily with impregnated bed nets, have recently been conducted in various regions of the world. Yet, there are important issues that need to be resolved, especially in areas of high malaria endemicity, before impregnated bed nets and/or curtains can be advocated more generally. Some of these issues are:

1. Impregnated bed nets versus other delivery systems and their efficacy and acceptance. (i.e. Impregnated curtains; impregnated wearing apparel, anklets, etc; combinations)

2. Study results from one region may not tally apply in other regions because of such factors as endemicity, vector competence and habits, climatic conditions, and cultural habits.

3. Impact of these control measures:

   On the vector(s): Do the pyrethroids kill, repel, or both; at what dosages; what is barrier effect especially with curtains. What insecticide should we use and at what dosage and formulation, and which materials are best for impregnating. significance of outdoor biting and the evening habits of the population.

   On the parasite: Reduction in incidence and/or level of parasitemia; If frequency of inoculation is lowered, does this translate into fewer infections and an improvement in the health of the user?

   On the clinical status of population: Will there be fewer clinical episodes of fever, possibly through a reduction of man-vector contact and/or lowered inoculation rate. Will there be an effect on anemia; An effect on changes in school or work days lost.

4. Cultural: Will people use the nets/curtains; maintain them if torn, and wash when needed; and then assist in impregnation; and buy replacements if necessary. Very major questions, especially where nets and curtains are not currently used.

   With these issues in mind, CDC in collaboration with the Kenya Medical Research Institute conducted an impregnated bed net/curtain study in Western Kenya to assess some of the above issues in 1988.

SLIDE 1:

Uriri, Kenya was selected as the study site. It is located 52 kilometers west of Kisumu, which is located near Lake Victoria as you can see on this slide. Uriri is a rural community composed of five villages with a total population of 2,000.

SLIDE 2:

A typical house is shown on this slide. These homes usually have only one door and one window and thatch roofs, although a few have metal roofs.

SLIDE 3:

Study Objectives:

1. Compare the incidence of P. falciparum infections in family members using impregnated bed nets or living in houses with impregnated curtains, with those not using nets or curtains.

2. Compare the incidence of clinical malaria and elevated temperatures in three groups.

3. Determine whether impregnated bed nets/curtains alter indoor resting densities of malaria vectors.

4. Evaluate acceptance of, and compliance in, the use of bed nets/curtains.

5. Evaluate bed net/curtain permethrin residual activity.

SLIDE 4:

Study Design:

The study population involved 105 families selected from two of the five villages. The 105 families were further randomly divided into three groups of 35 families each. One group received bed nets; another curtains, and the third group served as a control.

STILL ON SLIDE 4:

PROGRAM ACTIVITIES DURING THE STUDY INVOLVED.

1. Weekly blood smears from all family members.

2. Twice-a-week clinical evaluation. Include asking about fever, chills, antimalarial drug use, overnight absence form home between visits, and health facility visits since the previous visit. It any member complained of fever an axillary temperature was taken.

3. Entomological evaluation consisted of weekly resting collections of anophelines from a reed mat attached to the ceiling of each study house, and collections using the pyrethrum knockdown technique from approximately 3 hours in each group each week.

4. Attitudes-compliance survey were conducted at the beginning and at the end of the study to determine family acceptance of bed nets/curtains and level of compliance in their use.

5. Curative treatment with Fansidar at the beginning of the study of all family members in three groups.

6. The families were followed for 15 weeks.

SLIDE 5:

The curtains were made off 50% nylon-50% polyester open weave netting as were the sides and ends of the bed nets. The top and bottom border of the bed nets were of a closed weave 100% cotton material.

The nets and curtains were impregnated with permethrin at the rate of 0.5 grams active ingredient per meter square of material.

SLIDE 6:

During our initial visits to the study homes we conducted a number of activities -- such as -- updating the census and maps; determining the sleeping location of each family member; and measuring the windows, doors and length and width of the eave line. Using the latter information, we cut the curtain material for each house as you see on this slide.

SLIDE 7:

Impregnation was accomplished by soaking the netting in a permethrin-water dilution for approximately 2 minutes and then wringing out.

SLIDE 8:

This was followed by placing the netting on plastic to dry and

SLIDE 9:

Finally hanging the netting up for the rest of the drying period.

SLIDES 10, 11, 12

These slides show the curtains and bed nets being hung inn the houses.

Baseline malaria prevalence was 82% for the controls, 75% for the bed net and 72% for the curtain groups, mostly with P. falciparum.

SLIDE 13:

This slide shows that in those houses with impregnated bed nets or curtains anopheline resting was markedly reduced. On the left side you can see the total visits to the 35 houses in each group during the 15 week study period looking for An. gambiae s.l. or An. funestus. On the right side, it can be seen that the control houses were found positive 94 times for at least one An. gambiae s.l. or An. funestus while the bed net and curtain houses were found to be positive only 2 times, respectively.

SLIDE 14:

The number of An. gambiae s.l. or An. funestus captured during the study are given on this slide. A total of 218 were found in control houses; 2 in the bed net houses and 4 in the curtain houses.

SLIDE 15:

Pyrethrum knockdown collections indicated that out of the 38 control houses in which knockdown occurred we found 32 were positive for at least one An. gambiae s.l. or An. funestus while 12 of 41 bed nets homes were positive and 3 of 34 curtain houses.

SLIDE 16:

In terms of total numbers of An. gambiae s.l. or An. funestus, there were 195 in the control houses, 23 in the bed net and 3 in the curtain houses.

SLIDE 17:

Plasmodium falciparum infections per person week at risk were significantly higher in the control group than in both the curtain group (5.42 vs. 2.35 cases/100 person weeks risk) and the bed net group (5.42 vs 3.77 cases/100 person weeks risk). The curtain group had significantly fewer infections per person week at risk than the bed net group, suggesting curtains were more effective than nets in this study.

SLIDE 18:

A significant difference was found in clinical malaria between the groups: 45% of the individuals in the bed net and curtain groups REPORTED NO EPISODES OF FEVER AND CHILLS DURING THE STUDY WHILE ONLY 30% OF THE CONTROL GROUP INDIVIDUALS REPORTED NO EPISODES.

SLIDE 19:

The attitudes and compliance findings indicated that:

1. Both bed net and curtain users thought their form of protection reduced mosquito biting.

2. When given a choice all bed net users wanted bed nets, and 50% of the curtain users would prefer nets to curtains.

3. 85% of bed net users claimed to have used nets in previous 7 days, but unannounced nightly visits indicated around 70% using them.

4. The bed nets and curtains were well received.

SLIDE 20:

No relationship was noted between blood smears positive for P. falciparum and confirmed fevers. Of the 164 cases identified in the three groups only 20 reported having fever. When axillary temperatures were taken on these 20 patients, only 2 (bed net users) had a temperature >99.5°F. There was no significant difference in the groups.

Differences in heavy parasitemia (>5,000 parasites/mm^3 of blood) between users of impregnated bed nets and placebo-treated nets have been reported, but we observe no difference in heavy parasitemias between the 3 groups in our study.

We did note that P. falciparum cases occurred in only 47% of the curtain houses, whereas cases occurred in 74% of the bed net and 85% of the control houses.

After impregnation, curtain and bed net samples were found to contain 0.44 gm and 0.65 gm/m^2 of material. The cotton in the bed nets was found to take up more permethrin than the plain netting.

Samples placed in the homes for 2 months and analyzed 2 months after that still contained 0.45 g/m^2 (bed nets) and 0.40 g/m^2 (curtains). Bioassays 4 months after installation of the nets and curtains yielded an average adult An. gambiae mortality of 86% with a range of 65% to 100%.

SLIDE 20:

This slide recaps the major findings of our study. We certainly didn't resolve all the issues I mentioned earlier, but a start was made. Our data indicate impregnated curtains were even a more effective delivery system than the bed nets. One could postulate that the curtains have

a better barrier effect as curtains aren't as dependent on proper use by individuals as are bed nets. We feel curtains could be especially useful where houses are small, have solid walls, and one or at most 2 rooms. Closed eaves would further enhance their value.

The study also indicates that findings in one region or area may not wholly apply to another. Our malaria incidence and clinical findings were different from what a number of investigators have seen in other areas of Africa and the world.

Our data did help to come to grips with some of the issues I mentioned at the start. The bed net and curtain material, and our impregnation method, was apparently suitable as the actual dosage was close to the nominal dosage. The parasitological, clinical and entomological data all point to reductions in new infections; fewer fever and chills episodes and very few vectors resting in the bed net and curtain houses, respectively. Culturally, we found that people who had never or rarely used bed nets and curtains were very satisfied with the materials and thought they reduced mosquito biting. Yet, considerable effort still remains, particularly in the entomological arena, where it is apparent that even when few vector mosquitoes are seemingly present, transmission continues to occur.

The diversity of results obtained to date from the various small-scale studies suggest it is still to early to recommend community-wide use of these delivery systems as a means of reducing malaria transmission or even as a means of reducing man-vector contact, especially in areas of high endemicity. More needs to be done. CDC and KEMRI, supported by AID/WASH/REDSO/KENYA and IHPO implemented community studies in March 1990 to continue focusing on: 1) the effects of nets/curtains over different transmission seasons ont he vectors and parasite; 2) providing information on community acceptance, compliance and maintenance of the nets/curtains; and, 3) whether impregnated bed nets and curtains affect the severity of malaria and anemia.

THANK YOU.

RESULTS OF A PERMETHRIN IMPREGNATED BED NET/CURTAIN TRIAL CONDUCTED IN WESTERN KENYA DURING JULY-NOVEMBER, 1988.

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INTRODUCTION:

As parasite resistance to drugs spreads, there has been increased interest in alternative control measures that communities might employ to help protect themselves from malaria. One such measure is the use of bed nets to reduce man-vector contact, but with the added feature of impregnating the netting with a synethetic pyrethroid. In a similar manner, impregnated curtains have recently been evaluated as a means of reducing man-vector contact. In 1988, we carried out a collaborative study with the Kenya Medical Research Institute which involved both inpregnated bed nets and curtains in a community setting.

STUDY LOCATION AND POPULATION:

Uriri, Kenya was selected as the study site. It is located 52 kilometers west of Kisumu and is a rural community composed of five villages with a total population of 2,000. Houses are generally arranged in family compounds and the compounds are widely dispersed within the community. Typical houses have mud walls with thatch roofs, but a few have metal roofs.

STUDY OBJECTIVES:

1. Compare the incidence of *P. falciparum* infections in family members using impregnated bed nets or living in houses with impregnated curtains, with those not using nets or curtains.

2. Compare the incidence of fever and elevated temperatures in the three groups.

3. Determine whether impregnated bed nets/curtains alter indoor resting densities of malaria vectors.

4. Evaluate acceptance of, and compliance in, the use of bed nets/curtains.

5. Evaluate bed net/curtain permethrin residual activity with the WHO cone bioassay test using adult *An. gambiae*.

STUDY DESIGN

The study population involved 105 families selected from two of the five villages; each family contained at least 1 child under 5 years of age. The 105 families were further randomly divided into three groups of 35 families each. One group received bed nets; another curtains; and the third group served as a control.

On the day a particular family was to be entered into the study, each member had a blood smear taken and then given a curative treatment with Fansidar in order to eliminate P. falciparum infections. During the study, new P. falciparum cases were also treated with Fansidar while P. malariae and P. ovale cases were given chloroquine.

Those families selected for bed nets or curtains had them installed the same day as the curative treatment was given.

Program activities during the study involved:

Parasitological Evaluation: Weekly thick blood smears were taken from all family members.

Clinical Evaluation: The families were visited twice a week and asked about fever, chills, temperature, antimalarial drug usage, and health facility visits since the previous visit. If the subject stated he/she had since our last visit then an axillary temperature was taken.

Entomological Evaluation: Weekly resting collections of anophelines from a reed mat (5'x6') attached to the ceiling of each study house.

Pyrethrum knockdowns for resting mosquitoes in approximately 9 houses each week.

Bioassays of bed nets/curtains for residual activity of permethrin.

Attitudes-Compliance surveys were conducted at the beginning and at the end of the study to determine family acceptance of bed nets/curtains and level of compliance in their use.

The families were followed for 15 weeks.

BED NET AND CURTAIN MATERIAL:

The bed nets were made of 50% nylon - 50% polyester open weave netting (sides and ends) while 100% cotton was used to form the tightly weaved top and bottom borders. The curtains were of the same open weave netting used in the bed nets. During our initial visits to the selected homes we conducted a number of activities (updated the census; determined the sleeping location of each family member, answered questions on program activities) including the measurement of the windows, doors and eave line. With this information we cut

the curtain materials for each house and determined the number of square meters of material in order to accurately impregnated the curtains with the proper dosage of permethrin.as you see on this slide.

INSECTICIDE USED: The bed nets and curtains were impregnated with permethrin at the rate of 0.5 grams active ingredient per meter square of material. Permethrin from two containers were analyzed for permethrin content. Samples of netting impregnated with permethrin were also analyzed.

Impregnation was accomplished by soaking the netting in permethrin-water dilution for approximately 2 minutes and then wringing the netting out; followed by placing the netting on plastic to dry; and finally hanging the netting up to dry on clothes lines.

After drying, the bed nets and curtains were placed in large plastic bags until installed in the houses.

PRELIMINARY RESULTS:

There were 159, 161, and 157 people registered in the control, bed net, and curtain groups, respectively. The study population contained more females (56%) than males (44%). Part of the reason for this difference is that more males seek work outside Uriri than women and are harder to find for interviews. Fifty-six per cent of the study population was less than 10 years of age.

Samples of the bed net and curtain material impregnated at the nominal dosage of 0.5 grams per meter squared were analyzed. The average dosage for 12 curtain samples was 0.44 gm/m^2 while 16 bed net samples averaged 0.65 gm/m^2. While the bed net samples averaged slightly higher concentrations than the curtain material, there was a wide variation between the bed net samples of open weave netting (50% nylon and 50% polyester) and the 100% cotton close weaved top and borders of the bed net. In fact, the 100% cotton samples averaged 0.98 gm/m^2.

Samples of the open weave netting taken from the bed net and curtain material used in the initial analysis were placed in 20 homes for two months and then analyzed. The 10 bed net samples averaged 0.45 g/m^2 and the 10 curtain samples 0.40 g/m^2.

Using colony reared adult An. gambiae, WHO cone bioassays were carried out on 8 bed nets and 5 curtains four months after installation. The mosquitoes were exposed to the netting for 15 minutes followed by mortality counts 24 hours after commencement of the ests. The bioassays produced an average adult An. gambiae mortality of 86% with a range of 65% to 100%

To determine the residents' level of knowledge about the symptoms, transmission and prevention of malaria, 45 (15 in each group) of the 105 families were interviewed before the study began. Informants were adult male or female heads of household and were interviewed in Luo, their native language, using a standardized questionnaire. Approximately 60% of the respondents were able to read and write. Sixty percent of the informants

mentioned mosquitoes as the cause of malaria, but many believe that there are several other causes as well, such as drinking dirty water, getting cold or not keeping their compounds clean. Only 33% understood that malaria is transmitted by mosquitoes that have bitten an infected person. Only 9% of the families had bed nets when the study began; in contrast, 40% used aerosol insecticide space sprays, 56% burned mosquito coils to kill/drive away mosquitoes, and 38% had open cooking fires in the same building where they sleep. Most families shut the door to their houses between 6PM and 7PM. Children are in bed between 7PM and 8PM and adults between 9PM and 10PM. Only 15% of the 26 houses with windows had curtains.

Three months after the study began, 66 (94%) of the 70 families with bednets or curtains were reintereviewed using a standardized questionnaire to evaluate how the nets and curtains were being used and their condition. Both the bed net and curtain users felt their form of protection reduced the number of mosquito bits they received. When offered a choice of bed nets or curtains all the bed net users wanted to have bed nets and 50% of the curtain users would prefer bed nets. Eighty-five per cent of the bed net users claimed to have used the nets every night during the preceding 7 days, bit unannounced evening visits on 2 occasions between 9PM and 10PM indicated that only 70% and 73% of the families who were in bed at that hour were using their bed nets. The remainder stated that they had "forgotten" to use their nets or that "it was too hot" to use them.

Baseline malaria prevalence was similar in all three groups. Approximately 82%, 76% and 72% of the subjects in the control, bed net, and curtain groups were infected, mostly with P. falciparum.

The entomological findings clearly show that in those houses with impregnated bed nets or curtains anopheline resting was markedly reduced . A cumulative total of 100 control houses were found postive for at least one An. gambiae or funestus while only 2 bed net and curtain houses were found to be positive. A total of 228 An. gambiae and/or funestus were found in control houses, 2 in the bed houses and 4 in the curtain houses.

Pyrethrum knockdown collections indicated that out of the 38 control houses in which knockdown occurred we found 32 were positive for at least one An. gambiae or funestus while 12 of 41 bed nets homes were postive and 3 of 34 curtain houses. In terms of total numbers of anoplelines, there were 195 in the control houses, 23 in the bed net and 3 in the curtain houses.

In analyzing the parasitological data, all P. falciparum infections detected within 4 weeks after treatment with Fansidar were omitted. The number of new P. falciparum infections that were found during weeks 5 - 15 in the three groups was 75 in the control group; 55 in the bed net group; and 34 in the curtain group. The total weeks at risk was 1384, 1463, and 1447 for the control, bed net and curtain groups, respectively. The number of P. falciparum infections per person week at risk was significantly higher in the control group than either the curtain or the bed net group ($p<0.05$), and the bed net group infections per person week at risk was significantly higher ($p<0.05$) than the curtain group.

There was no significant difference between the three groups in terms of the total number of episodes of fever, chills or fever plus chills. However, only 54% of the bed net and 56% of the curtain users reported one or more episodes of fever and chills, compared to 70% of the control group subjects; bed net vs control was $p = 0.007$; curtain versus control: $p = 0.01$. Approximately 62% of the curtain and bed net users reported one or more episodes of fever or chills compared to 72% for the control group. This was significant ($p < 0.02$) for chills in the curtain and bed net users but not significant for fever, for bed net and curtain users.

During each visit, any individual reporting having a fever since the last visit had their temperature (axillary) taken. On a cumulative basis, temperatures were taken a total of 269, 324 and 257 times in the bed net, curtain and control population, respectively. It was found very few people reporting a fever actually had a confirmed fever. Only 9(3%), 16(6%) and 19(7%) of the curtain, control and bed net population reporting having fever, actually could be confirmed to have fever (equal or greater than 99.5°F)

There was also no relationship between being smear positive for *P. falciparum* and having a confirmed temperature. Only 10 of the 74 control cases, 8 of the 57 bed net cases and 3 of the curtain cases reported having fever and had a temperature taken. Of those having a temperature taken, only 2 of the bed net cases had fever (>99.5 degrees F).

CONCLUSIONS:

Preliminary analysis of these data indicate that curtain and bed net study group subjects had fewer *P. falciparum* infections per person weeks at risk than control subjects. The number of individuals reporting never having an episode of fever or chills, or fever/chills during the study was significantly higher in the bed net and curtain groups as compared to the control group. The bed net/curtain population readily accepted the bed nets/curtains, although compliance in the use of the bet nets was lower than anticipated. Entomological findings indicate indoor resting by the major vector mosquitoes decreased significantly in both the bed net and curtain houses. Bioassays of the bed nets and curtains four months after installation still produced reasonable mortality of insectary reared *An. gambiae*. The amount of residual permethrin remaining on samples of bed nets and curtains placed in houses for two months and analyzed two months after that was still high. We recognize that our study was limited in scope; involved only a part of the total population in the two villages, but we are optimistic that the results support further studies on the use and effect of permethrin impregnated bed nets and curtains on malaria transmission in a long-term community-based program.

SURVEILLANCE OF MALARIA IN TOGO

DR. ANANI GAYIBOR DIRECTOR, NATIONAL MALARIA SERVICE
TOGO

ABSTRACT

Author discusses the development of Togo's surveillance system for malaria. In 1984 the system began with tests in 3 sites for chemio-resistant strains of P. falciparum and the installation of a national reporting system of morbidity from dispensaries. The system has gone on to computerized analysis of morbidity and mortality, and anti-malarial drug distribution in Togo, and currently has expanded to include all medical facilities including hospital in-patients. Author makes recommendations for countries interested in developing malaria surveillance systems.

MINISTERE DE LA SANTE PUBLIQUE

SERVICE NATIONAL DU PALUDISME

LOME - TOGO

REPUBLIQUE TOGOLAISE
Union-Paix-Solidarité

SURVEILLANCE ET SUIVI DE LA MORBIDITE ET DE LA MORTALITE PALUSTRES AU TOGO.

Dr. GAYIBOR Anani

Médecin-Chef SNP Lomé

1. Introduction

Le paludisme, l'une des plus grandes endémies de l'Afrique, continue encore aujourd'hui par maintenir sa place de maladie prioritaire dans les programmes de santé de la plupart de nos états. Cette situation est devenue encore plus complexe surtout avec l'apparition ces dernières années de la chimiorésistance du P.falciparum aux antipaludiques. Ce qui oblige les pays des zones impaludées à mettre sur pied des programmes englobant tous les aspects de la lutte contre ce fléau. C'est pourquoi le Togo a retenu dans son programme toutes les activités qui sont possibles d'être réalisées dans nos conditions, en mettant un accent particulier sur la surveillance et le suivi de la morbidité et de la mortalité palustres, ainsi que sur la surveillance de la chimiosensibilité du P.falciparum aux antipaludiques.

2. Présentation géographique

Superficie	56.785 km2	
Population	3.215.297	
Capitale	Lomé	
Limites	Sud	: Océan Atlantique
	Nord	: Burkina Faso
	Est	: République du Bénin
	Ouest	: Ghana

Relief
- Chaine de montagne du Sud-Ouest au Nord-Est.
- plaine

Climat
- Climat guinéen au Sud avec deux saisons sèch et deux saisons pluvieuses.
- Climat soudanien au Nord avec une grande saison sèche et une grande saison pluvieuse.

Voies de communication

1.383 kms de routes bitumées
1.125 kms de routes praticables en toutes saisons

5.000 kms de pistes
436 kms de voies ferrées

deux aéroports internationaux
un port autonome à Lomé.

Administration territoriale

21 préfectures regroupées en 5 régions.

Langues
- Officielle : Français
- Nationales : EWE et KABYE

Espérance de Vie : Hommes 49,2 ans
Femmes 51,3 ans

Taux d'accroissement annuel : 2,9 %

3. Données Sanitaires

3.1. Organisation de l'Administration Sanitaire.

Le système national de santé du Togo comprend trois niveaux :

- le niveau central est constitué par le Cabinet du Ministre et la Direction Générale composée de huit (8) divisions.

Chaque division comprend des services : le Service National du Paludisme est un service de la Division de l'Epidémiologie.

- le niveau intermédiaire est constitué par cinq (5) directions régionales non encore opérationnelles.

- le niveau périphérique est constitué par vingt et une (21) Subdivisions Sanitaires.

3.2. Infrastructures Sanitaires de Soins.

i. Hôpitaux

Le pays comprend :

- 2 CHU à Lomé
- 4 Hôpitaux Régionaux
- 3 Hôpitaux de plein exercice
- 5 Hôpitaux privés
- 13 Hôpitaux de subdivisions
- 1 Hôpital psychiatrique.

ii. Centres de Santé

Ils sont au nombre de dix-sept (17) ; il est prévu d'en créer au total soixante dix-sept (77).

iii. Dispensaires

Ils sont actuellement au nombre de 350 ; il est prévu au total 391.

Postes de Santé au niveau des villages.

Il est prévu d'en créer environ 2.000

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3.3. Les Instituts et Ecoles de Formation

Il existe au niveau central :

- l'Institut National d'Hygiène, laboratoire central de référence équipé pour le diagnostic biologique, la vaccination et la recherche.

- les écoles de formation du personnel de la Santé :
  - Faculté de Médecine de l'Université du Bénin
  - l'Ecole des Assistants Médicaux
  - l'Ecole Nationale des Sages-Femmes
  - l'Ecole Nationale des Auxiliaires Médicaux dont l'Ecole de Formation des Aides Sanitaires de Sokodé
  - l'Institut Universitaire de Technologie de Santé
  - le Centre de Formation en Santé Publique OMS.

4. Le Service National du Paludisme (SNP)

Créé depuis 1952, le SNP conserve jusqu'à présent la lourde responsabilité de l'organisation de la lutte antipaludique sur le plan national :

- l'élaboration de la Stratégie Nationale et sa mise en application dans toutes les formations sanitaires
- la coordination des activités de lutte antipaludique entre le Ministère de la Santé et les différents organismes internationaux et les ONG.
- l'évaluation et la supervision
- la recherche opérationnelle.

Après les travaux de recherche sur la chimiosensibilité du P.falciparum aux amino-4-quinoléines qui se sont déroulés dans 4 régions du Togo en 1988, et dont les résultats ont montré l'existence de la chimiorésistance de cette espèce plasmodiale à la chloroquine et à l'Amodiaquine, un Séminaire Atelier s'était tenu en Mars 1989 pour réviser

la stratégie nationale de lutte antipaludique. L'accent a été mis essentiellement sur :

- l'utilisation rationnelle des antipaludiques existants sur le marché togolais ; choix de l'antipaludique suivant le cas de paludisme à traiter, dose, rythme d'administration et durée du traitement,

- la régularité de la chimioprophylaxie chez la femme enceinte et allaitante jusqu'à 2 mois après l'accouchement,

- la surveillance épidémiologique de la morbidité et de la mortalité en particulier chez les enfants de moins de 5 ans,

- la surveillance de la chimiosensibilité du P.falciparum aux antipaludiques usuels aussi bien au niveau des dispensaires que des CHR et CHU.

5. Surveillance de la morbidité et de la mortalité palustres.

5.1. Niveau des dispensaires

C'est le système de recueil de données le plus ancien. Mais avec le programme de contrôle du paludisme et la dotation en chloroquine des dispensaires, de nouveaux formulaires ont vu le jour. Tout accès fébrile traité avec la chloroquine est considéré comme un accès palustre. Tous ces cas sont rapportés ainsi que le nombre de comprimés utilisés à cet effet, et le nombre de décès supposés dûs au paludisme. Ces formulaires standards sont remplis une fois par mois, puis envoyés au Médecin Chef de Subdivision qui l'expédie au Service National du Paludisme. La compilation de ces rapports mensuels des dispensaires permet d'estimer par groupe d'âge le nombre de cas de fièvre traités chaque mois par Centre de Santé et le nombre de comprimés de chloroquine utilisés.

5.2. Niveau des Hôpitaux

Si au niveau des dispensaires tout accès fébrile est considé comme paludisme, parce que ne disposant pas de moyens d'inve tigation, les centres hospitaliers par contre sont équipés pour pratiquer les gouttes épaisses qui permettent de confir mer parasitologiquement le diagnostic. En plus les centres hospitaliers prennent en charge les cas graves de paludisme et c'est également là où vont se produire bon nombre de décè

Un système de recueil de toutes ces informations est mis en pla dans 38 hôpitaux du Togo par le Service National des Statistiques Sanitaires en 1989. Ce système de recueil de données, dont le Service Natio du Paludisme met à profit les résultats consiste en l'enregistrement de sept variables chez tous les malades hospitalisés à partir de leur dossier : service, âge, sexe, diagnostic de sortie,date d'admission et mod sortie. Les données sont envoyées directement à Lomé au Service National des Statistiques Sanitaires qui en fera l'analyse et communiquera les résultats.

5.3. Résultats

Tableau 1 - Le Paludisme représente 34 % de toutes les affections rencontrées en 1989.

Tableau 2 - Au Service de Pédiatrie de Lomé il représente 44 % des admissions.

Tableau 3 - Morbidité palustre

Tableau 4 et 5 - La létalité palustre tourne autour de 2 à 4 %, avec de grande variation au cours de certains mois qui correspondent à la période de la saison des pluies.

Tableau 6 et 7 - Létalité à l'hôpital d'Aného et au CHR Atakpamé.

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Les données de 86 à 88 sont retrospectives. Elles ont permis de découvrir que tous les Hôpitaux n'avaient pas la même définition des c de paludisme.

N.B.- La létalité palustre dans les CHR est évidemment influencée par
- la qualité des prestations dans les services,
- le type de population.

6. Surveillance de la chimiosensibilité du P.falciparum à la Chloroquin

Après les premiers tests de sensibilité in vivo du P.falciparum à la chloroquine à la dose de 10mg/kg menés à Kpalimé et à Lomé en 1984, et ensuite à Sokodé en 1985 avec la collaboration du CDC d'ATLANTA, une méthode de surveillance passive fut préconisée en 198 par le SNP et le Service de Parasitologie du CHU dans le souci de maintenir une surveillance continue afin de suivre l'évolution de la chimiosensibilité de cette espèce plasmodiale aux antipaludiques disponibles sur le marché togolais. Cette méthode, expérimentée au SNP, a été instituée d'abord en 1987 dans les Centres de Santé de Lomé et Bè, et ensuite en 1988 dans les hôpitaux périphériques de Subdivision.

6.1. Méthode de la surveillance passive.

Cette méthode basée sur les tests de sensibilité in vivo consiste à suivre pendant huit jours l'évolution de la parasitémie à JO, J2 et J7 chez des malades surtout les enfants de moins de 5 ans, dont le diagnostic de paludisme est confirmé au laboratoire et qui sont soumis à un traitement antipaludique.

6.2. Résultats

Nous tenons surtout compte de l'évolution de la parasitémie à JO et à J7.

Année 1986 - aucune souche résistante n'a été décelée.

Année 1987 - 26 souches du P.falciparum résistants ont été décelées, d'où la grande enquête de 1988 dans 4 régions du Togo.

Année 1988 - quelques Subdivisions Sanitaires ont mis en pratique le système de surveillance.
Souche de P.falciparum résistant 92 sur 440.
Ce qui est confirmé également par les tests in vivo

Année 1989 - Seul le SNP a fourni le rapport de ces activités.

6.3. Commentaires

La surveillance idéale de la chimiosensibilité dans un pays doit être faite de façon régulière et continue, comme celle que nous préconisons au Togo : surveillance passive permanente débouchant sur une surveillance active.

Les avantages de la surveillance passive :

- elle est continue
- elle est peu onéreuse et peut s'articuler facilement avec les activités de routine des laboratoires
- enfin elle permet de dépister à tout moment la baisse de sensibilité de P.falciparum aux antipaludéens et de provoquer une action de grande envergure comme la surveillance active.

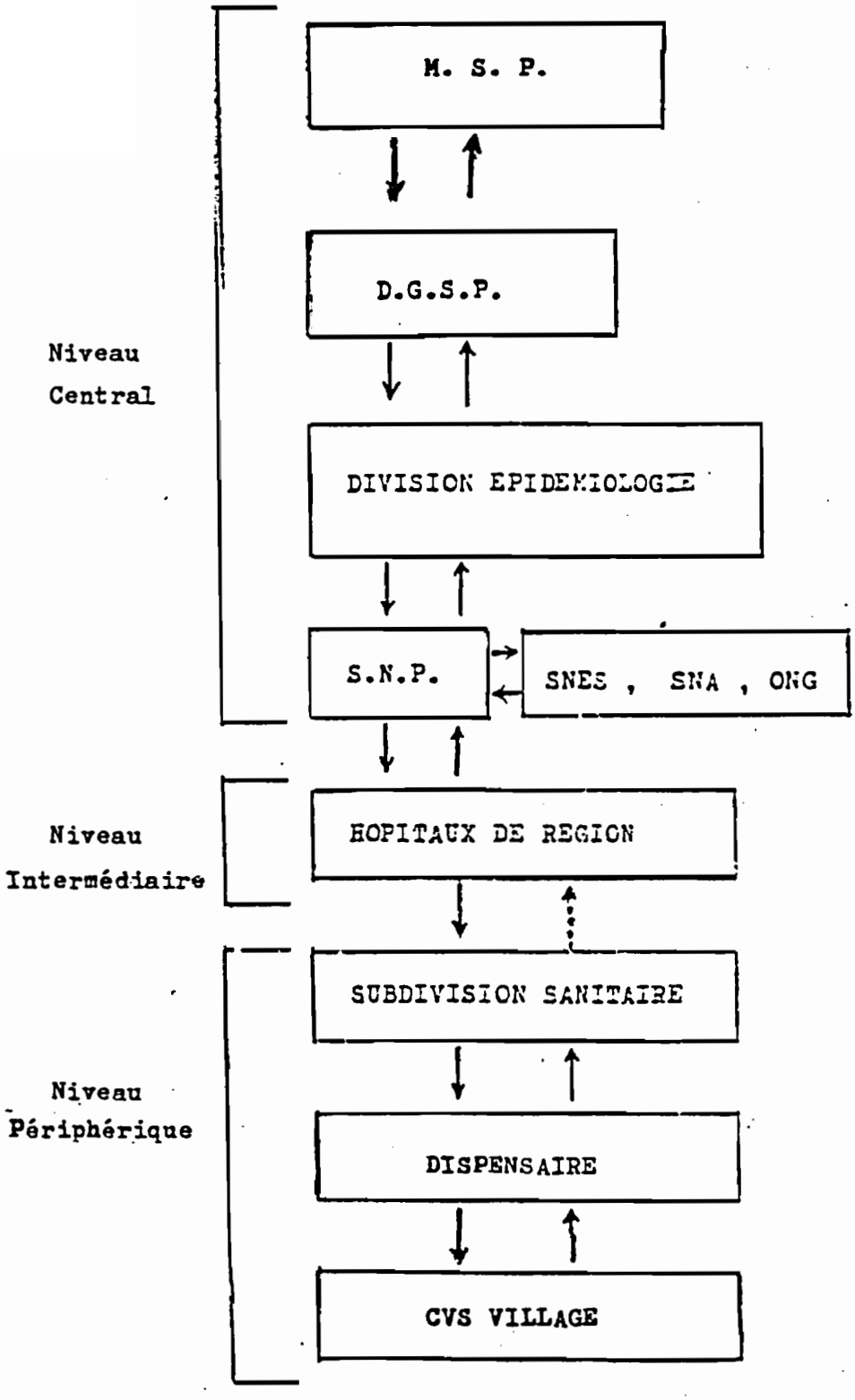
Une difficulté essentielle réside dans le suivi des malades. Le taux des perdus de vue est assez élevé dans chacun des centres respectifs, ainsi qu'au cours des différentes années. Ceci pourrait être à l'origine d'un manque d'enthousiasme de la part du personnel de la Santé.

Conclusion

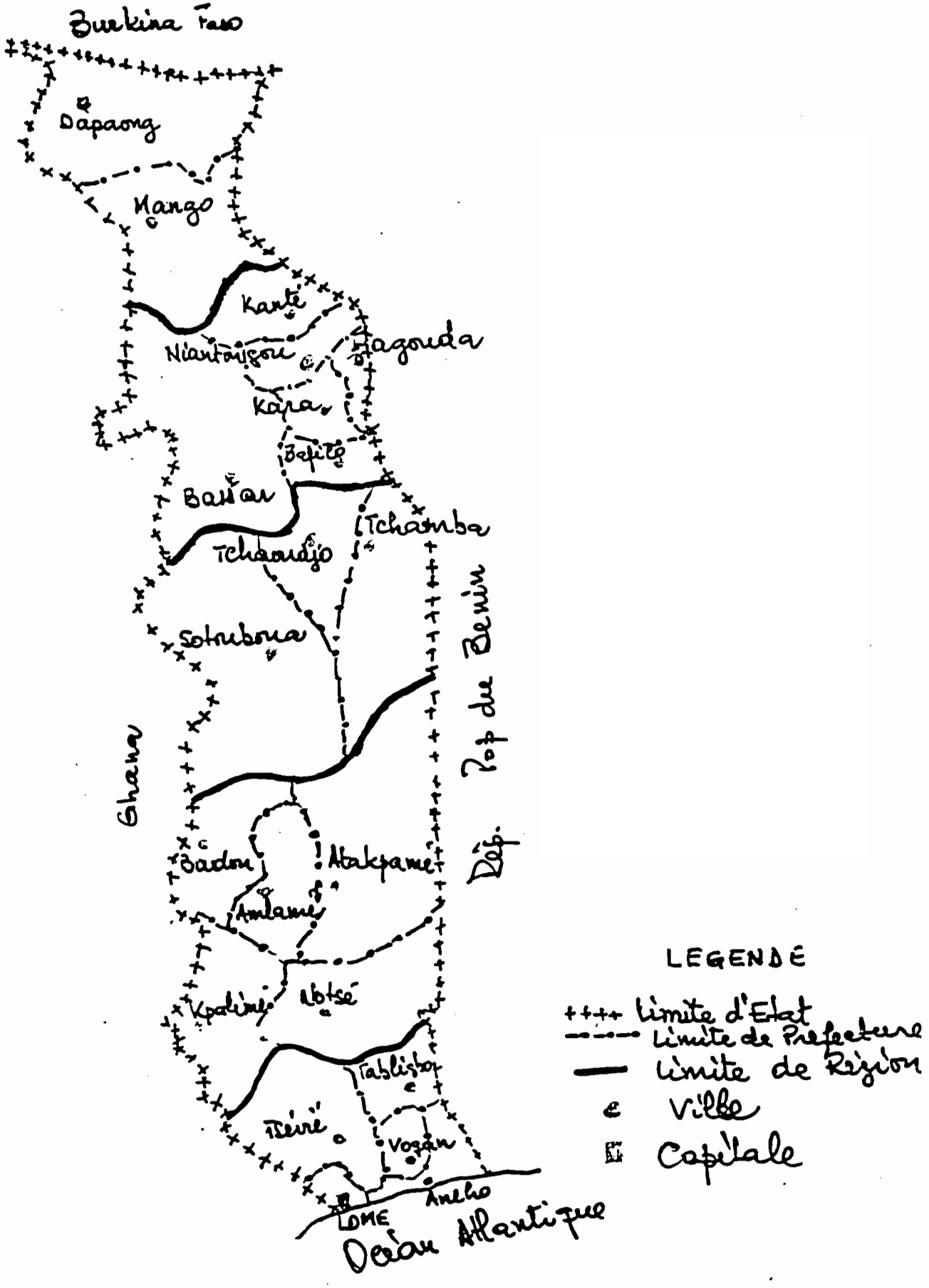
L'effort que font aujourd'hui tous les pays c'est d'obtenir le maximum de renseignements sur les maladies dont les programmes sont en cours d'exécution pour juger de leur efficacité, d'autant plus que l'exécution de ces programmes nécessite et mobilise d'importante ressource financière dont ne disposent pas très souvent les pays en voie de développement. C'est pourquoi la mise en place de système aussi simple de surveillance et leur utilisation effective en ce qui concerne l'endémie palustre pourraient permettre une meilleure conduite de ces programmes de lutte dans différents pays.

Organisation de l'Administration Sanitaire

On distingue 3 échelons

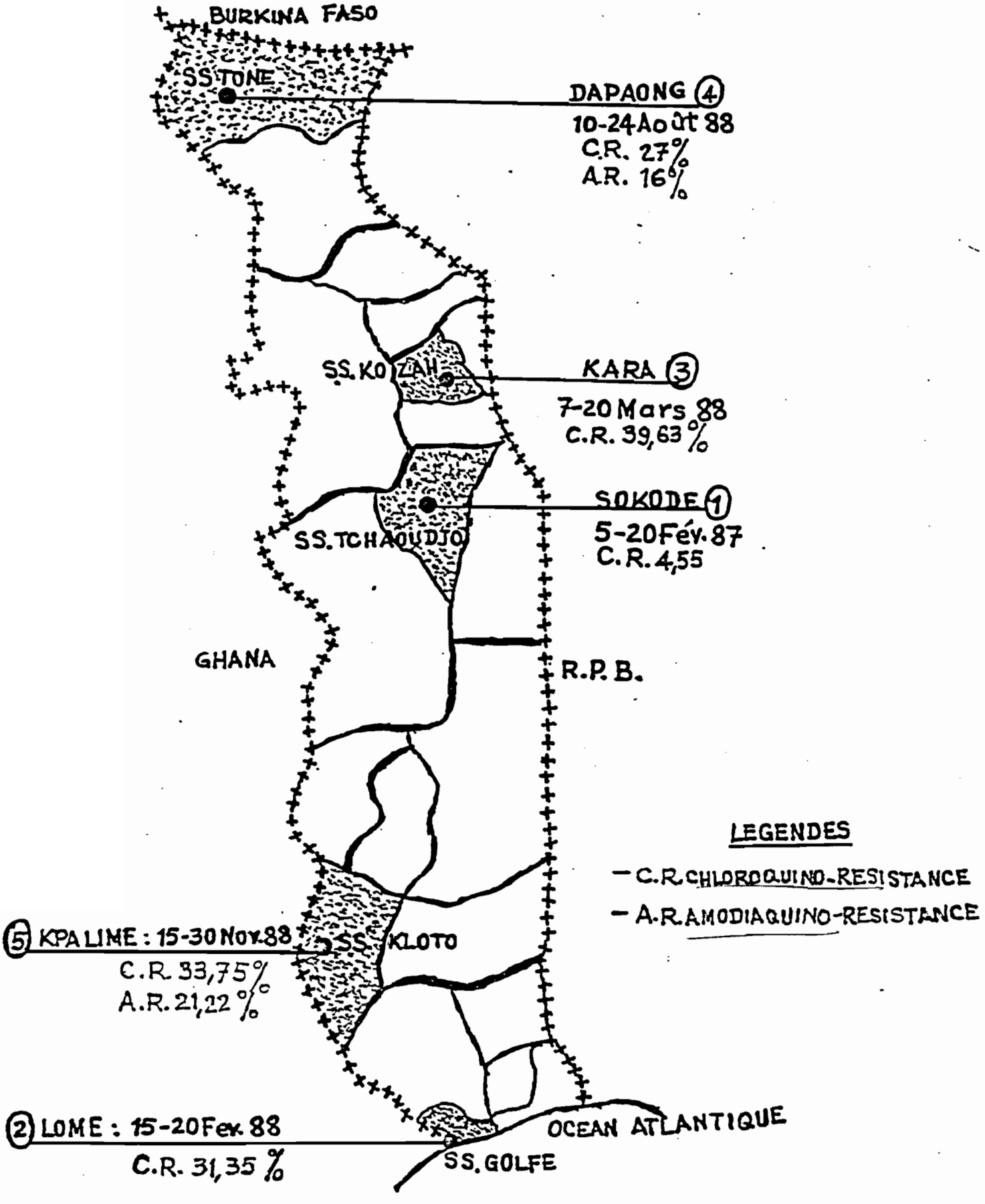


CARTE DU TOGO

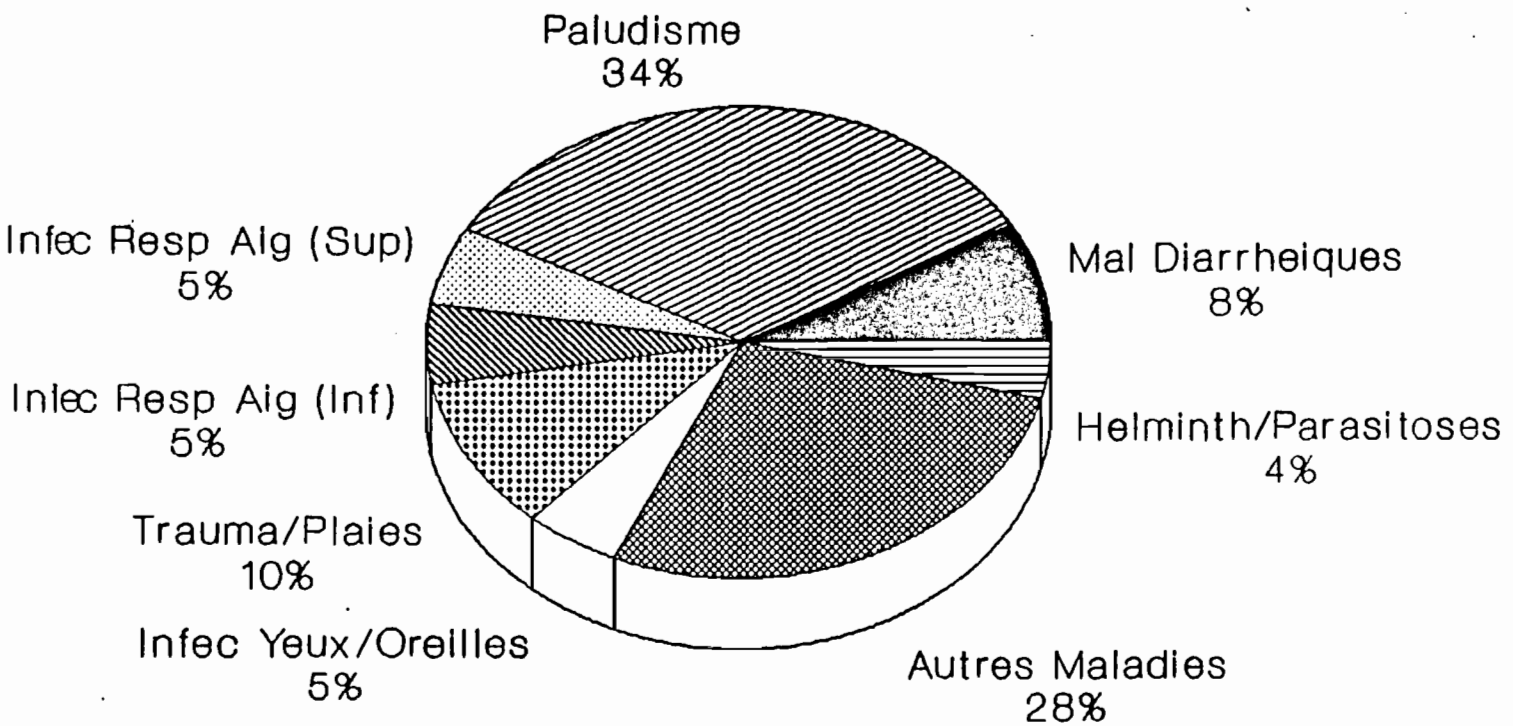


CARTE DE LA CHIMIO RESISTANCE IN VIVO DU P. FALCIPARUM AUX ANTIPALUDIQUES

TOGO



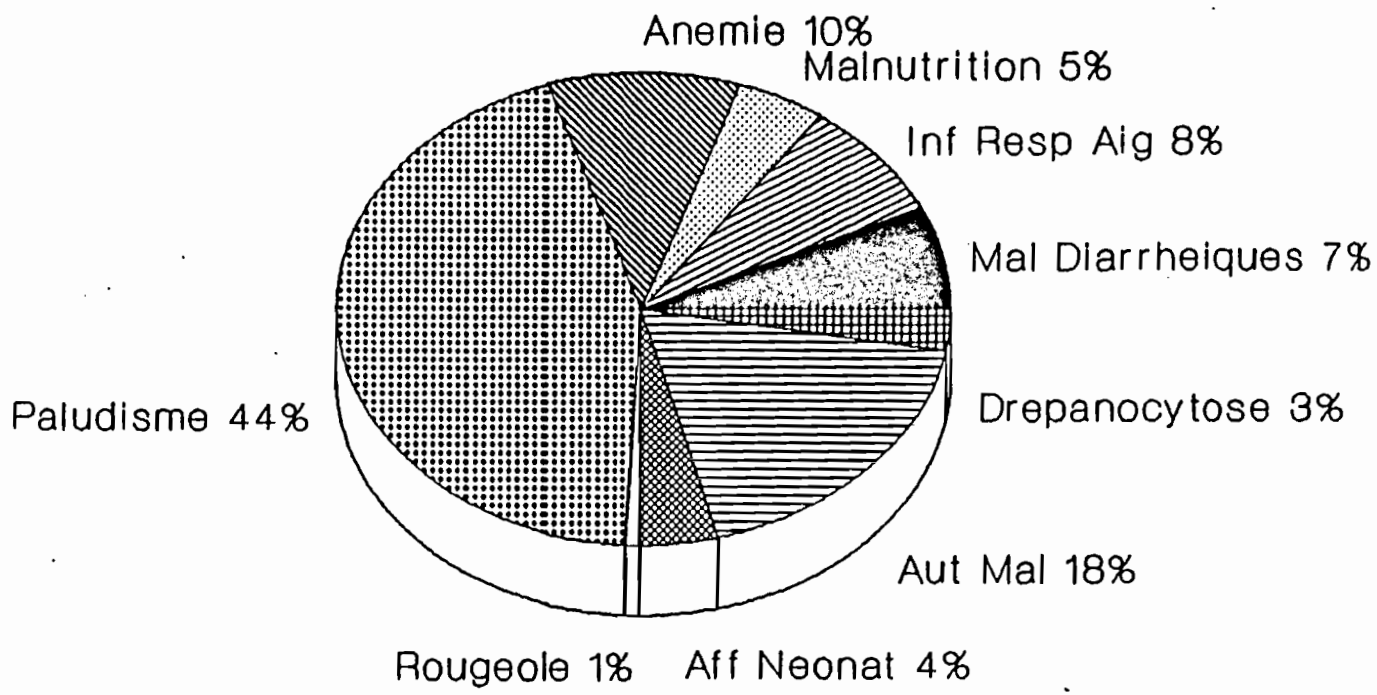
MALADES CONSULTANTS PAR MALADIE
Ensemble du Togo, 1989
Soins Externes



Total: 2.161.491

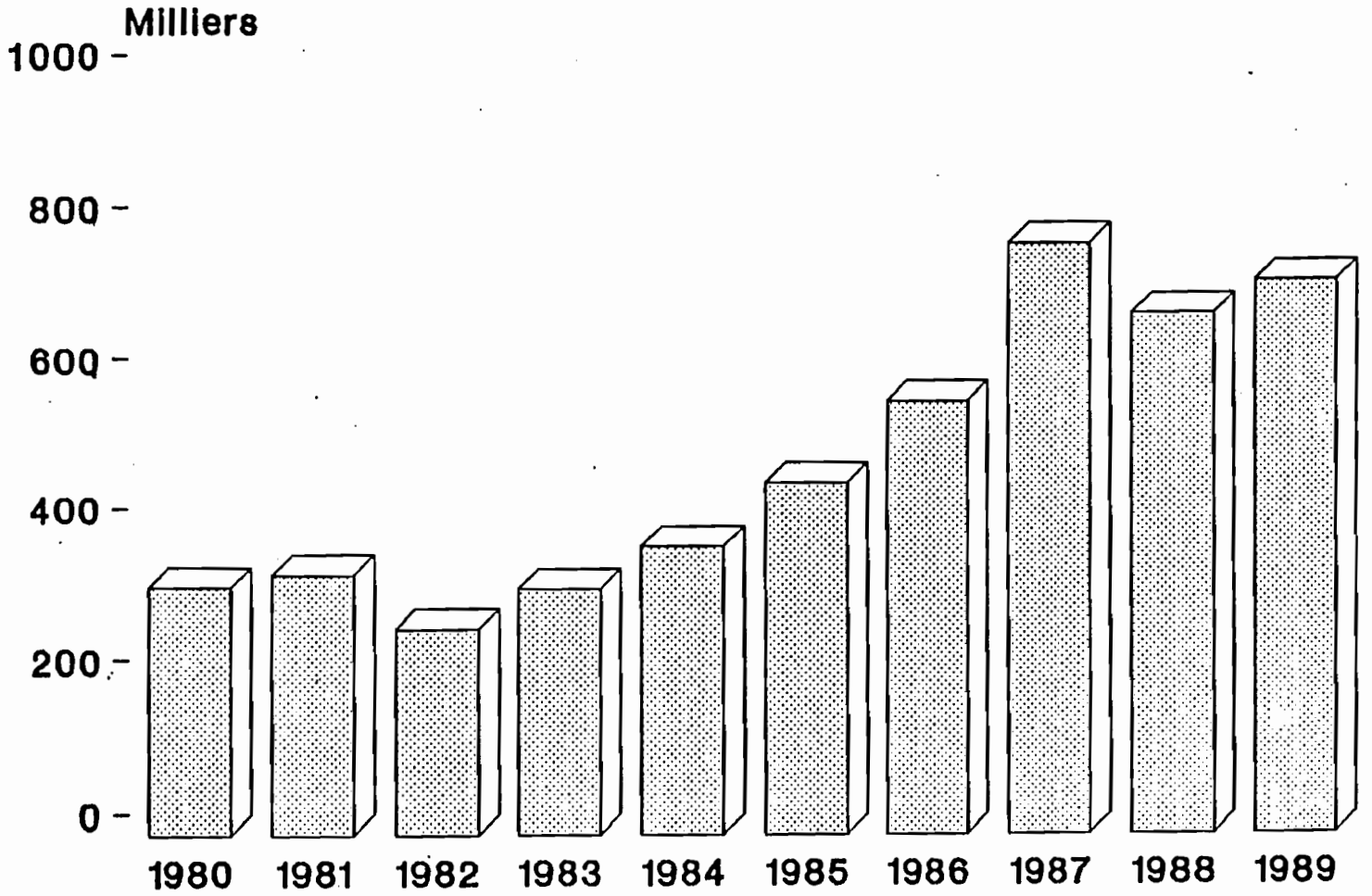
Tout Age

PRINCIPALES CAUSES D'HOSPITALISATION
Services de Pediatrie
Ensemble du Togo, 1989



Enfants <15 ans

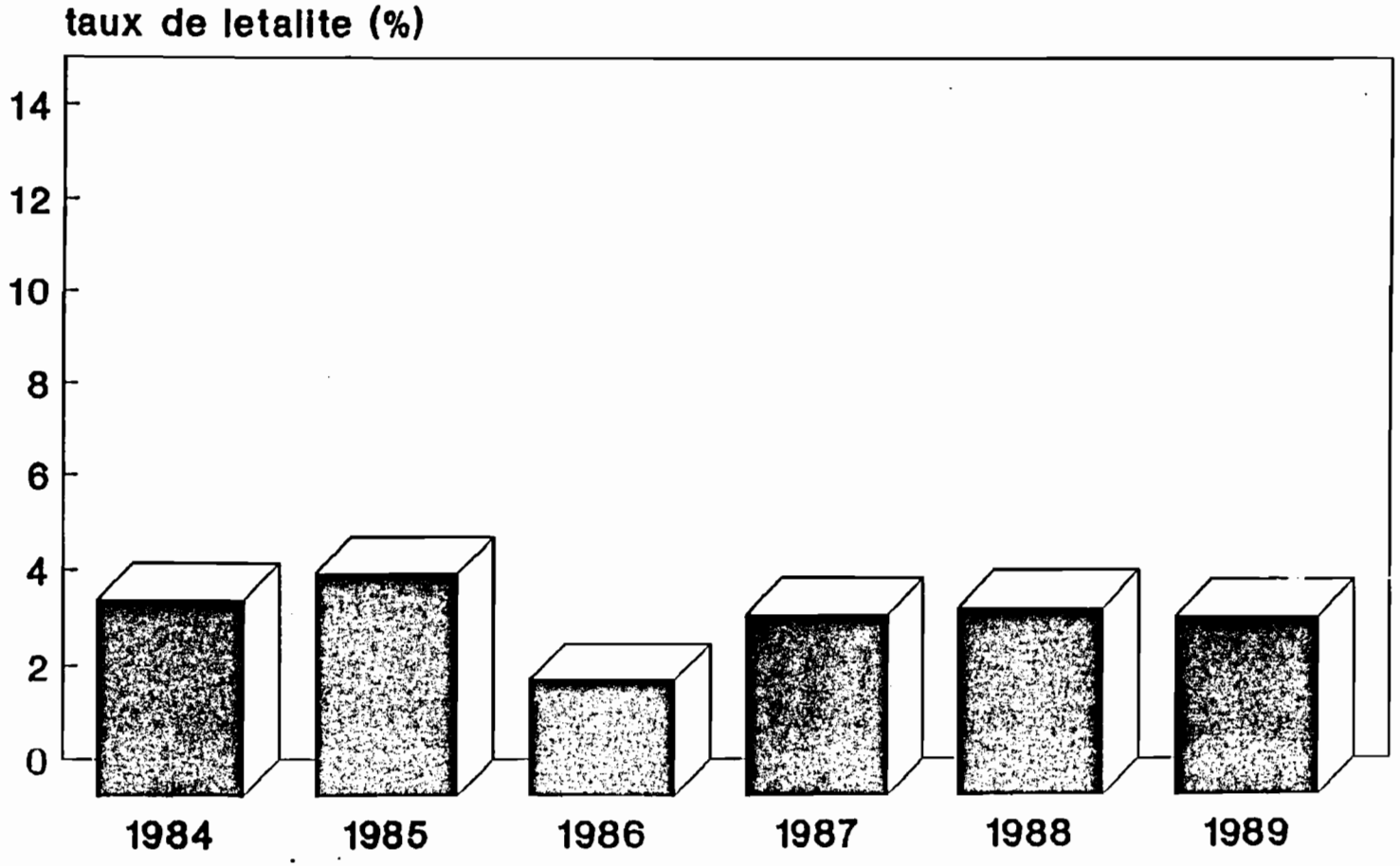
CAS DE PALUDISME RAPPORTES PAR AN
Soins Externes, Togo, 1980-89



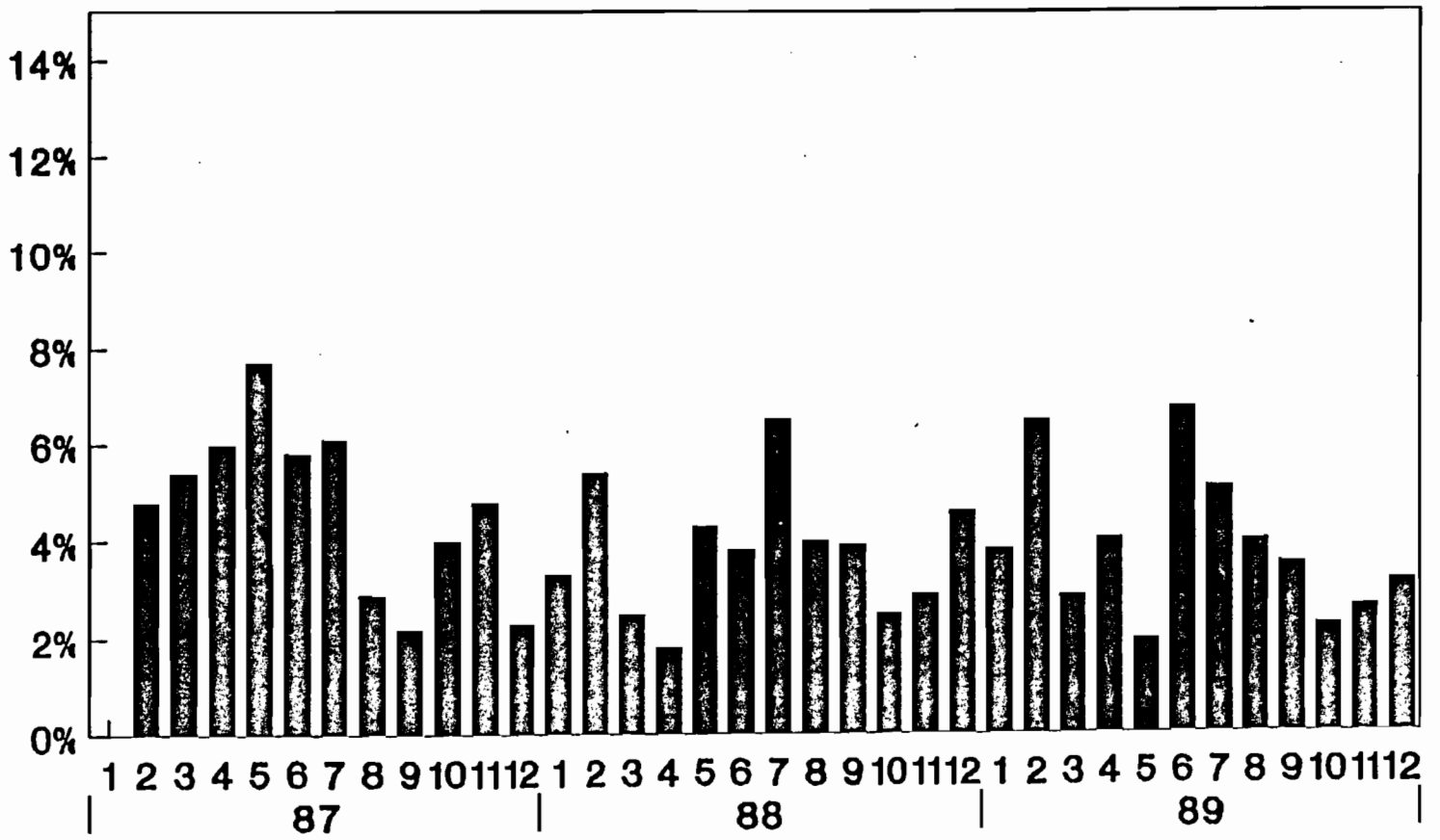
Source: Statistiques Sanitaires

Annual Malaria Mortality

Letalite Palustre Par An
Service de Pediatrie, CHU
Lome, Togo, 1984-1989

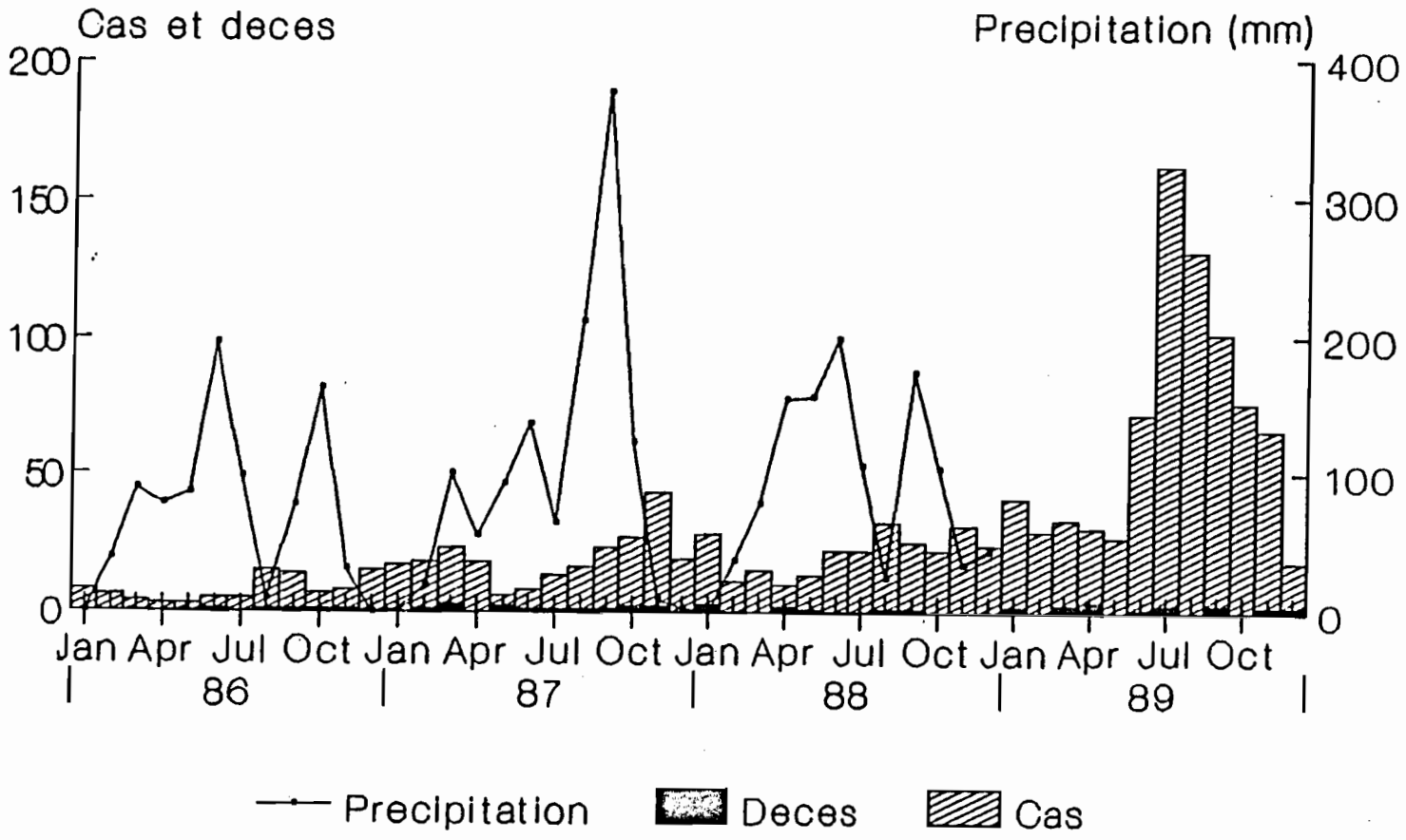


Letalite Palustre par Mois
Service de Pediatrie, CHU
Lome, Togo, 1987-88



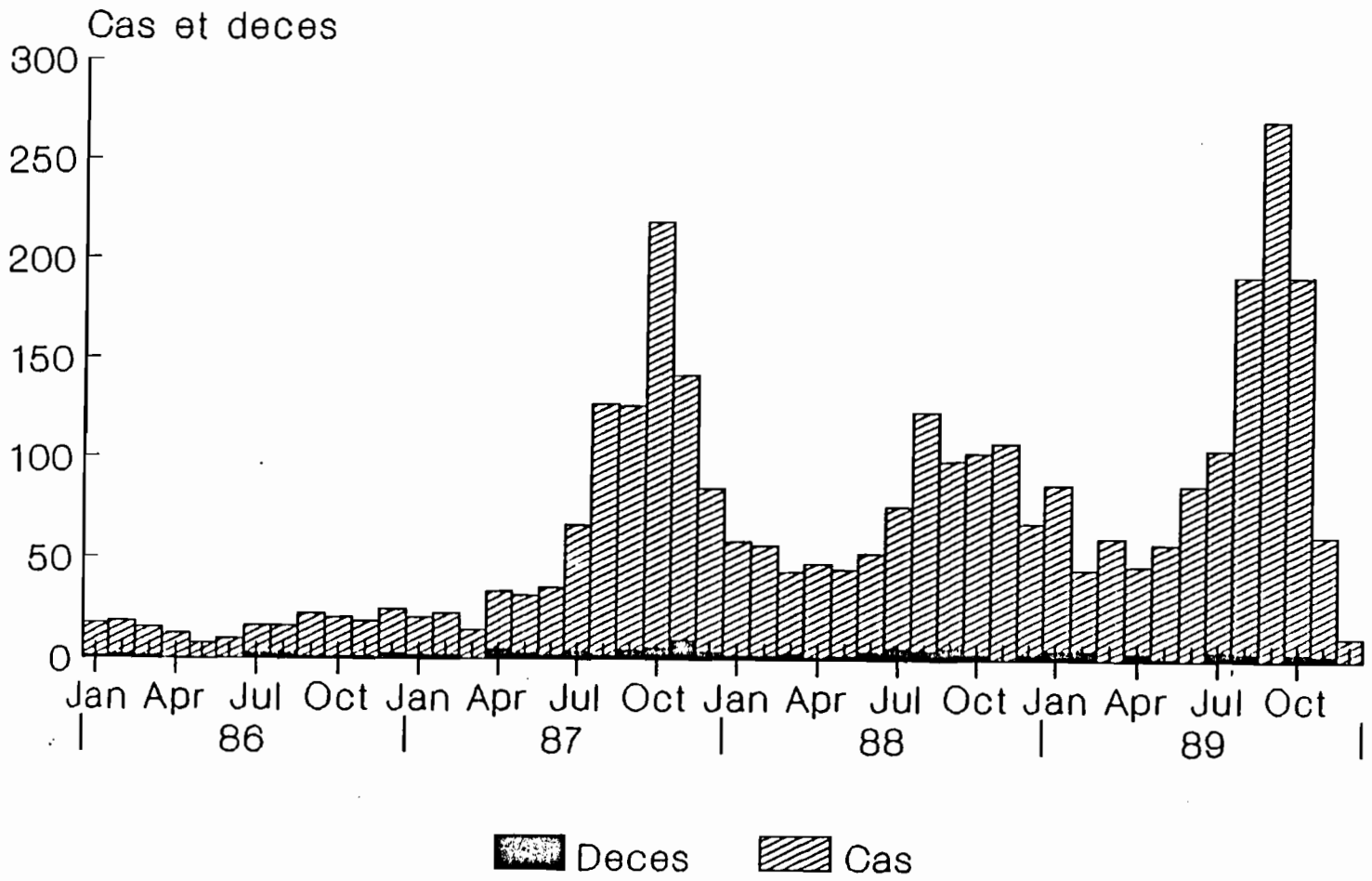
Enfants <15 ans

PALUDISME: CAS ET DECES
Hopital de Plein Exercice, Aneho
Togo, 1986 - 1989



:nfants

PALUDISME: CAS ET DECES AU CHR, ATAKPAME
Region des Plateaux, Togo, 1986-89



Enfants

Surveillance Passive Janvier à Décembre 88

	Cas sélectionnés	Présents à J7	Souches sensibles	Souches Résistantes	
S.N.P.	595	300	240	60	20%
C.S. Lomé	70	43	32	11	25,5%
C.S. Bè	40	27	15	12	
S.S. Golfe	32	23	17	6	
S.S. Vo	47	16	16	0	
S.S. Haho	8	4	4	0	
S.S. Kloto	7	2	1	1	
S.S. Amou	7	7	7	0	
S.S. Wawa	9	1	1	0	
SS. Sotouboua	54	0	0	0	
S.S. Assoli	2	0	0	0	
S.S. Tone	23	9	8	1	
Total	894	432	341	91 (21%)	
CHU	18	8	7	1	

Tableau 3. Pourcentage des Cas de Résistance observés en 1989.

Mois	J	F	M	A	M	J	J	A	S	O	N	D	Total
Sujets sélectionnés	43	27	14	13	17	62	152	266	206	180	155	132	1267
Sujets présent à J7	31	17	8	11	7	39	87	155	109	126	103	80	769
Cas Résistants	3	4	2	1	1	5	25	48	24	41	27	20	201
% de Résistance	9	23	25	9	14	12	28	30	22	32	26	25	26

RESULTATS : SURVEILLANCE EPIDEMIOLOGIQUE de la CHIMIOSENSIBILITE du P. falciparum aux Antipaludiques

Année 1986

	Cas Sélectionnés	Présents à J7	Souches Sensibles	Souches Résistantes
x CSL	15	0	0	0
xx CSB	13	8	8	0
xxx SNP	64	39	39	0
TOTAL	92	47	47	0

Année 1987

	Cas Sélectionnés	Présents à J7	Souches Sensibles	Souches Résistantes
x CSL	37	2	2	0
xx CSB	37	28	28	0
xxx SNP	163	79	53	26
TOTAL	237	109	83	26

x Centre de Santé de Lomé
xx Centre de Santé de Bé

DEVELOPMENT OF A NATIONAL MALARIA CONTROL PLAN IN NIGERIA

Dr. O.J. Ekanem
National Malaria and Vector Control Division
Federal Ministry of Health
Yaba, Lagos, Nigeria

Malaria is highly endemic in Nigeria. It is the leading cause of illness and among the top five causes of mortality. *Plasmodium falciparum* is responsible for over 90% of malaria infections.

The strategy for malaria control recognizes the efficient management of malaria as one of the major endemic diseases within the Primary Health Care (PHC) system. To achieve malaria control, the rational use of antimalarial drugs is essential. The development of a National Malaria Control Plan is a necessary and valid step in that direction.

The Malaria Control Plan in NIgeria was prepared under the auspices of the Nigeria Child Survival Programme in collaboration with the ACSI-CCCD Project. Between November 1986 and February 1987, there were a series of administrative and technical consultations between USAID-CCCD and their counterparts in the Federal Ministry of Health. Resulting from these consultations a multi-disciplinary health sector National Malaria Technical Committee was established with membership from the Ministry of Health, various Universities, the pharmaceutical industry and International Organizations (WHO, USAID) to determine and define data bases relevant to the objectives of the Nigeria Child Survival Programme and to develop a National Malaria Control Plan (NMCP).

The NMCP was formulated based on data obtained from a series of planned operational research activities including a nationwide malaria therapy efficacy surveillance (MTES). The MTES showed that CRPF occurred in 16 of 21 sites investigated throughout the country. In spite of the frequency of parasitological failures with CQ, clinical failures were uncommon. Thus, CQ remained the first-line drug for the treatment of non-severe malaria.

The NMCP provides for the proper diagnosis, efficient use of antimalarials, referral, community mobilization and education, personal and community vector control, staff training, programme evaluation and drug therapy surveillance.

It is concluded that with the spread of CRPF and the need to achieve malaria control, the development of the NMCP is a fundamental pre-requisite to enhancing the rational use of antimalarial drugs among other objectives.

"IMPROVING VACCINATION FOLLOW-UP RATES IN LIBERIA: AN INTERVENTION TRIAL"

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Ministry of Health & Social Welfare

Deborah A. Bender, Ph.D., M.P.H.
University of North Carolina

ABSTRACT

Although coverage rates for the initial doses of DPT and Polio have improved significantly in Liberia since 1985, coverage rates for DPT2/Polio2 and DPT3/Polio3 remain disappointingly low. To address this problem, a two-phase operational research study was conducted in two counties. In Phase I, focus group discussions were held to assess the reasons mothers fail to bring their children for follow-up vaccinations. The reasons cited included fear of side effects, lack of knowledge about when to return, cost of the Road To Health Card and long waiting times. The strategy most highly recommended as a means of encouraging mothers to return was to involve influential community leaders (like village chiefs and traditional midwives) as a more integral part of vaccination activities. Phase II was therefore designed to field test the impact on vaccination follow-up rates of involving chiefs and midwives as "Extenders of the Vaccination Team." For the purposes of the study, four districts in each county were randomly assigned to one of four categories: 1) Chiefs only 2) Midwives only 3) Chiefs and Midwives and 4) Control. Ten chiefs and/or midwives from each district were invited to participate in a two-day Awareness Workshop designed to educate participants on the importance of vaccination, treatment of side effects, and strategies to improve vaccination follow-up rates. Strategies suggested by chiefs/midwives to improve vaccination follow-up included conducting meetings with community members to explain the importance of vaccination, imposing a penalty on defaulters, and using a village roster to record immunization status of children under five years. Three approaches were used to evaluate the impact of the intervention: 1) interviews with chiefs/midwives to assess knowledge retention, 2) interviews with mothers to assess knowledge transfer, and 3) coverage surveys to assess vaccination coverage for fully immunized children. Results showed that knowledge about vaccination, treatment of side effects and the importance of the RTH Card was greater among chiefs/midwives and mothers in the intervention districts vs the control districts. Coverage rates for fully immunized children were greater in the intervention districts (56% intervention vs 45% control). Coverage rates were highest in districts where chiefs participated (68%), perhaps reflecting the high degree of authority chiefs exercise in their respective communities. As a result of this study, the Ministry of Health has decided to extend this activity into other counties and to add additional information on other PHC messages.

Child Survival -- Challenges for the Next Decade

During the last decade, significant gains have been made in child survival. Still, eight of the 10 countries in the world with the highest infant mortality rates are in sub-Saharan Africa. Fertility rates are also high -- a doubling of the population is expected every 20-25 years, placing a further strain on limited resources and on already fragile environments. Malnutrition, after declining for almost three decades, is once again on the rise, perhaps spurred on by the global economic recession of the 1980s. National policy makers, faced with increasing demands from all sectors, have been unable to maintain their traditionally high investments in health infrastructure. To complete an already bleak landscape, epidemiologic conditions have also worsened. HIV infection and AIDS are bringing about accompanying increases in the incidence of tuberculosis and sexually transmitted diseases, and are at least partially responsible for a pattern of increasing incidence of more frequently fatal malaria. These factors will tend to make further progress more difficult to achieve.

Many of the gains to date have been made in the context of a small number of specific programs, all of which were relatively self-contained. Although these programs were all aimed at disease problems of obvious priority, the control programs were designed in ways which maximize their aggregate logistic and

managerial burdens. The Expanded Program on Immunization (EPI), the Control of Diarrheal Diseases program (CDD) and family planning programs all developed independent systems of training, health education, management information, and commodity distribution, even though most health systems are designed such that a small number of health workers in peripheral facilities are the target of most of the training and other support ~~and~~ implement all of the interventions. Most recently, AIDS control programs and accelerated immunization programs have further contributed to managerial duplication, resource allocation problems, and to the workload of the health worker. A bright spot on the horizon is the potential for newer interventions, such as ARI control, vitamin A supplementation, more effective and acceptable contraceptive technologies, and so on, to contribute to the health of African children and mothers. These new technological developments will only be helpful, however, if programs to bring them to the most peripheral levels of the health structure, including the community, can be more efficiently managed and more effectively implemented by health workers throughout the health care system.

CCCD is another project which was designed to address the priority diseases of childhood. It has been largely successful. The more timely vaccination of a larger proportion of the child population has been a major achievement. The development of diarrhea training units has resulted in significant reductions in

mortality and in rates of hospital admission, in addition to providing supervised sites where health care providers are trained in new techniques. In malaria control, the spread of chloroquine resistance across Africa prompted studies which clarified the epidemiology of the disease and highlighted its pervasive effect on childhood mortality.

During the 1990s, it will be necessary to build upon the successes of CCCD. CCCD was not intended to be a comprehensive program and insufficient attention has been paid to important contributors to mortality such as the lack of effective family planning services. No provision was made for addressing the problem of HIV infection, which may increase child mortality by as much as 45% during the coming decade in parts of Africa. Perhaps more importantly, although CCCD helped to improve treatment for episodes of acute illness, it was not designed to deal with the long-term consequences of the diseases it sought to treat, viz., the chronic and sometimes severe anemia which developed from repeated malaria infection, the malnutrition which results, in part, from repeated episodes of diarrhea, measles, and other illnesses, and the unacceptably high proportion of low birth weight children, a consequence of diverse, incompletely explored causes.

In spite of these gaps, CCCD has clearly demonstrated the feasibility and desirability of an integrated approach to child

survival issues in Africa. Because of the limited resources available to most African nations and because of the relatively restricted access of large portions of the population to the formal health care system, the key to success in the future will lie on the degree to which money, personnel, and technical knowledge can be efficiently delivered from central levels to the periphery and on the degree to which the community becomes more responsible for its health.

In order to more efficiently address the needs of the population, the many technological advances which can be made more available to it, disease-specific programs must better integrated. One way to do so would be to place the emphasis on the problems of the individual, not on the control of specific diseases. In the case of children, care should be available as often and conveniently as possible, and caretakers should be made aware of prevention strategies for diarrhea, for malaria, and for sexually transmissible diseases, including HIV infection. The ability to assess, diagnose, and treat life-threatening diseases early in their course should also exist in the community, as should the ability to recognize when there is a need for more advanced care.

At the clinic, a wide range of services should be available more frequently than current practice provides. Curative care offered for acute illness should be combined with greater attention to

the total health needs of the child and mother. Immunization services, counselling and commodities necessary for child spacing and the control of STDs should be routinely available, and health care personnel must be able to refer more severely ill children for appropriate care. The ability of the system to adapt itself to deal with the individual rather than with the diseases will bring about a more rapid and a more sustainable decline of what are still unacceptably high levels of mortality.

To move from a disease-specific to a child-oriented program which deals with many conditions simultaneously and seeks to combine, to the extent possible, the many intervention programs which exist, resources must be deployed in as efficient a manner as possible. Linkages between what are now essentially free-standing programs, such as EPI and CDD must be developed and exploited, so that the strong points of each program are incorporated into every program and so that the flow of knowledge, commodities, and resources is reinforced at every level of the system.

Areas of potential linkage can be readily identified. They include the following:

1. **technical strategies** -- some interventions contribute to the control of diseases for which they are not the primary target; for example, measles immunization is an essential feature of diarrheal disease control programs, the treatment of moderate

pneumonia with cotrimoxazole may eliminate malaria parasitemia, and the promotion of condom use may help increase birth intervals and reduce the spread of sexually transmissible diseases.

2. **program management** -- at the central level, programs such as diarrheal disease control and control of acute respiratory infection may be merged. Both rely primarily on curative strategies involving clinical training and both will require strong rational drug policies. Undoing the division which has been created between family planning/child spacing programs and other child survival programs which share a common objective should be explored.

3. **commodity management** -- oral rehydration salts, antibiotics, family planning commodities, and so forth could all be distributed from central level to the community along with vaccines. Procurement and inventory control procedures could be similarly combined for the sake of improved efficiency.

4. **physical facilities** -- the maintenance of separate structures for curative, and maternal and child health services should be reviewed. Similarly, where specialized units for oral rehydration, for example, exist, they might be used for other purposes.

5. **health care personnel** -- at the peripheral levels of the health care system, personnel are already polyvalent and expected to provide competent preventive and curative care to all children who present to the health center. An integrated health care delivery system would result in their being better able to do so.

Drugs and other commodities would be more frequently available in adequate quantity, training would be offered in a wider variety of interventions, and record keeping (form filling) tasks would hopefully be reduced.

6. **health education** -- mothers and other child caretakers (including community health workers) need to be able to recognize all of the more common illnesses which afflict their children. Because of limitations on access to health centers, early treatment for many of these conditions is required at the community level. Mothers must be educated to deal appropriately with health problems when they arise and to avail themselves of preventive services. Local pharmacists, market women, and others involved in the dispensing of medications also should be involved in the health care system.

7. **training and supervision** -- the separation of different child survival interventions is nowhere as blatantly reflected than in single-intervention training programs. Although minimum amounts of time for training in actually delivery of care (immunization practices, oral rehydration therapy, family planning counselling, etc.) are necessary in order to maintain a high level of quality which must not be sacrificed, other aspects of health care delivery, such as management, supervisory skills, and monitoring and evaluation are common to all programs. Consideration should be given to developing more efficient means of providing more comprehensive continuing education to health care personnel.

8. **health information systems (program monitoring and evaluation)** -- the collection of morbidity and service data provides an ideal example of an opportunity for program integration. A record of the health care received by a child can be recorded on a single "road to health" card, all clinic visits are recorded in a single register, and data are frequently collected and analyzed by a single statistical office. A HIS should ensure that the necessary information is seen by all those who need it.

9. **operational research** -- efforts to develop a more integrated system of health care provision will undoubtedly be met by many obstacles. Operational research is required in order to meld currently separate programs in such a way as to more adequately address the spectrum of child survival problems while maintaining the effectiveness of current programs.

If continued progress is to be made and further improvement of infant and childhood health is to occur, wasteful duplication of program activities must be eliminated; scarce executive, managerial, and technical manpower and other resources must be used more efficiently; multi-purpose clinic health workers must be trained, supplied, and supervised in the most effective manner; and mothers and community health workers must become knowledgeable of the means by which they might prevent or provide prompt treatment for important childhood illnesses. A great deal

of further thought and discussion is warranted. We hope that the conference this week will provide the opportunity to more thoroughly explore some of the issues presented in this paper.

SUMMARY AND FUTURE OF MALARIA CONTROL IN AFRICA

R. STEKETEE, M.D.

As we enter the 1990s, there is a growing urgency for action to address the toll that malaria extracts from child survival. There is an increasing recognition from all sectors: from mothers and fathers, from health workers, malaria program managers, and from international and donor groups.

This morning you have heard that we understand, better than ever before, the breadth of the problem and where exactly malaria is exacting its toll.

SLIDE

The four areas: the human-mosquito contact, the acute illness, the chronic complications and the perinatal infection, each require efforts of prevention or treatment of the condition. We have become increasingly impressed that a multipronged effort will be necessary since no single intervention can be expected to deal with each component of the problem.

SLIDE

We also have an ever clearer understanding of the risk groups and the necessary timing of the interventions. That is, certain efforts must be concentrated in a specific time frame: during pregnancy; during early infancy through the second year of life for the serious consequences of malaria associated anemia; or from later in infancy through childhood for the prompt treatment of acute fever illness.

But malaria is not just a pediatric disease. It is a disease affecting young women of child bearing age -- soon to be pregnant. There is emerging recognition of malaria in adults, the economically active individuals who are increasingly infected in agricultural schemes and

by the spread of urban malaria.

SLIDE

What is malaria control? If malaria is infection, then malaria control is the control of the vector-human contact: personal protection with insecticide-impregnated bed nets or curtains. From the presentation this morning, you can see that the ideas are not new, they are simply being reconsidered and finding their place in the composite picture. There are important positive aspects to infection control and opportunities for further work.

Are impregnated bednets or curtains ready for programming in the field? If not yet, we are close. Currently, these are best done in defined urban or rural settings with careful documentation of successes and local understanding of cultural and economic opportunities.

In the case of malaria disease control, the approach rests on recognition of acute illness, chronic complications or the women approaching or already pregnant. Case management involving intervention with either chemotherapy or chemoprophylaxis and basic program support including health education, training, supervision, logistical support, etc. are the program components.

What about case recognition: This is the hard work with mothers identifying the illnesses in their children that require treatment (and as we have heard this week it does not matter whether it is diarrhea, respiratory disease or fever illness).

What about "effective therapy": We have effective drugs, including chloroquine. The use of these drugs in different settings may be different. For example, the first line treatment by mother of fever illness in a 3 year old child should have a high likelihood of providing clinical cure. The first line treatment for fever in a 14 month old with pale conjunctiva (indicative of a important anemia) may need to provide clinical <u>and</u> parasitologic cure. The child with severe illness requires both clinical and parasitologic cure. The drug used in

pregnancy must be safe, effective, deliverable over time during pregnancy and acceptable for the woman.

The name of the drug is not so important; "effective therapy" constitutes the best possible match given the requirements and the available drugs. Programming will require an evaluation of locally available and effective drugs.

Finally, what about the malaria disease control program components:

We currently have clear examples of moving operational research into programming experience. Early on in CCCD, the advent and spread of chloroquine resistance led to documentation of the extent of resistance, and these studies moved directly to decision making and strategy development for drug use policy. In a more recent large operational research project in Malawi focusing on the prevention of malaria in pregnancy, we have answered important technical questions and are now moving forward to detailed plans which include allocation of resources to a specific phased intervention program addressing the three illness components of acute, chronic and perinatal disease. This will begin in two districts with planned future extension into other districts.

But today, wee come to you less as malariologists than ever before. We come with an infrastructure, a cadre of trained malaria control program managers, we also have programs and talented hard working staff in the field and in ministries.

We need a strong infrastructure. To the EPI and CDD people in the audience, I would like to say that wee want your infrastructure! We don't want to build our own, to duplicate services which already find children before or during their illness.

There must be a partnership.

To the MCH people, we want your infrastructure too. The antenatal clinic must deliver tetanus immunization, iron and folic acid and other services. The malaria control programs

must work with those already in the antenatal clinics. The partnership is never so compelling as when one works to prevent low birth weight by preventing malaria in pregnancy and watches the healthy newborn die of tetanus!

We also look forward to working with the family planning groups. If our major focus in malaria prevention in pregnancy is to reduce low birth weight, we have to be involved in delaying that first pregnancy.

But the most important partnership is with mothers and caretakers in the community. If they don't perceive the problem and don't understand what may, to them, appear as our interests and our programs, not their programs, then child survival efforts will not have impact and can never be sustainable.

Where do the international organizations and the donors fit in this scheme? You have just hear that WHO, too, is moving to respond to the evolving challenges. WHO's reorganization and their plans for a 1992 meeting are clear signs of their interest and concern. USAID has recently begun to support additional efforts to reevaluate the malaria control strategies, in Africa and elsewhere.

We in CCCD have to be involved in that response. As African Nations participating in the largest child survival project in Africa, where most of the malaria exists, national malaria control program managers and their ministry of health supervisors must be in the leadership position to attend that WHO conference in 1992 with relevant experience in malaria control. If that does not occur, the predictable result will be that malariologists from developed and developing countries will wring their hands and conclude that we need more information.

I realize that there has been much discussion that now is the time to consolidate and strengthen current activities. However, in the face of increasing pressure of malaria, anemia

and low birth weight on child survival, we cannot afford to sit and discuss amidst inactivity.

The CCCD project has invested heavily in people as the driving component of programs. These same people must gain additional experience working in the homes, the communities, the health centers, the hospitals; and take leadership role to future discussions on malaria control in Africa.

Attachment 2

The CDD Programme: Global and regional overview

M. Claeson, CDD Programme, WHO

This overview outlines the achievements and constraints of national CDD programmes, and some of the issues and challenges facing CDD globally.

The priority activity of the global and regional CDD programme is training in managerial and clinical skills. While training in supervisory skills is on target, major efforts need to be made in the area of clinical case management training to achieve the target set for 1995, which is 40% of health workers responsible for case management trained in clinical skills; to date approximately 11% have been trained globally. DTUs have been established to provide hands-on training and it is now important that these be assessed to ensure that strict criteria for DTU training and for the establishment of new sites are applied (i.e. skilled and motivated trainers and availability of cases). It is a challenge for NCDDPs to ensure follow-up and reinforcement of skills, and to decentralize and expand training without detriment to quality.

New innovative ways to conduct training are being explored. In addition to the Programme Managers' and Supervisory Skills training courses (which train managers in managerial skills which can be applied to any component of PHC) and the DTU teaching materials, a new short training course for small hospitals and health centers, a self learning package for those who cannot reach a DTU, and a training video to use when there are no cases, have been developed and will soon be available.

All case management training is based on the CDD treatment guidelines outlined in the WHO chart, Management of the Patient with Diarrhoea, revised in 1990 as a result of experience and research, to which many present here have contributed. This revision aims at simplifying assessment of dehydration, improving feeding guidelines and includes initial treatment of persistent diarrhoea and rational drug use. The revised chart reflects not only a shift in focus from rehydration to case management including feeding aspects but is also more specific regarding necessary action if a child presents other problems. The decision to shift to the revised chart will be left to individual NCDDPs.

Access to ORT at household and health facility levels is another priority activity of the CDD programme. Correct case management in the home (fluid, feeding and correct help seeking behaviour) is being promoted by most NCDDPs today, and we have gained experience from countries about the feasibility and appropriateness of the different approaches taken. We have learned that special recipes such as SSS are difficult to retain and often result in incorrect and dangerous solutions with a high sodium content and too high osmolality. Based on these community experiences the WHO/CDD programme recommends that countries identify and promote home fluids such as food-based fluids with starch and proteins that are familiar, readily available, affordable, easy to prepare, acceptable for use during diarrhoea, can be given in large volumes, and which are safe and efficacious, e.g. undiluted cereal gruels to which salt can be added. Alternatively, fluids with little or no starch and with no salt (e.g. rice water, tea or plain water) can be recommended when no better choice is available.

Ideally, all children should have access to a trained provider of ORS, so that the proportion of children who develop dehydration can receive the correct rehydration therapy. Self reliance in the production of ORS is a global goal. Today 75% of ORS manufacturers are located in developing countries and an estimated equivalent of 350 million litres per year are produced - 80% conforming to WHO/UNICEF formula.

Attempts to identify an improved ORS that would not only replace fluid losses but also reduce stool output are ongoing. The most studied and promising is rice-based ORS (pre-cooked rice powder); a review of 13 studies showed significant reduction in stool output in the first 24 hours and in the duration of diarrhoea, and an estimated 30-35% reduction in total output. More research is needed to evaluate efficacy and safety in children under six months of age and in malnourished children, before it can be universally recommended. Other cereal-based ORS formulations have been studied, such as sorghum in Rwanda, indicating other effective replacements for glucose. It will be interesting to evaluate the impact of an improved ORS on acceptability and use, particularly if this product is to be promoted and perceived as having antidiarrhoeal properties.

Evaluation and monitoring are integral parts of NCDDPs and improved tools have been developed to evaluate what is actually happening at household and health facility levels: household case management and health facility surveys are conducted to evaluate correct case management. WHO recommends that countries monitor a few key indicators, using these tools, such as correct preparation of ORT, increase in fluid intake and continued feeding - in addition to ORT/ORS use rates. The results of such surveys can guide policy and planning, communications and training efforts.

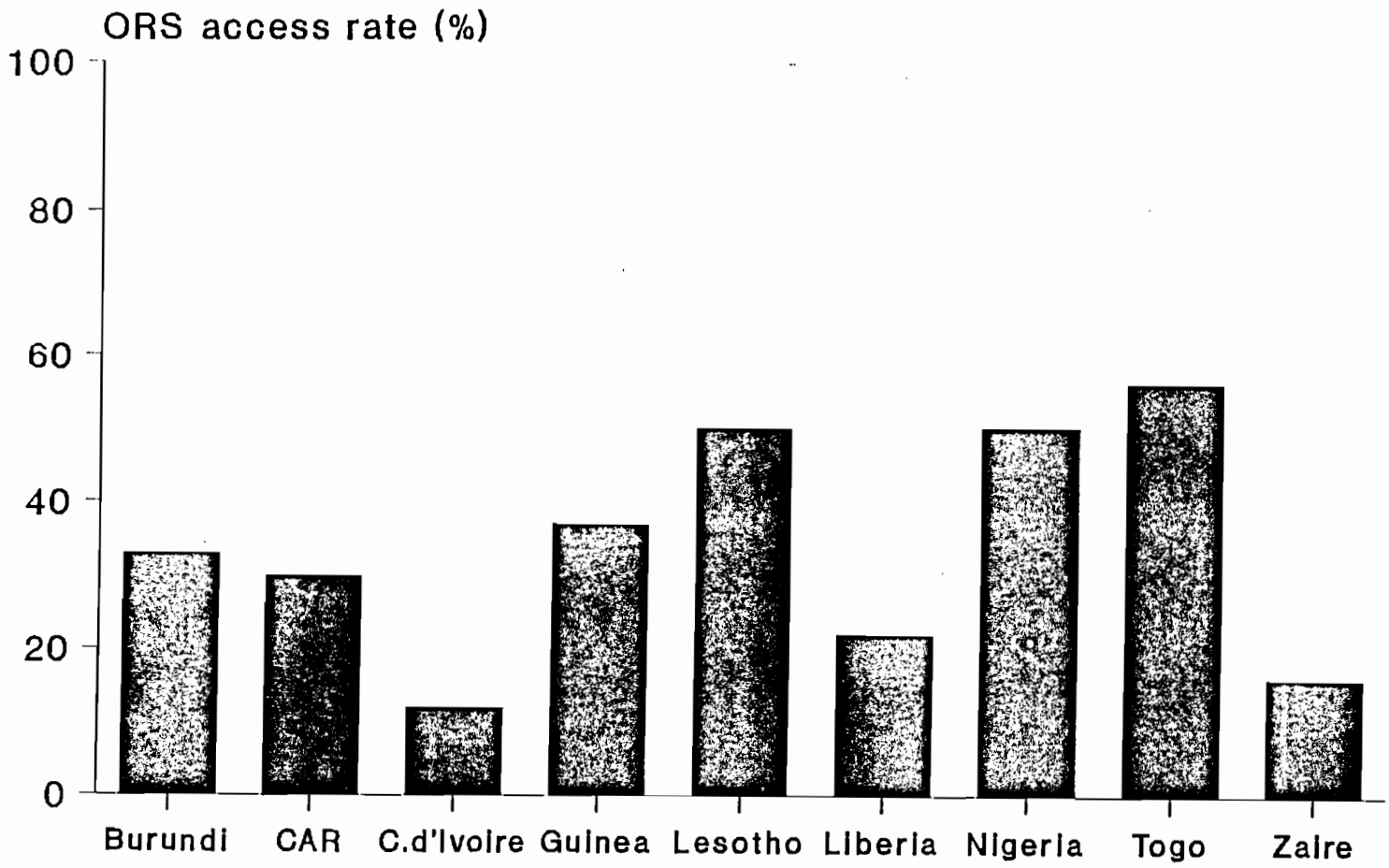
Is progress being made? Yes, the global ORS access was 58% in 1989 (AFRO 44%) and the CDD programme is aiming for 80% by 1995. The ORT use rate was 32% in 1989 (AFRO 26%) which corresponds to the initial global target for 1989, revised in 1986 to 50%. The CDD programme is now aiming to achieve 50% correct case management by 1995. The reported ORS access and ORS/ORT use rates in the CCCD supported countries are compared; it should be noted that the reported rates are based on information made available to WHO for 1988 (Figs. 1 and 2).

Other important CDD programme activities involve preventive interventions. The global priority intervention is the promotion of breast-feeding since it has a well documented impact on diarrhoea-associated morbidity and mortality. Exclusive breast-feeding in the first 4-6 months of life is a global recommendation of the CDD programme; breast-feeding rates are declining in all urban areas. The WHO/CDD programme has initiated activities in countries to support and evaluate lactation management training, changes in hospital practices and mothers' support groups. Other preventive activities such as hand-washing, use of clean water and improved weaning practices are incorporated in CDD training; how to implement these activities in the most effective and appropriate ways are priority topics for research.

A major commitment by governments is needed to continue our progress - globally, regionally, nationally - towards our common goal: reduction in childhood mortality and morbidity.

FIGURE 1

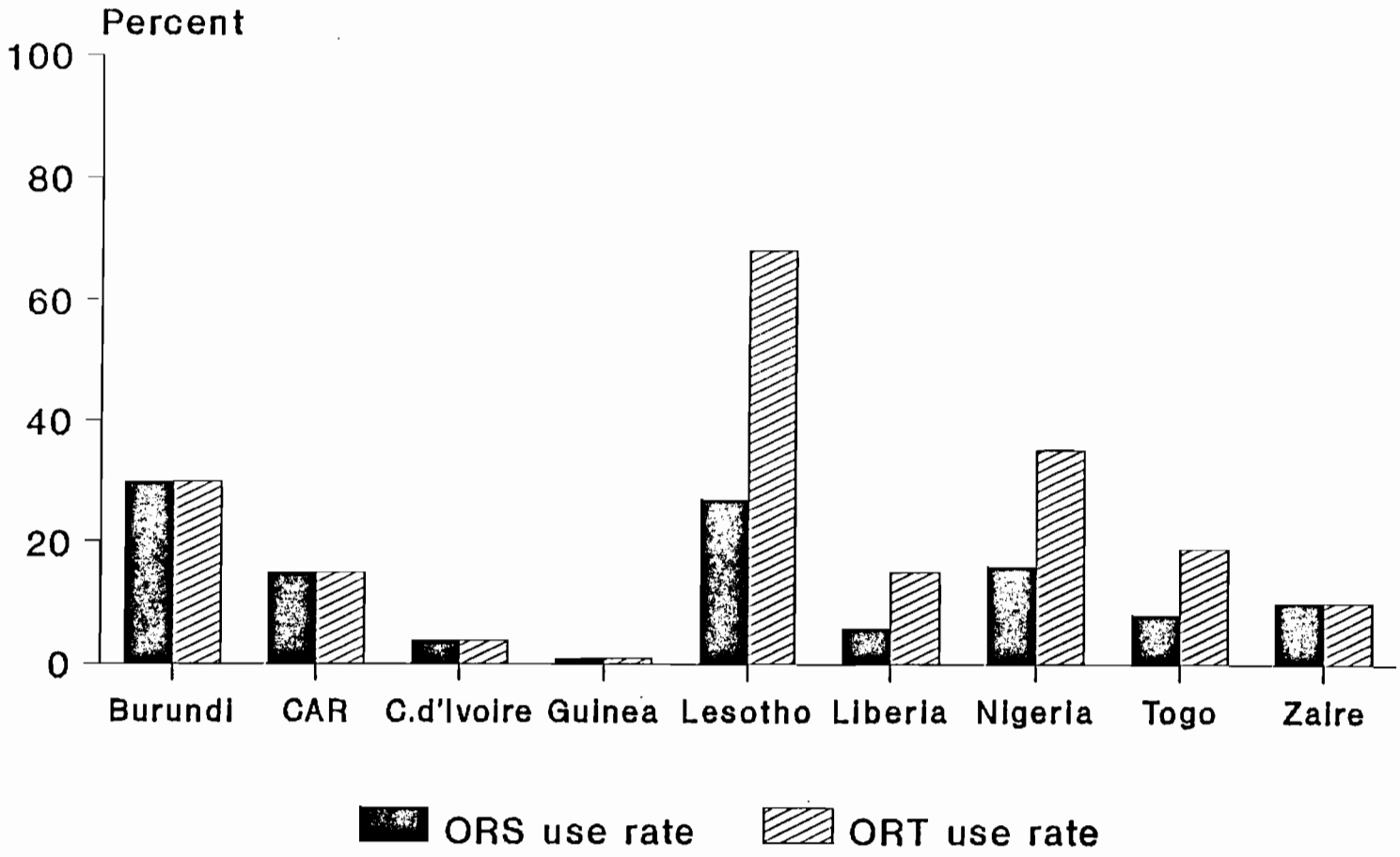
WHO CDD ESTIMATES OF ORS ACCESS IN CCCD COUNTRIES, 1988



WHO Biannual Report, 1990
(draft)

FIGURE 2

WHO CDD ESTIMATES OF ORS/ORT USE RATE IN CCCD COUNTRIES, 1988



WHO Biannual Report, 1990
(draft)

Rational Drug Use in CDD

M Claeson, CDD Programme, WHO

Drug misuse has been identified as one of the major constraints to the implementation of case management in the control of diarrhoeal diseases in most countries. Findings from comprehensive programme reviews, health facility and household case management surveys, as well as studies of private sector sales and prescription rates show that:

- children with acute diarrhoea receive an average of four drugs per episode in some countries;
- caretakers prefer drugs which they perceive as effective, i.e. that "stop diarrhoea";
- drug vendors and pharmacists, often sell drugs over the counter without prescription; antidiarrhoeals are among the most commonly dispensed drugs;
- doctors prescribe drugs that have no documented efficacy and carry side effects.

Many factors influence these behaviours which result in an inappropriate pattern of drug use in diarrhoea treatment, for example, use of antidiarrhoeal drugs for children and routine use of antibiotics and/or antiparasitic drugs. The problems resulting from inappropriate drug use are:

1. Diversion of attention and resources from rehydration therapy and feeding, influencing help-seeking behaviour and treatment choices, as exemplified by the studies in Conakry, where most patients received other drugs before seeking correct treatment, and in Swaziland where a study showed that 58% of patients with signs of dehydration had first seen a traditional healer. The extent of this competitive effect of other drugs on acceptance of ORT and compliance with effective case management needs to be further studied.

2. The expenditure on inappropriate drugs is an additional burden to already limited national health budgets and to individual families. It is estimated that more than US$1 billion is spent on antidiarrhoeal drugs in the developing world; many of the antidiarrhoeals marketed for use in children in developing countries are banned or restricted for use in adults in developed countries.

3. Antibiotic resistance is an increasing global problem and its spread to some of the commonly used antibiotics is reducing the availability of effective drugs, e.g. those required to treat Shigella dysentery and suspected cases of cholera.

4. Antidiarrhoeal drugs, such as loperamide, hydroxyquinolines and antiemetics (some of the most commonly used antidiarrhoeals), carry risks of serious adverse reactions in children. These are not generally monitored or reported on in most developing countries, but are found when the situation is more closely examined. Studies in several hospitals in Peru and Pakistan found loperamide to be one of the most common causes of intoxication in children.

The following guidelines on rational drug use, which are included in the WHO chart, Management of the Patient with Diarrhoea (revised in 1990), are advocated:

- Antibiotics should only be used for dysentery and suspected cholera. They are ineffective in other types of diarrhoea.

- Antiparasitic drugs should only be used for:

  Amoebiasis, after antibiotic treatment of bloody diarrhoea for Shigella has failed or when trophozoites of E.histolytica containing red blood cells are seen in the faeces.

  Giardiasis, when diarrhoea has lasted at least 14 days and cysts or trophozoites of Giardia are seen in faeces or small bowel fluid.

- Antidiarrhoeal drugs and antiemetics should never be used. None has proven practical value. Some are dangerous.

How to improve rational drug use within the context of national CDD programmes? Recent experiences in WHO's Eastern Mediterranean Region and in Kenya have shown that national CDD programmes can play an important role in influencing drug availability and use through establishing and communicating a clear policy. A combination of managerial, educational and regulatory approaches are more likely to have an impact than single interventions. There are many possible points of intervention along the drug path from the manufacturer to the user, as illustrated in the attached figure.

The drug use problem is country specific and the planning of activities to rationalize drug use needs to be based on individual situational analysis. WHO/CDD is increasing its support to countries in this area. Activities include:

1. At the request of countries to provide a scientific basis for rational drug use in the treatment of acute diarrhoea, the Programme is reviewing the literature on the most commonly used drugs regarding their efficacy, interactions and side effects. The document will be available in 1990.

2. A training package for pharmacists aimed at influencing prescribing habits is being developed.

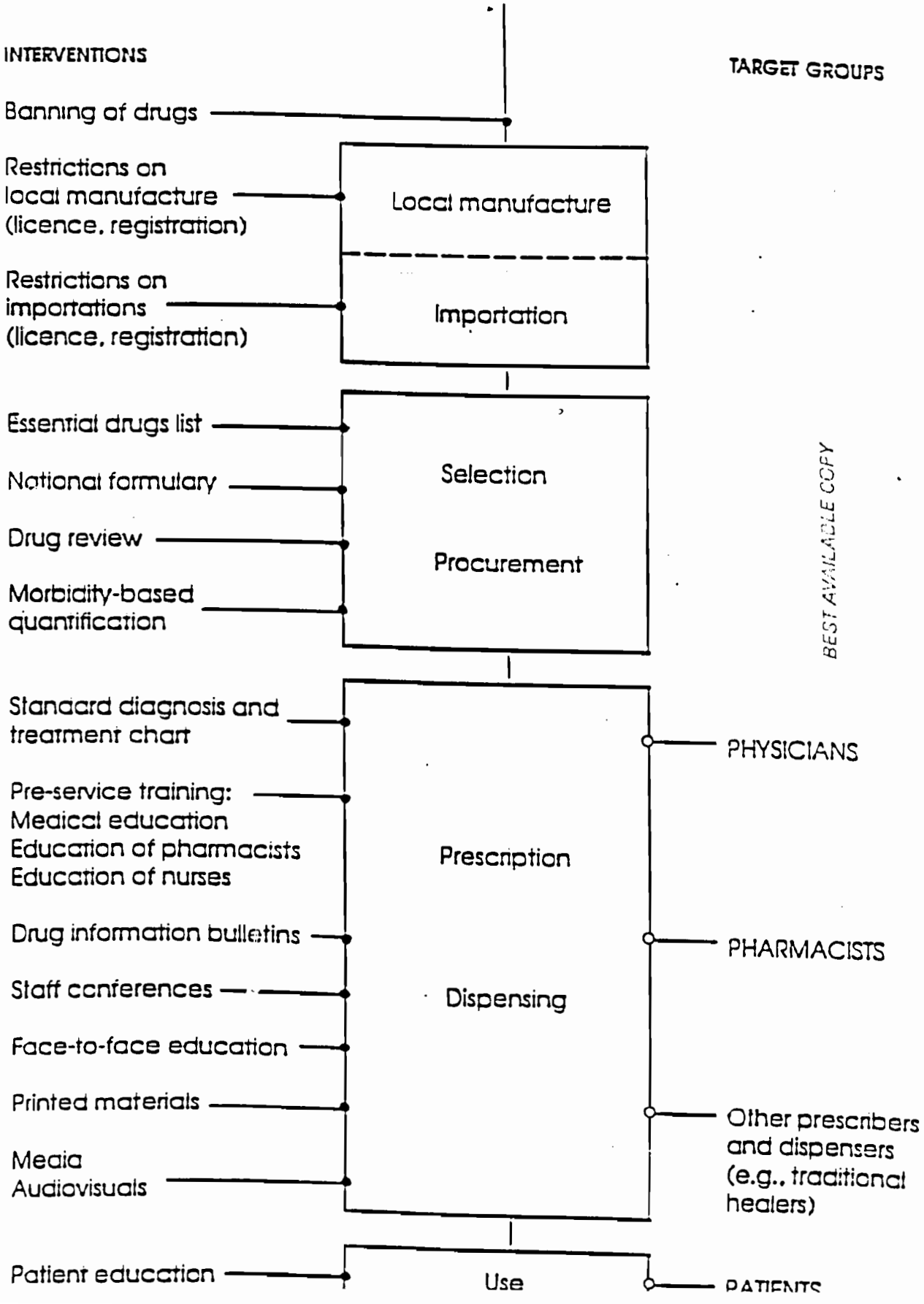
3. A priority over the next few years will be to assist countries in assessing their drug use problem, developing a plan of action and evaluating the activities. Very little research has been carried out to date in developing countries regarding drug prescription, drug dispensing and drug use behaviours and the effect/impact of selected interventions.

4. A drug use protocol to be included as an addendum to the Household Survey Manual is being developed.

It is felt that in order to expand CDD activities and to increase ORS/ORT use, NCDDPs should include rational drug use as an important component of their programmes.

DRUG USE SYSTEM

THE DRUG PATHWAY:



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WORKSHOP: Rational Use of Drugs in CCD Programs

OBJECTIVES:

1. Define the current problems associated with drug use in your country.

2. For each problem identified, define the implications for the following categories:

   a. decision makers, importors and distributors

   b. health personnel and mothers

SCHEDULE	TIME
1. Brainstorm list of problems observed at the community level, health service provider and program manager level.	10 min
2. Question and answer period to clarify above list	5 min
3. Divide into 2 groups. Define the implications of each problem for: a. decision makers, importors and distributors b. health personnel and mothers	
4. Re assemble into one group. Group 1 present their imformation. Group 2 make any addition not already presented	

OUTCOME

FACILITATORS: Mariam Claeson
Adama Kone

WORKSHOP; Program Expansion: DTUs

OBJECTIVES

1. Describe the logistics necessary for establishing a DTU for the purpose of training peripheral health personnel and medical and paramedical students.

2. List the criteria for selecting trainers for DTUs, establishing training programs and training trainers.

SCHEDULE	TIME
Introduction	
1. Presentation on planning logistics for DTU	10-15 min
2. Presentation on selecting and training trainers	10-15 min
3. Divide into two groups. Have each group develop a list of the implications of establishing a DTU for the program manager and for the health service provider.	

OUTCOME

TECHNICAL RESOURCE:

FACILITATORS: Maye Olivola
Annie Voigt

WORKSHOP: Home Case Management

OBJECTIVES

At the end of the workshop, participants will be able to:

1. Describe the purpose and limitation of home available fluids.

2. Describe the programmatic implications of the two types of home case managment (prevention and treatment) of diarrhea for program managers, care providers and commuity promoting both the use of home available fluids and ORS in the community.

SCHEDULE	TIME
1. Introduction: Technical presentation with data	10 min.
2. Brainstorm to develop list of issues that will need to be addressed at the level of the program manager, the care provider and the community when a policy on the use of home available fluids is initiated.	10 min
3. Ask for questions to clarify any item. Ask participants to select three priority issues for eacy area (program managers, care providers and community	
4. Break into two groups. Each group will select three priorities that were identified during the brainstorming session and will develop a matrix describing the implications of these issues for program managers, health care providers and community	75 min.
5. Have groups re-assemble. Group one should present their conclusions to the entire group. Then ask for questions to clarify (not debate) what has been presented.eac4.	10 min
6. Ask the second group if they have any additions to make to the list. Add any new suggestions.	5 min.
7. Summarize	5 min.

OUTCOME

group works with facilitators to prepare 10 min summary of workshop for closing plenary.

CCCD/ACSI MEETING, SWAZILAND, 2-6 APRIL 1990

RATIONAL DRUG USE IN DIARRHOEAL DISEASES CONTROL PROGRAMMES

IDENTIFYING THE PROBLEM

Inappropriate drug use is a problem common to most countries. The need for a more rational use of drugs in the control of diarrhoeal diseases has been identified in comprehensive programme reviews of national CDD programmes, and in household and health facility surveys. It has been a topic for discussion in many supervisory skills courses, programme managers' courses and meetings, and clinical management courses. Special studies in some countries have recently confirmed that national CDD programmes need to find approaches to limit the current use of antidiarrhoeal drugs, which are ineffective, expensive, sometimes harmful, and may divert resources and interest away from oral rehydration therapy (ORT), which is effective, cheap, and appropriate.

It has been found that:

- in some countries, children with acute diarrhoea receive an average of four drugs per diarrhoea attack;
- mothers often prefer drugs which, according to their belief or perception, should stop diarrhoea;
- drug vendors or pharmacists sell drugs, such as antidiarrhoeals, over the counter without prescription; and
- doctors continue to prescribe drugs that have no documented efficacy and carry a risk of side-effects for children.

These behaviours are at the root of the drug use problem in the management of acute diarrhoea and are of concern to national CDD programme managers. The effects of inappropriate drug use are: an increased risk of side-effects, increased spread of resistance to antibiotics, and unnecessary cost for both the family and the national health service. Ultimately, it contributes to the mismanagement of acute diarrhoea and to the high diarrhoea-associated mortality in children under five.

It is important that CDD programme managers analyse the drug use problem, identify possible solutions, and decide on activities that need to be carried out.

The WHO CDD Programme supports national CDD programme activities to promote rational drug use by:

- providing <u>information</u> on drugs that are commonly used in the treatment of acute diarrhoea in children,
- <u>training</u>,
- <u>evaluating</u> and <u>monitoring</u> drug use and country activities to limit inappropriate drug use.

The objectives of this session on drug use are to:

- identify important problems in connection with the use of drugs for diarrhoeal diseases in participants' countries,
- identify educational, managerial, and regulatory approaches to improve the drug use situation in participants' countries, and
- assess the strength and weakness of each approach, and select priority activities for implementation by national CDD programmes in the coming year.

OVERVIEW OF THE DRUG USE SYSTEM

There are a number of ways of looking at the drug use problem. A drug use system is a complex of environmental and behavioural factors that together determine which drugs reach which people at a given time. These factors can be divided into four groups (Figure 1): environmental factors such as pharmaceutical supply and prevailing illness pattern, and behavioural factors such as prescribing/dispensing decisions and patient demand. These factors limit the choices involved and shape drug use practices by determining how and when patients seek therapy, which drugs will be recommended, and which will be consumed. Pharmaceutical supply is influenced by many factors, such as government and private sector decisions on the licensing, manufacture, selection, and purchase of drugs, and on logistics. Prevailing illness pattern includes the type, severity, and epidemiology of disease, as well as the way in which diseases are perceived and/or interpreted in a given society. Prescribing and dispensing decisions are shaped by training, education, sources of drug information, beliefs, social expectations, peer group influences, and economic motivations. Patient demand is influenced by recommendations about therapy from different sources, knowledge and conceptions, beliefs and perceptions, treatment choices, traditional practices, etc.

A drug problem is usually a result of a combination of these factors. In deciding what action should be taken to improve drug use, programme managers should take all of them into consideration.

When considering interventions to improve drug use in the treatment of acute diarrhoeal diseases, it is useful to consider the chain of events in a drug use system. Figure 2 (Interventions for Influencing Drug Use) shows the path followed by a drug from the producer to the consumer. It lists possible interventions and illustrates some of the target groups involved in the system. These interventions will be discussed below.

STRATEGIES TO ACHIEVE A MORE RATIONAL USE OF DRUGS IN CDD PROGRAMMES

Three types of strategy can be applied to change inappropriate drug use into rational drug use in CDD programmes: educational, managerial, and regulatory.

(1) Educational strategies

Educational interventions usually target prescribers, dispensers, and/or consumers. Their objective is to change the behaviours of these target groups so that they use drugs more rationally. There are many possible approaches. A few will be described here.

Printed materials

The use of printed materials is the most common and the least expensive educational intervention. Such materials include newsletters for pharmacists and medical practitioners, drug information bulletins, printed guidelines, and posters. These can be: mailed to prescribers, posted on the walls of health centres and hospitals, placed in patient charts, or handed in person to prescribers and patients. The advantage of distributing printed materials, apart from its low cost, is that it can be part of a comprehensive programme which also includes intensive education. One disadvantage of this approach is that it assumes that it is lack of knowledge that limits appropriate drug use - which is not always the case. Also, the materials may not be read, and if they are, they may be thought irrelevant or misunderstood by the reader.

Face-to-face education

Talking directly to prescribers or consumers on a one-to-one basis, during small group presentations or in staff conferences, is another way of improving prescription and use habits. This can supplement the use of printed materials. Research has shown that face-to-face education is more effective in changing behaviour than the use of printed materials alone, and that it is a cost-effective strategy. It encourages active and participatory learning and enables the educator to assess the motivation of the prescriber/dispenser of the drug. In the case of mothers, it can stimulate two-way communication. The disadvantage of this method is the need for trained manpower such as retailers. The ratio of trained retailers to prescribers is often low, resulting in limited coverage.

Media

Use of the media (radio, television, video, and newspapers) can be an effective means of raising awareness and informing different audiences about rational drug use. The advantages and disadvantages of the different communication channels as means of changing the behaviour of consumers and prescribers will not be discussed in this session.

Training

Training includes pre-service and in-service training strategies. The CDD Programme is already making efforts to improve medical education and nurses' education through curriculum development activities. Changing the training curricula of pharmacists will also be an important strategy for achieving rational drug use. It is important to review the manner in which medical students and student nurses and pharmacists are taught the use of drugs during their theoretical years and how such teaching is reinforced during practicals.

In-service training in diarrhoeal diseases control includes courses on supervisory skills, programme management, and clinical case management. All these training courses promote the use of ORT in the treatment of acute diarrhoea. Inappropriate drug use can be given more specific attention as the national programme progresses, particularly in areas where access to ORS is high but the use of ORT remains low, suggesting the interference of

Conclusion: Educational strategies, such as information dissemination and training, are activities that have been undertaken in most national CDD programmes. They can be improved and expanded to include rational drug use, reach additional target groups, and explore new and more effective methods.

(2) Managerial strategies

Managerial strategies attempt to improve the drug decision processes through a variety of means, which may be related to selection and procurement, prescription and dispensing, or financing of drugs. Some examples will be given below.

Selection and procurement

Essential drug lists and national formularies attempt to reduce the number of drugs available (usually in the government sector) to those that are the most effective and economical for treating important health conditions. Often different lists of drugs exist: for example, there may be a longer drug list for physicians operating in hospital/referral settings and another, shorter list for health workers at a lower level. There have been few studies to evaluate the effectiveness of this approach. While it probably reduces the use of certain unnecessary drugs, without the training of prescribers and patient education it is possible that some of the drugs on the lists will be misused and that drugs available in the private sector will continue to be used in the same pattern as before. However, essential drug lists are an important starting point in developing a more comprehensive essential drugs programme which also addresses the inappropriate use of the drugs supplied.

Morbidity-based quantification is another supply-system strategy which attempts to increase the availability of needed drugs, based on the health needs of a given area. It involves assembling data on the frequency of important diseases in the catchment area of health centres, defining drug supply needs that match the local conditions, and altering the supply of specific drugs accordingly.

Prescribing and dispensing strategies

Structured diagnostic and treatment protocols help health workers to make decisions, based on symptoms and signs, that will lead to the most appropriate treatment. A good example is the Diarrhoea Treatment Chart which can be used for health workers at all levels.

Improvements in labelling can prevent errors in dispensing and use by patients. For example, colour-coding or symbolic labelling can help the patient to identify the therapeutic use and understand how to take the medicine. A control of labelling could help to reduce the number of false messages given on current labels. The disadvantages of this approach are that drugs are often sold to illiterate customers over the counter and labels are often ignored. It is clear, too, that appropriate labelling on ineffective or dangerous drugs will not solve the problem.

Structured drug order forms and the requirement of a justification or consultation with higher-level supervisors or authorities before specific drugs can be released are other means of reducing the availability of drugs that are especially toxic and costly, or may contribute to resistance problems, and thus need to be carefully controlled. An example in CDD programmes would be justification of the use of second-line antibiotics for the treatment of diarrhoea.

Audit plus feedback to prescribers is done by collecting data on prescriptions for particular health problems and by providing a feedback to the prescriber. In CDD programmes this can be accomplished by using the Health Facility Survey protocol to detect any treatment pattern that does not meet the standard (correct case management), and reporting the results back to the health worker. The feedback can be accomplished in person, e.g., by the supervisor "on the job", or in writing. The monitoring of drug use at health facilities can be done as part of the monitoring of case management, on the basis of records, interviews, and observation.

Financing

Pricing drugs according to their potential health impact, or applying patient cost-sharing, are two financing methods aimed at reducing the use of inappropriate drugs. The pricing of drugs to increase their use is very context-specific; it can be done either by lowering or raising the price (the latter on the assumption that a higher price increases the perceived value). The goal of patient cost-sharing is that patients should finance the drug delivery system, and the strategy is based on the assumption that small payments do not dissuade patients from taking essential medicines. These assumptions are questioned by many, their concern being that these financial strategies do not ensure that the right drug reaches the person most in need of it.

(3) Regulatory strategies

Banning or withdrawal of drugs from the market

Drugs can be banned or withdrawn from the market by different regulatory strategies, such as bans on importation, production, and/or sales. Antidiarrhoeals for the treatment of acute diarrhoea in children can be banned on the basis of lack of efficacy and/or the risk of side-effects, as some countries have done, for example, in the case of hydroxyquinolines and neomycin. This strategy, if enforced, seems to be one of the most effective control measures.

Some encouraging results have recently emerged from CDD Programme initiatives in this area. Following the receipt of a letter from the WHO Regional Office for the Eastern Mediterranean addressed to ministries of health, some countries in that region have banned or restricted the use of antidiarrhoeals, and in others the national CDD programme has started to collaborate with the drug regulatory authorities in an effort to have such drugs withdrawn from the market.

Limits on the number of drugs per patient and automatic stop-orders are other methods used to try to reduce overprescribing. The risk with these strategies is that very ill patients may not receive some essential drugs.

RATIONAL DRUG USE IN DIARRHOEAL DISEASES CONTROL PROGRAMMES

Evaluating options for promoting appropriate drug use in the CDD programme - an exercise for programme managers

Objective

You will select one major example of inappropriate drug prescription, dispensing, or use in the treatment of acute diarrhoea in children in your country. You will consider the advantages and disadvantages of possible educational, managerial, or regulatory strategies in an attempt to solve this problem.

Instructions:

1. Use worksheet 1 to briefly describe an important drug use problem in the treatment of acute diarrhoea in children in your country.

2. Use worksheet 2 to assess the advantages and disadvantages of each possible approach. Consider different aspects, such as benefits, risks, limitations, costs, and feasibility.

WORKSHEET 1

Step 1

Describe a common drug prescription, dispensing, or use problem which is likely to have a major impact on the quality and/or cost of care of children with acute diarrhoeal diseases in your country:

_____

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Step 2

How well do you think each of the following activities could improve the situation in your country? What are the advantages and disadvantages of each activity?

Use Worksheet 2 to comment on the benefits, risks, limitations, cost, and feasibility of each activity. (You may like to add other activities that would be appropriate for your CDD programme.)

Step 3

Select three activities from worksheet 2 that you would like your national CDD programme to implement in the coming year:

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Step 4

Who are the major decision-makers or opinion leaders in your country whose involvement will be necessary to correct this problem?

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Worksheet 2

Activity	Advantages/ benefits	Disadvantages/ risks, limitations	Cost	Feasibility
Printed educational materials				
Face-to-face education				
Media				
Medical education				
Education of pharmacists				
Education of nurses				
DTU in-service training				
Supervisory skills training				
Programme managers' training				
Essential drugs lists				
Drug information bulletins				
Diagnostics and treatment protocols				
Staff conferences				

Worksheet 2, page 2

Activities	Advantages/ benefits	Disadvantages/ risks, limitations	Cost	Feasibility
Improved labelling				
Drug order form				
Required consultation or justification				
Audit plus feed-back: to pharmacists				
Supervisory visits to health facilities				
Audit plus feed-back: to private practitioners				
Pricing drugs according to health impact				
Patient cost-sharing				
Banning of drugs from the market				
Restriction on importation (licensing, registration)				
Restriction on local manufacture (licensing, registration)				
Limitation on the number of drugs per patient				
Automatic stop-orders				

CCCD/ACSI MEETING, SWAZILAND, 2-6 APRIL 1990

RATIONAL DRUG USE IN DIARRHOEAL DISEASES CONTROL PROGRAMMES

IDENTIFYING THE PROBLEM

Inappropriate drug use is a problem common to most countries. The need for a more rational use of drugs in the control of diarrhoeal diseases has been identified in comprehensive programme reviews of national CDD programmes, and in household and health facility surveys. It has been a topic for discussion in many supervisory skills courses, programme managers' courses and meetings, and clinical management courses. Special studies in some countries have recently confirmed that national CDD programmes need to find approaches to limit the current use of antidiarrhoeal drugs, which are ineffective, expensive, sometimes harmful, and may divert resources and interest away from oral rehydration therapy (ORT), which is effective, cheap, and appropriate.

It has been found that:

- in some countries, children with acute diarrhoea receive an average of four drugs per diarrhoea attack;
- mothers often prefer drugs which, according to their belief or perception, should stop diarrhoea;
- drug vendors or pharmacists sell drugs, such as antidiarrhoeals, over the counter without prescription; and
- doctors continue to prescribe drugs that have no documented efficacy and carry a risk of side-effects for children.

These behaviours are at the root of the drug use problem in the management of acute diarrhoea and are of concern to national CDD programme managers. The effects of inappropriate drug use are: an increased risk of side-effects, increased spread of resistance to antibiotics, and unnecessary cost for both the family and the national health service. Ultimately, it contributes to the mismanagement of acute diarrhoea and to the high diarrhoea-associated mortality in children under five.

It is important that CDD programme managers analyse the drug use problem, identify possible solutions, and decide on activities that need to be carried out.

The WHO CDD Programme supports national CDD programme activities to promote rational drug use by:

- providing <u>information</u> on drugs that are commonly used in the treatment of acute diarrhoea in children,
- <u>training</u>,
- <u>evaluating</u> and <u>monitoring</u> drug use and country activities to limit inappropriate drug use.

(1) Educational strategies

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Audit plus feedback to prescribers is done by collecting data on prescriptions for particular health problems and by providing a feedback to the prescriber. In CDD programmes this can be accomplished by using the Health Facility Survey protocol to detect any treatment pattern that does not meet the standard (correct case management), and reporting the results back to the health worker. The feedback can be accomplished in person, e.g., by the supervisor "on the job", or in writing. The monitoring of drug use at health facilities can be done as part of the monitoring of case management, on the basis of records, interviews, and observation.

Financing

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(3) Regulatory strategies

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WORKSHEET 1

Step 1

Describe a common drug prescription, dispensing, or use problem which is likely to have a major impact on the quality and/or cost of care of children with acute diarrhoeal diseases in your country:

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_____

Step 2

How well do you think each of the following activities could improve the situation in your country? What are the advantages and disadvantages of each activity?

Use Worksheet 2 to comment on the benefits, risks, limitations, cost, and feasibility of each activity. (You may like to add other activities that would be appropriate for your CDD programme.)

Step 3

Select three activities from worksheet 2 that you would like your national CDD programme to implement in the coming year:

_____

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Step 4

Who are the major decision-makers or opinion leaders in your country whose involvement will be necessary to correct this problem?

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Worksheet 2, page 2

Activities	Advantages/ benefits	Disadvantages/ risks, limitations	Cost	Feasibility
Improved labelling				
Drug order form				
Required consultation or justification				
Audit plus feed-back: to pharmacists				
Supervisory visits to health facilities				
Audit plus feed-back: to private practitioners				
Pricing drugs according to health impact				
Patient cost-sharing				
Banning of drugs from the market				
Restriction on importation (licensing, registration)				
Restriction on local manufacture (licensing, registration)				
Limitation on the number of drugs per patient				
Automatic stop-orders				

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REUNION DU CCCD/ACSI, SWAZILAND, 2-6 AVRIL 1990

UTILISATION RATIONNELLE DES MEDICAMENTS

DANS LES PROGRAMMES DE LUTTE CONTRE LES MALADIES DIARRHEIQUES (LMD)

IDENTIFICATION DES PROBLEMES

L'utilisation inappropriée des médicaments est un problème commun à la plupart des pays. Une utilisation plus rationnelle des médicaments dans la lutte contre les maladies diarrhéiques a été considérée nécessaire au cours des revues globales des programmes nationaux LMD et des enquêtes dans les foyers et les installations sanitaires. C'est aussi un sujet de discussion dans de nombreux stages de formation à la supervision, dans les cours et les réunions pour les administrations de programmes et dans les stages de formation à la prise en charge clinique. Des études particulières menées dans certains pays ont confirmé récemment que les programmes nationaux LMD devaient envisager les moyens de limiter l'utilisation actuelle des médicaments antidiarrhéiques, qui sont inefficaces, coûteux, parfois dangereux, et qui peuvent détourner les ressources et l'intérêt pour la thérapie par réhydratation orale (TRO), qui est efficace, bon marché et appropriée.

On a pu constater que:

- dans certains pays, les enfants souffrant de diarrhée aiguë reçoivent une moyenne de quatre médicaments par attaque de diarrhée;

- les mères préfèrent souvent les médicaments qui, pensent-elles, devraient arrêter la diarrhée;

- les vendeurs de médicaments ou les pharmaciens vendent des médicaments, comme les antidiarrhéiques, clandestinement, sans ordonnance; et

- les médecins continuent à prescrire des médicaments dont l'efficacité n'a pas été prouvée et qui comportent un risque d'effets secondaires pour les enfants.

Ces comportements sont à l'origine du problème de l'utilisation des médicaments dans la prise en charge des cas de diarrhée aiguë et sont un sujet de préoccupation pour les administrateurs de programmes nationaux LMD. Les effets d'une utilisation inappropriée des médicaments sont multiples: risques plus élevés d'effets secondaires, propagation accrue de la résistance aux antibiotiques, et coûts inutiles pour les familles comme pour les services nationaux de santé. Enfin, ils contribuent à une mauvaise prise en charge de la diarrhée aiguë et à la mortalité élevée associée à la diarrhée chez les enfants de moins de cinq ans.

Il est important que les administrateurs de programmes LMD analysent le problème de l'utilisation des médicaments, trouvent les solutions possibles et décident des activités qu'il convient de mettre en place.

Le programme LMD de l'OMS soutient les activités des programmes nationaux LMD pour la promotion d'une utilisation rationnelle des médicaments, et ce par:

- <u>l'information</u> sur les médicaments couramment utilisés dans le traitement de la diarrhée aiguë chez les enfants;

- la formation;

- l'évaluation et la surveillance continue de l'utilisation des médicaments et des activités dans les pays pour limiter l'utilisation inappropriée des médicaments.

Les objectifs de cette session sur l'utilisation des médicaments sont les suivants:

- identifier les problèmes importants liés à l'utilisation de médicaments pour les maladies diarrhéiques dans les pays des participants;

- identifier les approches pédagogiques, gestionnaires et réglementaires pour améliorer la situation de l'utilisation des médicaments dans les pays des participants; et

- évaluer les points forts et les faiblesses de chacune des approches, et sélectionner les activités prioritaires pour la mise en oeuvre des programmes nationaux LMD dans l'année à venir.

VUE D'ENSEMBLE DU SYSTEME D'UTILISATION DES MEDICAMENTS

Le problème de l'utilisation des médicaments peut être envisagé sous différents aspects. Un système d'utilisation des médicaments est un ensemble de facteurs environnementaux et comportementaux qui déterminent conjointement quels médicaments sont utilisés par les gens à un moment donné. Ces facteurs peuvent être divisés en quatre groupes (figure 1). Les facteurs environnementaux, comme l'approvisionnement pharmaceutique et la pathocénose dominante, et les facteurs comportementaux comme les décisions de prescription/exécution des ordonnances et la demande du patient. Ces facteurs limitent les choix possibles et façonnent les pratiques d'utilisation des médicaments en déterminant comment et quand les patients demandent une thérapie, quels médicaments seront recommandés et lesquels seront consommés. L'approvisionnement pharmaceutique est influencé par de nombreux facteurs, comme les décisions du secteur public et privé sur la réglementation, la fabrication, la sélection et l'achat des médicaments, et sur les moyens logistiques. La pathocénose dominante comprend le type, la sévérité et l'épidémiologie de la maladie, ainsi que la façon dont chaque maladie est perçue et/ou interprétée dans une société donnée. Les décisions liées à la prescription et à l'exécution des ordonannces sont conditionnées par la formation, l'éducation, les sources d'information sur les médicaments, les opinions, les perspectives sociales, l'influence des pères, et les motivations économiques. La demande du patient est influencée par les recommandations sur la thérapie en provenance de différentes sources, par ses connaissances et ses conceptions, ses opinions et ses perceptions, les choix de traitement, les pratiques traditionnelles, etc.

Un problème d'utilisation de médicaments est généralement le résultat d'une combinaison de ces facteurs. En décidant quelle action devrait être prise pour améliorer l'utilisation des médicaments, les administrateurs de programmes devraient prendre en compte tous ces facteurs.

Lorsqu'on examine les interventions pour améliorer l'utilisation des médicaments dans le traitement des maladies diarrhéiques aiguës, on peut utilement considérer la chaîne des événements dans le système d'utilisation des médicaments. La figure 2 (interventions pour influencer l'utilisation des médicaments) montre le chemin parcouru par un médicament depuis le fabricant jusqu'au consommateur. Elle dresse la liste des interventions possibles et illustre quelques-uns des groupes cibles impliqués dans le système. Ces interventions sont examinées ci-dessous.

STRATEGIES POUR UN USAGE RATIONNEL DES MEDICAMENTS DANS LES PROGRAMMES LMD

Trois types de stratégies peuvent être appliquées pour changer une utilisation inappropriée des médicaments en une utilisation rationnelle dans les programmes LMD: pédagogiques, gestionnaires et réglementaires.

1) Stratégies pédagogiques

Les interventions pédagogiques sont généralement ciblées sur les prescripteurs, les distributeurs et/ou les consommateurs. Leur objectif est de modifier les comportements de ces groupes cibles, de telle sorte qu'ils utilisent les médicaments de façon plus rationnelle. De nombreuses approches sont possibles. Quelques-unes sont décrites ci-dessous.

Matériels imprimés

L'utilisation de matériels imprimés constitue l'intervention pédagogique la plus courante et la moins coûteuse. Ces matériaux comprennent des bulletins réguliers à l'intention des pharmaciens et des médecins, des bulletins d'information sur les médicaments, des instructions écrites, ou des affiches. Ces matériels peuvent être envoyés par la poste au prescripteur, affichés sur les murs des centres de santé des hôpitaux, insérés dans les dossiers des patients, ou apportés en personne au prescripteur et au patient. L'avantage de la distribution de ces matériaux, outre son faible coût, est qu'elle peut s'intégrer dans un programme global qui inclut également une éducation intensive. L'un des désavantages de cette approche est qu'elle présuppose que c'est un manque de connaissances qui empêche une utilisation appropriée des médicaments, ce qui n'est pas toujours le cas. De même, ces matériaux peuvent ne pas être lus et, s'ils le sont, peuvent être considérés comme inappropriés ou être mal compris par le lecteur.

Education face à face

Une conversation directe et personnelle avec les prescripteurs ou les consommateurs, à l'occasion de petites présentations de groupes ou de conférences de personnel, est un autre moyen d'améliorer les habitudes de prescription et d'utilisation des médicaments. Ces discussions peuvent venir en complément des matériaux imprimés. Les recherches ont montré que l'éducation directe est plus efficace pour changer les comportements que l'utilisation des seuls imprimés, et qu'il s'agit d'une stratégie rentable. Elle encourage un apprentissage actif et coopératif et permet à l'éducateur d'évaluer la motivation du prescripteur/exécuteur des ordonnances. Dans le cas des mères, elle peut stimuler une communication dans les deux sens. Le désavantage de cette méthode est qu'elle nécessite une main-d'oeuvre qualifiée, comme les détaillants. La proportion des détaillants qualifiés par rapport aux prescripteurs est souvent faible, avec pour conséquence une couverture limitée.

Médias

L'utilisation des médias (radio, télévision, vidéo et journaux) peut être un moyen efficace d'élever la prise de conscience et d'informer diverses audiences sur l'usage rationnel des médicaments. Les avantages et les désavantages de ces différents canaux de communication utilisés comme moyens de changement des comportements des consommateurs et des prescripteurs ne seront pas examinés au cours de cette séance.

Formation

La formation inclut des stratégies de formation préprofessionnelles et en cours d'emploi. Le programme LMD s'efforce déjà d'améliorer l'enseignement médical et l'éducation des personnels infirmiers par le biais d'activités de mise au point des programmes d'étude. Le changement des programmes de formation des pharmaciens constituera également une stratégie importante pour aboutir à un usage rationnel des médicaments. Il est important d'examiner la manière dont les étudiants en médecine et en pharmacie et les élèves infirmiers/infirmières sont formés à l'utilisation des médicaments au cours de leurs années d'études théoriques et comment cet enseignement est renforcé pendant leurs années de pratique.

La formation en cours d'emploi à la lutte contre les maladies diarrhéiques comprend des cours sur les compétences de supervision, la gestion du programme et la prise en charge clinique des cas. Tous ces cours de formation font la promotion de la TRO dans le traitement de la diarrhée aiguë. Au fur et à mesure que le programme national progresse, on peut accorder une attention plus particulière à l'utilisation inappropriée des médicaments, en particulier dans les zones où l'accès aux SRO est aisé, mais où l'utilisation de la TRO reste faible, suggérant l'interférence d'une utilisation inappropriée des médicaments.

Conclusion

Les stratégies pédagogiques, comme la diffusion de l'information et la formation, sont des activités qui peuvent être entreprises dans la plupart des programmes nationaux LMD. Elle peuvent être améliorées et élargies pour inclure l'usage rationnel des médicaments, atteindre de nouveaux groupes cibles et explorer des méthodes nouvelles plus efficaces.

2) Stratégies gestionnaires

Les stratégies gestionnaires cherchent à améliorer les processus de décision concernant les médicaments par divers moyens, qui peuvent être liés à la sélection et à l'achat, à la prescription et à la distribution, ou au financement des médicaments. Quelques exemples sont donnés ci-dessous.

Sélection et achat

Les listes de médicaments essentiels et les formulaires nationaux essaient de réduire le nombre de médicaments disponibles (généralement dans le secteur public) à ceux des médicaments qui sont le plus efficaces et le plus économiques pour le traitement des maladies importantes. Souvent, des listes différentes de médicaments coexistent: par exemple, il peut y avoir une liste plus complète pour les médecins travaillant dans un hôpital ou une institution d'orientation-recours et une autre, plus courte, pour les agents de santé à un

niveau plus local. Quelques études ont été faites pour évaluer l'efficacité de cette approche. Bien qu'elles réduisent probablement l'utilisation de certains médicaments non indispensables, il reste possible que, en l'absence d'une formation des prescripteurs et d'une éducation des patients, certains des médicaments énumérés dans les listes soient mal utilisés et que des médicaments disponibles dans le secteur privé continuent d'être utilisés de la même manière qu'avant. Néanmoins, les listes de médicaments essentiels sont un point de départ important dans la mise en oeuvre d'un programme plus complet de médicaments essentiels qui permette également de s'attaquer au problème de l'utilisation inappropriée des médicaments fournis.

Le sytème d'approvisionnement basé sur les données de morbidité est une autre stratégie qui permettrait d'accroitre la disponibilité des médicaments nécessaires, en se basant sur les besoins sanitaires d'une zone donnée. Elle implique de rassembler les données sur la fréquence des maladies importantes dans la zone d'activité des centres de santé, de définir les besoins en approvisionnement pharmaceutique correspondant aux conditions locales et de modifier en conséquence l'approvisionnement de certains médicaments.

Stratégies de prescription et de distribution des médicaments

Des protocoles précis de diagnostic et de traitement aident les agents de santé à prendre des décisions, sur la base des symptômes et des signes cliniques observés, qui conduiront au traitement le plus approprié. Un bon exemple de ces protocoles est le Tableau de traitement des diarrhées qui peut être utilisé par les agents de santé à tous les niveaux.

Des améliorations dans l'étiquetage peuvent éviter des erreurs dans la distribution des médicaments et leur utilisation par les patients. Par exemple, l'utilisation de codes de couleur ou de symboles sur les étiquettes pourra aider le patient à identifier l'utilisation thérapeutique et à comprendre comment prendre le médicament. Un contrôle de l'étiquetage permettrait de réduire le nombre de messages mensongers que l'on peut trouver sur la plupart des étiquettes. Le désavantage de cette approche est que les médicaments sont souvent vendus clandestinement à des consommateurs illettrés et que les étiquettes sont souvent ignorées. Il est clair également qu'un étiquetage approprié de médicaments inefficaces ou dangereux ne résoudra pas le problème.

Les formulaires précis de commande de médicaments et la nécessité d'une justification ou d'une consultation des superviseurs ou des autorités au niveau supérieur pour autoriser la distribution de certains médicaments sont parmi les autres moyens de réduire la disponibilité des médicaments particulièrement toxiques ou coûteux ou pouvant contribuer à des problèmes de résistance, et qui nécessitent donc d'être soigneusement contrôlés. La justification de l'utilisation d'antibiotiques secondaires pour le traitement de la diarrhée pourrait être un exemple à suivre dans les programmes LMD.

La vérification des prescriptions et la rétro-information aux prescripteurs se font par la collecte des données sur les prescriptions établies pour des problèmes de santé particuliers et par l'envoi d'une rétro-information aux prescripteurs. Dans les programmes LMD, cela peut se faire en utilisant le protocole d'enquête sur les équipements sanitaires qui permet de détecter tout traitement ne correspondant pas aux normes (prise en charge correcte des cas), et en renvoyant les résultats à l'agent de santé. La rétro-information peut se faire directement, par exemple par le superviseur au cours d'une visite, ou par écrit. La surveillance continue de l'utilisation des médicaments peut ainsi s'intégrer dans la surveillance continue de la prise en charge des cas, sur la base des dossiers, interviews et observations.

Financement

Etablir le prix des médicaments en fonction de leur impact potentiel sur la santé ou faire partager leur coût aux patients sont deux méthodes de financement visant à réduire l'utilisation de médicaments inappropriés. L'établissement des prix visant à augmenter utilisation de certains médicaments peut être très différente selon le contexte; cela peut se faire soit en baissant soit en augmentant le prix (ce dernier cas dans l'hypothèse qu'un prix plus élevé augmentera la valeur perçue). Faire partager le coût des médicaments a pour but le financement par les patients du système de fourniture des médicaments; cette stratégie est basée sur l'idée que des paiements minimes ne dissuaderont pas les patients de prendre les médicaments essentiels. Ces hypothèses sont remises en question par de nombreuses personnes, qui craignent que ces stratégies financières ne permettent pas d'assurer le droit à l'accès aux médicaments des personnes qui en ont le plus besoin.

3) Stratégies réglementaires

Interdiction ou retrait des médicaments du marché

Les médicaments peuvent être interdits ou retirés du marché à travers diverses stratégies réglementaires, comme l'interdiction de l'importation, de la production et/ou de la vente. Les antidiarrhéiques pour le traitement de la diarrhée aiguë chez les enfants peuvent être interdits pour leur manque d'efficacité et/ou le risque d'effets secondaires, comme l'ont déjà fait certains pays, pour les hydroxyquinolines et la néomycine par exemple. Cette stratégie, si elle est appliquée, semble être l'une des mesures de contrôle les plus efficaces.

Des résultats encourageants ont récemment été observés au cours d'initiatives du programme LMD dans ce domaine. Suite à une lettre reçue du Bureau régional de l'OMS pour la Méditerranée orientale adressée aux ministres de la santé, certains pays dans cette Région ont interdit ou restreint l'utilisation des antidiarrhéiques, dans d'autres, le programme national LMD a commencé à collaborer avec les autorités chargés de la réglementation pharmaceutique dans un effort pour retirer ces médicaments du marché.

La limitation du nombre de médicaments par patient et l'arrêt automatique des prescriptions sont d'autres méthodes utilisées pour essayer de réduire la prescription à outrance. Le risque avec ces stratégies est que les patients très malades ne reçoivent pas certains médicaments essentiels.

UTILISATION RATIONNELLE DES MEDICAMENTS DANS LES PROGRAMMES DE LUTTE CONTRE LES MALADIES DIARRHEIQUES

Evaluations possibles pour la promotion de l'utilisation appropriée des médicaments dans le programme LMD - un exercice pour les administrateurs de programme

Objectif

Choisissez un exemple majeur de prescription, distribution ou utilisation inappropriées de médicaments dans le traitement de la diarrhée aiguë chez les enfants dans votre pays. Considérez les avantages et les désavantages des stratégies pédagogiques, gestionnaires ou réglementaires possibles pour essayer de résoudre ce problème.

Instructions :

1. Utilisez le formulaire 1 pour décrire brièvement un problème important d'utilisation de médicaments dans le traitement de la diarrhée chez les enfants dans votre pays.

2. Utilisez le formulaire 2 pour évaluer les avantages et les désavantages de chaque approche possible. Considérez les différents aspects, comme les avantages, les risques, les limites, les coûts et la faisabilité.

FORMULAIRE 1

Etape 1

Décrivez un problème ordinaire de prescription, distribution ou utilisation de médicament qui aurait de fortes chances d'avoir un impact majeur sur la qualité et/ou le coût des soins aux enfants souffrant de maladies diarrhéiques aiguës dans votre pays:

Etape 2

Jusqu'à quel point pensez-vous que les activités suivantes peuvent améliorer la situation dans votre pays? Quels sont les avantages et les désavantages de chaque activité?

Utilisez le formulaire 2 pour commenter les avantages, risques, limites, coût et faisabilité de chaque activité (vous pouvez ajouter d'autres activités qui vous semblent appropriées pour votre programme LMD.).

Etape 3

Sélectionnez trois activités du formulaire 2 que vous voudriez mettre en oeuvre dans le cadre de votre programme national LMD dans l'année qui vient:

Etape 4

Quels sont les principaux décideurs ou leaders d'opinion dans votre pays dont la participation serait nécessaire pour corriger ce problème?

Formulaire 2

Activités	Avantages/ bénéfices	Désavantages/ risques, limites	Coût	Faisabilité
Matériels pédagogiques imprimés				
Education directe				
Médias				
Enseignement médical				
Education des pharmaciens				
Education du personnel infirmier				
Formation en cours d'emploi dans les DTU				
Formation à la supervision				
Formation des administrateurs de programme				
Listes de médicaments essentiels				
Bulletins d'information pharmaceutique				
Protocoles de diagnostic et de traitement				
Conférences du personnel				
Amélioration de l'étiquetage				

Formulaire 2 (suite)

Activités	Avantages/ bénéfices	Désavantages/ risques, limites	Coût	Faisabilité
Formulaires de commande des médicaments				
Consultation ou justification obligatoires				
Vérification plus rétro-information : aux pharmaciens				
Visites de supervision aux institutions sanitaires				
Vérification plus rétro-information : aux praticiens du secteur privé				
Etablissement des prix des médicaments en fonction de l'impact sur la santé				
Partage des coûts par les patients				
Interdiction de certains médicaments sur le marché				
Restriction des importations (autorisation, enregistrement)				
Restriction de la fabrication locale (autorisation, enregistrement)				
Limitation du nombre de médicaments par patient				
Arrêt automatique des prescriptions				

RESULTATS PRELIMINAIRES DE L'ETUDE DES SOLUTIONS A BASE DE CEREALE POUR LA PREVENTION DE LA DESYDRATATION

DR. FLEURY MAMADOU YAYA

INTRODUCTION

- LES DIFFICULTES QUE RENCONTRENT LES PAYS EN VOIE DE DEVELOPPEMENT DANS LA VULGARISATION DES SOLUTIONS SALEES SUCREES

- LE COUT ELEVE DE LA DISTRIBUTION DES SACHETS DE S.R.O.

- ET LA FAIBLE ACCESSIBILITE DES MERES AUX SACHETS DE S.R.O. NOTAMMENT EN ZONE RURALE,

  ONT AMENE LES RESPONSABLES DU PROGRAMME NATIONAL DE LUTTE CONTRE LES MALADIES DIARRHEIQUES A EXPLORER L'ALTERNATIVE QUE POURRAIT CONSTITUER L'UTILISATION DES SOLUTIONS DOMICILIERES A BASE DE CEREALE POUR PREVENIR LA DESHYDRATATION CAUSEE PAR LA DIARRHEE CHEZ LES ENFANTS DE MOINS DE 5 ANS

L'ETUDE A ETE CONCUE POUR ETRE REALISER ET DEUX PHASES.

CETTE PRESENTATION EST LE RESULTAT DE LA PREMIERE PARTIE DE L'ETUDE ENVISAGEE.

NOUS VERRONS SUCCESSIVEMENT:

1. LES OBJECTIFS
2. LA METHODOLOGIE
3. LES RESULTATS ET COMMENTAIRES
4. NOS CONCLUSIONS

1. <u>OBJECTIFS</u> (TRANSPARENT)

LES OBJECTIFS RECHERCHEES SONT LES POSSIBILITES D'UTILISER LES SOLUTIONS A BASE DE CEREALES POUR LA PREVENTION DE LA DESHYDRATATION:

- IDENTIFIER LA SOLUTION DE CEREALES LA PLUS UTILISEE PARMI LES DIFFERENTES CEREALES QUI EXISTENT

- DETERMINER LA PROPORTION DES INGREDIENTS TELS QUE SEL, SUCRE, ET AUTRES QUI SONT AJOUTES AUX SOLUTIONS ADMINISTREES

- DETERMINER L'AGE AUQUEL LES DIFFERENTS TYPES DE SOLUTIONS SONT DONNEES PREFERENTIELLEMENTS

- IDENTIFIER LES RAISONS POUR LESQUELLES CES SOLUTIONS SONT DONNEES OU PAS.

2. METHODOLOGIE (TRANSPARENT)

L'ENQUETE CONCERNE LES MERES OU LES GARDIENNES D'ENFANTS DE MOINS DE TROIS ANS.

LES QUESTIONNAIRES DE LA LUTTE CONTRE LES MALADIES DIARRHEIQUES ONT ETE UTILISES CONJOINTEMENT AVEC LES QUESTIONNAIRES DE L'ENQUETE DE COUVERTURE VACCINALE

CES ETUDES ONT ETE REALISEES SIMULTANEMENT DANS TROIS MILIEU GEOGRAPHIQUES:

- ZONE RURALE (57,79% DE LA POPULATION)
- ZONE URBAINE (22,60% DE LA POPULATION)
- BANGUI 17,7% DE LA POPULATION

AVANTAGE:

CE TYPE D'ENQUETE COUTE MOINS CHER ET L'ECHANTILLON EST REPRESENTATIF

INCONVENIENT:

LE NOMBRE DE QUESTION EST LIMITE

3. RESULTATS

3.1 BOUILLIE PREFEREE PENDANT LA DIARRHEE (TRANSPARENT)

LA BOUILLIE DE MAIS EST LA PLUS PREFEREE DE L'ENSEMBLE DES BOUILLIES CONSTITUES DE RIZ, DE MIL, DE KOULOU, DE MANIOC ET SURTOUT A BANGUI, SUIVI DE LA BOUILLIE DE RIZ TRES LARGEMENT UTILISE EN ZONES URBAINES ET RURALE

3.2 RAISON POUR DONNER DES SOLUTIONS (TRANSPARENT)

L'ETUDE S'EST EGALEMENT INTERESSE AUX RAISONS FOURNIES POUR DONNER LES SOLUTIONS;

IL EN RESULTE QUE LA PRINCIPALE RAISON EN CE QUI CONCERNE LES BOUILLES DE MAIS, RIZ ET KOULOU EST L'ALIMENTATION DE L'ENFANT (80% EN MOYENNE) TANDIS QUE LES MERES SAVENT QU'ELLES ADMINISTRENT L'EAU DE RIZ DANS LE BUT DE REDUIRE LA DIARRHEE

PAR CONTRE A LA QUESTION DE SAVOIR POURQUOI LES MERES NE DONNERONT PAS LE KOULOU PENDANT LA DIARRHEE (TANSPARENT) ELLES ONT REPONDU:

- CELA AUGMENTE LA DIAARHEE SI C'EST MAL PREPARE OU
- L'ENFANT REFUSE OU
- PEUT CAUSER DE VOMISSEMENTS.

3.3 AUTRE INGREDIENTS DANS LES BOUILLIES DE MAIS ET DE RIZ (TRANSPARENT)

ON REMARQUE QUE LE CITRON ET LA PATE D'ARACHIDE SONT LES INGREDIENTS LES PLUS UTILISEES DANS LES BOUILLIES MAIS A DES POURCENTAGES ENCORE PLUS FAIBLES

	MAIS	RIZ
CITRON	11%	12%
PATE D'ARACHIDE	25%	17%
JAUNE D'OEUFS	9%	2%

3.4 COMPOSITION CHIMIQUE DES SOLUTIONS ADMINISTREES AUX ENFANTS (TRANSPARENT)

DES PRELEVEMENTS DE BOUILLIES UTILISES ONT ETE ANALYSES POUR DETERMINER LEUR COMPOSITION CHIMIQUE:

LA CONCENTRATION EN SODIUM ET EN POTASSIUM DES SOLUTIONS A BASE DE MAIS SONT TRES FAIBLES PAR RAPPORT A LA CONCENTRATION DANS LA SOLUTION IDEALE RECOMMANDEE PAR L'O.M.S.

	AMIDON	SODIUM	POTASSIUM
	GR/L	MEG/L	MEG/L
BOUILLIE DE MAIS	125	0,94	0,39
BOUILLIE KOULOU	60	1,37	0,16
EAU DE RIZ	8	0,63	0,16
IDEALE SELON ORS	50	90	20
SOLUTION DOMICILIERE			
IDEALE	50	45-60	AUTRE SOURCE

3.5 PRIX ET DISPONIBLITE DU MAIS ET DU RIZ DANS LES ZONES RURALE DE LA R.C.A (TRANSPARENT)

IL RESULTE DE CETTE ETUDE QUE LE MAIS EST TOUJOURS DISPONIBLE ET MOINS CHER PAR RAPPORT AU RIZ QUI EST DISPONIBLE MAIS CHER.

	MAIS	RIZ
PRIX 80 GRAM SEC	33 FCFA	60 FCFA
"TOUJOURS DISPONIBLE"		
- PARMI LES UTILISATEURS	79%	70%
- PARMI TOUS LES REPONDANTS		59%

3.6. CARACTERISTIQUES DES SOLUTIONS (TRANSPARENT)

	BOUILLIES	EAU DE RIZ	SOLUTIONS DOMICILIAIRE IDEALE
QUANTITE DONNEE			
ML FREQUENCE	100-300	10-150	125-250
NBRE FOIS PAR JOUR	2-3	2-3	5-6
SUCRE AJOUTE(CARREAU)	1-3 (-6)	0-2*	RIEN/L
SEL AJOUTE	RIEN	RIEN	UN PEU
AGE DES ENFANTS A QUI SOLUTIONS SONT DONNEES (MOIS)	3-8	3-24*	4*

4. C O N C L U S I O N

LA SOLUTION A BASE DE MAIS POURRAIT ETRE UTILISEE DANS LA PREVENTION DE LA DESHYDRATATION ~~TRAITEMENT DE LA DIARRHEE PRECOCE A~~ DOMICILE MAIS IL FAUDRAIT RESOUDRE LES QUESTIONS SUIVANTES (Transparent)

. L'ACCEPTIBILITE D'UTILISATION DE LA SOLUTION PENDANT LA DIARRHEE SANS REDUCTION DE L'ALIMENTATION.

. APTITUDES DES MERES A AJOUTER LE SEL, A DETERMINER LES QUANTITES NECESSAIRES, LES FREQUENCES D'ADMINISTRATION

. EFFICACITE DANS LA PREVENTION DE LA DESHYDRATATION

LA DEUXIEME PHASE DE CETTE ETUDE QUI EST DEJA EN COURS CONSISTE EN UNE ETUDE CLINIQUE SUR L'EFFICACITE COMPARATIVE DE LA SOLUTION A BASE DE CEREALE A LA SOLUTION DE SRO.

JE VOUS REMERCIE

TROIS ANNEES D'EXPERIENCE GUINEENNE DE LUTTE CONTRE LES MALADIES DIARRHEIQUES

Situation Géo-climatique

La Guinée est située en Afrique de l'Ouest, elle est limitée au Nord par la Guinée Bissau, le Sénégal et le Mali. A l'Est par la Côte d'Ivoire, au Sud par le Libéria et la Sierra Léone.

Sa superficie est de 245.857 Km2, le pays est divisé en 4 régions naturelles

- La Basse Guinée
- La Moyenne Guinée
- La Haute Guinée
- La Guinée Forestière

Le climat est du type tropical, avec alternance d'une saison sèche qui s'étend de Novembre à Avril et d'une saison pluvieuse de Mai à Octobre.

Démographie

La Population totale en Guinée en 1989 est estimée à 6.700.000 habitants dont 800.000 vivent à Conakry. La densité Moyenne est de 24 habitants au Km2.

Indicateurs Démographiques.

- Taux de natalité 48%.
- Taux de mortalité 25%.
- enfant de 0-4 ans 18%
- population de 5-14 ans 26%
- population de 15-59 ans 51%
- Fertilité 6 enfants / femmes
- population urbaine 26,4%

Expérience Guinéenne de lutte contre les maladies diarrhéiques.

En République de Guinée les maladies diarrhéiques occupent une place importante parmi les causes de morbidité et de mortalité chez les enfants de 0-5 ans.

Des enquêtes de morbi-mortalité réalisé en 1986 à Conakry en 1988 à Kindia ont révélés que chaque enfant a en moyenne 4 à 6 épisodes de diarrhée par an. Le taux de mortalité associée à la diarrhée est de 50,5% .

Le programme national de lutte contre les maladies diarrhéiques est pleinement intégré au Programme National des Soins de Santé Primaires dénommé PEV/SSP/ME. (Programme Elargi de Vaccination intégré aux Soins de Santé Primaires et Médicaments Essentiels). Développé depuis 1986, ce programme vise la couverture de l'ensemble du pays par l'installation de Centres de Santé menant des activités intégrées de SSP avec une forte participation communautaire et un système de recouvrement des coûts.

La prise en charge efficace des cas de diarrhée représente la principale stratégie de réduction de la mortalité liée à la diarrhée chez les enfants de moins de 5 ans.

La priorité est accordée à l'amélioration de l'utilisation des services par la disponibilité des SRO et la formation du personnel.

Le programme LMD mène des activités en collaboration avec le Projet CCCD dans la zone maritime et côtière pour étendre ensuite ses activités dans les autres préfectures.

Les épidémies successives de choléra (1970, 1978, 1986) qui ce sont limitées dans la zone maritime et côtière ont permis de sensibiliser le personnel médical et les population sur lá nécessité d'entreprendre activités de prise en charge des cas de diarrhée par l'utilisation des sels de réhydratation orale La preuve de leur efficacité a été fournie lors des ruptures de stock de soluté IV pendant l'épidémiecholera 1986.

En 1970 2812 cas de diarrhée furent enregistrer à Conakry avec 150 décès, en 1978 13251 cas de diarrhée ont été notifiés avec 159 décès et en 1986 8874, cas avec 38 décès.

La première unité de réhydratation oral à été ouverte en Septembre 1986 au CHU de Donka pour assurer une prise en charge rapide des cas de diarrhée venant des 3 préfectures de la capitale, intéresser le personnel de Santé et les mères à la pratique de la Thérapie de réhydratation oral et la formation continue des agents de Santé.

(Transparent N° 1): Surveillance des cas de diarrhées 1986 à 1989.
La collecte des données des rapports mensuels de surveillances épidémiologiques nous montre :

De 1986 à 1987 : Seul l'unité de réhydratation de Donka était fonctionnelle, cette unité recevait tous les cas de diarrhée venant des 3 préfectures de Conakry.

De 1988 à 1989 : On remarque avec l'ouverture des unités de réhydratation dans les autres Centres de Santé de Conakry que le nombre de cas reçu à augmenté. Par contre l'activité de L'URO Donka a diminué.

A Télémelé et Kindia les activités de réhydratation n'ont démarrés qu'en Décembre 1988 ce qui fait que le nombre de cas enregistrés est moindre.

En 1987 l'accent a été mis tout d'abord sur la formation du personnel.

Transparent N° 2 : Formation du personnel et ouverture des 18 URO
Période 1986 à 1989.

- En 1987 20 agents ont été formés pour les 10 CS de Conakry
- En 1988 35 agents de Santé ont été formés Kindia et Télémelé avec l'ouverture de 18 URO
- En 1989 36 agents de Santé ont été formés pour l'ouverture des postes sentinelles de réhydratation dans la zone maritime et les îles.

Il est à noter également la formation des chefs de Centre de Santé du Programme National PEV/SSP/ME. 98 centres de santé sur les 346 mènent les activités intégrées, 72 CS seront ouvert en 1990, 32 autres CS appliquent les instructions du programme LMD et 144 restent à ouvrir.

- En 1989 une décentralisation de la formation a été réalise par la formation d'équipes régionales des formateurs au niveau des 4 régions naturelles.

En l'absence d'une évaluation détaillée du programme il est difficile d'avoir avec précision toutes les données relatives aux activités réalisées néanmoins les données disponibles au niveau central des différentes enquêtes nous donnent quelques renseignements.

Transparent N° 3 : Utilisation des SRO, incidence, mortalité pour diarrhée. Période 1985 à 1989.

- L'incidence est plus ou mois stable de 1985 à 1988 et à elle à légèrement diminuée en 1989
- La létalité à diminuée en 1989
- L'utilisation de SRO à augmenter de 1988 à 1989
- Par contre le taux de mortalité associé à la diarrhée est resté pratiquement le même du 1985 en 1989.

Transparent N° 4: Les études menées en 1988 et 1989 montrent que la saison pluvieuse est la plus concernée par les diarrhées

Tableau N° 5 : Répartition des cas de diarrhée selon le plan de traitement : période 1989.
La plupart des cas de diarrhée reçus au niveau des CS sont du plan A. Par contre l'on s'attendait à voir plus de cas de plan C à L'URO de Donka ce qui n'a pas été le cas. Ceci pourrait s'expliquer par la défaillance du système d'enregistrement des plans C hospitalisés.

BEST AVAILABLE

Tableau N 6 : Habitude de prescription en cas de diarrhée à la consultation infantile.

Parmi les 8.105 enfants de 0-5 ans consultés dans les 10 centres de santé de Conakry de Janvier à Décembre 1989 d'après les registres de consultation il y a eu 24.669 prescriptions.

- 61% des prescriptions sont des antidiarrhéiques
- 34% des prescriptions sont des SRO
- 4% des prescriptions sont des antibiotiques.

Chaque enfant diarrhéique à eu en moyenne 3 prescriptions. Les antidiarrhéiques représentent le premier acte des agents de santé devant un enfant diarrhéique. Par contre l'utilisation des antibiotiques est moindre par rapport à 1986 ou la plupart des cas de diarrhée étaient traités aux antibiotiques.

Tableau N 7 : Connaissance des mères en matière de sels de réhydratation oral et solution salée sucrée. (SRO, SSS).

Une étude effectuée à L'URO Donka par l'interrogatoire de 50 mères nous donnent quelques renseignement sur les connaissances des mères en matière de SRO et SSS.

33 mères interrogées sur 50 soit 66% ont déjà entendu parler du SRO
27 mères ont entendues au centre de santé
17 mères à la télévision
18 (36%) l'on déjà utilisé
13 mères (26%) pensent que le SRO arrête la diarrhée.
10 mères (20%) pensent que le SRO remplace l'eau perdue
15 mères (30%) préparent le SRO correctement.
8 mères (16%) ne savent pas l'utilité de SRO.

Connaissance en SSS.
31 mères (62%) ont déjà entendues parler SSS.
14 mères ont entendues au CS
20 mères ont entendues à la Télévision.
12 mères préparent correctement le SSS.
39 mères montrent une mesure correcte d'un litre.

BEST AVAILABLE

SUGGESTIONS-RECOMMANDATIONS:

Le programme national de lutte contre les maladies diarrhéiques en tenant compte des résultats des études à prévu dans son plan d'action de 1990 les activités ci-après.

1) La formation des médecins pédiatres des grandes formations sanitaires en matière de thérapie de réhydratation orale et l'ouverture des unités de réhydratation.

2) L'amélioration du circuit d'approvisionnement en SRO

3) La Formation des accoucheuses traditionnelles pour la prise en charge des cas de diarrhées au niveau du village.

4) L'élaboration des messages éducatifs pour les agents de santé et les mères pour renforcer l'Education pour la Santé.

5) Le renforcement de la supervision au niveau des C.S.

BEST AVAILABLE

FROM DIARRHEA TRAINING UNIT TO PROGRAM EXPANSION

T. MNDZEBELE

[TITLE OVERHEAD]

The promotion of oral rehydration in Swaziland began in 1976 when radio messages recommended fluids containing two teaspoons of sugar and a pinch of salt to a half liter of water.

Diarrhea and the resulting dehydration were brought to the forefront of public and political awareness of Swaziland during the 1981-82 cholera outbreak, when 707 cases and 32 deaths were reported.

The control of diarrhea disease programme was launched in 1983-1984 with the CCCD Project Assistant. The programme started with a Knowledge-Attitudes-Practices survey on CDD activities and was followed by a strong health education component with emphasis on:

1) Mass communication
2) Training of health personnel
3) Traditional healers
4) Rural health motivators and extension workers

In 1983, ORS packets were first donated to the country by WHO and UNICEF. In 1987, the Ministry of Health invited a consultant to assist in preparing a 3-year plan for CCCD assisted programs

[CDD PLAN-OVERHEAD]

The CDD 3-year strategy called for establishing the Swaziland Control of Diarrheal Diseases Treatment and Training Centers by the end of 1988; by the end of 1989 to have established 5 regional ORT units in the four regions; and by the end of this year, to have established ORT corners at the clinic level.

[SLIDE OF NATIONAL ORTU TRAINING CENTER]

The Swaziland and diarrheal disease treatment and training center was established and officially opened by the Minister for Health, Dr. Fanny Friedman in October 1988. Two staff nurses were assigned to the unit as trainers and service providers after attending a training course in Alexandria, Egypt in September 1988.

The National ORT training curriculum was developed with assistance from the Centers for Disease Control.

[SLIDE OF TRAINING IN ORTU]

Eight ORT training courses were taught in 1989, training a total of 80 nurses and nursing assistants from government, mission, and private health facilities in oral rehydration therapy.

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[SLIDE OF ORTU CORNER]

ORT Corners were established in most clinics and health centers where there was at least one nurse one had been trained at the National ORT Training Center.

[PICTURE OF FLORENCE SHOWING HOW TO MAKE UP ORS]

Nurses trained at the National ORT Training Center teach mothers how to make and give ORS, and proper feeding during and after episodes of diarrhea.

[OVERHEAD OF INFO COLLECTED IN ASSESSMENT FORM]

Before 1988, the only data collected on diarrhea was the number of cases less than 5 and greater than 5 years old. Data is now collected from patients seen at ORT Units which allow us to look at historical, demographic, and clinical information.

[OVERHEAD OF STUDY OBJECTIVES]

To determine the efficacy of home case-management of diarrhea following discharge from an oral rehydration unit, we conducted a follow-up study of patients discharged from the National ORT Training Centers.

[OVERHEAD OF STUDY DESIGN]

Between November 27, and December 14, 1989, 69 patients seen at the National ORT Training Center were enrolled in a 2-day follow-up study. Patients were examined and interviewed at the time of the clinic visit., and re-examined and re-interviewed two days later

in their homes.

[OVERHEAD OF PATIENT CHARACTERISTICS]

Of the 69 patients enrolled, 29 were male and 40 were female. 57 patients were categorized as Plan A, and 12 patients as Plan B. Median duration of diarrhea at the time of clinic visit was 3 days, with an average of 4 bowel movements per day.

FROM DIARRHEA TRAINING UNIT TO PROGRAM EXPANSION

T. MNDZEBELE

[TITLE OVERHEAD]

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ORS DISTRIBUTION AND SALES BY COMMUNITY HEALTH WORKERS IN LESOTHO

MRS. THABILE KHOALI, NURSING OFFICER

MOHALE'S HOEK HEALTH SERVICE AREA, LESOTHO

Introduction

In response to a Ministry of Health policy in Lesotho to make ORS packets available to Basotho at all levels, a pilot ORS distribution and sales scheme by community health workers was undertaken in Mohale's Hoek Health Service Area (or HSA). It was carried out from November 1988 to April 1989. The scheme included teaching community health workers to a) prepare ORS and sugar-salt-solution (SSS) correctly, b) give health education on prevention and management of diarrhoea, and c) to assess children with diarrhoea. Health personnel involved and/or trained for this purpose were the national CDD Coordinator, Mohale's Hoek HSA staff (including myself), the nursing staff of 2 health centres, and 35 community health workers.

Methodology

1. Training: HSA staff together with health centre nurses underwent a 2-day training while the community health workers underwent a two and 1/2 day training in the following areas:

a) Diarrhoea management using an assessment and treatment chart written in the local Sesotho language;

b) Use of a monitoring tool introduced to help the community health workers keep records of ORS stocks and revenues;

c) Use of ORT pamphlets used in health education sessions for mothers; and

d) Practise in the preparation of ORS and SSS. This training included lectures and discussions, demonstrations, role plays and practical exercises.

2. Monitoring: We assessed job performance and reviewed records monthly at the community health workers' own villages. A monitoring tool was developed to assess the knowledge and skills of both community health workers and a random sample of local mothers.

3. Accounting: For the first time in a government health institution, a trial was made to have ORS packets actually sold by community health workers. 50 lisente (or 20 U.S. cents) was collected for 2 packets issued per consultation. 42 lisente went to government accounts to cover packet costs, while 8 lisente was retained for the community health workers' use in local community projects.

Constraints

Diarrhoea cases were few, possibly due to increased knowledge about diarrhoea prevention, and to decreased diarrhoea incidence associated with unusually cold weather during the summer diarrhoea season.. As a result, observation of community health workers' performance on-the-job was limited. To overcome this constraint, we asked community health workers to demonstrate what they do when they have cases, and compared that with the assessment records already completed.

Results of the Pilot Scheme Evaluation:

1. Community health workers proved competent in managing ORS distribution and all that it entails. For example, they gave health education to mothers well, and kept good records of ORS stocks and money collected.

2. Good acceptance by the community towards ORS distribution and sales was noted.

3. The evaluators also observed that community health workers could correctly measure water for the ORS, and used the entire packet contents in the mixture.

4. We noted several weak areas for strengthening, such as not knowing the actual amounts of ORS to be given after assessment, or demonstrating incorrect salt measurements in SSS. For example, only 27% of community health workers evaluated could give the correct amount of fluid according to age during the diarrhoeal episodes. Also, only 50% of community health workers could measure salt correctly, using the accepted pinch and scoop method.

Conclusion:

Given these results, it was decided to pilot the scheme further in 4 more HSA's. Following the experience in this current second phase, the Ministry of Health may spread the scheme country wide. Hopefully the Ministry of Health may also consider giving more than just ORS packets to community health workers to dispense in the future.

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RATIONAL DRUG USE IN CDD

M. Claeson

Introduction

- Why has rational drug use become an important aspect of diarrhoeal diseases control?

- Can we not continue to promote effective case management: ORS/ORT and feeding and not bother whether other drugs are being used also - in addition?

If we analyze the drug use problem, the aspect of the problem, the behaviors involved and the factors influencing these behaviors - we understand why rational drug use has become a topic on the agenda of CDD.

CPRs, HFS, HH surveys and special studies have identified inappropriate drug use as a major constraint to the implementation of case management in CDD in most countries. This is confirmed by studies of private sector sales and prescription rates.

It has been found that:

- children with acute diarrhoea receive an average of four drugs per episode

- care takers prefer and request drugs which they perceive as effective, that "stops diarrhoea".

- drug vendors, pharmacists, sell drugs often without prescription over the counter: antidiarrhoeals are among the most commonly used drugs

- doctors prescribe drugs that have no documented efficacy and carry side-effects.

Many factors influence these behaviors which result in a drug use pattern where inappropriate drugs, such as antidiarrhoeals in children and routine antibiotics and/or antiparasitic drugs are given. This leads to a number of problems:

1. Diversion of attention and resources from rehydration therapy and feeding, influencing help-seeking behavior and treatment choices. The extent of the competitive effect of attractive drugs on acceptance of ORT and compliance needs to be further studied.

2. Cost.

The expenditure on inappropriate drugs is an additional burden to already limited national health budgets and to the individual family. It is estimated that > 1 billion US dollars is spent in the developing world, on antidiarrhoeals - many of them banned or restricted for use in adults in developed countries but marketed for use in children in developing countries.

3. Antibiotic resistance
We need antibiotics for the treatment Shigella dysenteria and for suspected cholera. Increasing rapid spread of resistance to some of the commonly used antibiotics is a well documented problem in some areas - less so in other parts. eg. Shigella resistance to ampicillin, tetracycline, sulphas and coming up cotrimoxagole.

4. Side-Effects
Loperamide, (disphemoxylabe) antiemetics, hydroxyquinolines - to name a few of the most commonly used antidiarrhoeals all carry additional risk of serious adverse reactions in children. Side-effects are not commonly monitored or reported on in most developing countries - but they are found when looked for. We have results from clinical studies in Peru and Pakistan regarding intoxication of loperamide
- the most common cause for pediatric admission for intoxication.

Interference of ORT, children not taking ORS because they are drowsy due to antidiarrhoeals (antiemetics) is a common observation at some DTUs.

What is rational drug use?
It is knowing when to give antibiotics and antiparasitic drugs and to never give antidiarrhoeals to children. See simple guidelines of the new Treatment Chart.

How can we improve rational drug use within the context of CDD.
We know that single interventions do not have significant impact; however a combination of approaches : managerial, educational egulatory are more likely to have an impact.

We also know the drug use problem is
and that i...tions should be based
analysis, what we can do in the WHO CDD
to provide options and support and
evaluation; and to learn from country exp

We know the NCDDPs can influence drug avail
communications, (Kenya) policy (EMRO) as
traditional ways.

What are we doing in WHO?

1. Scientific reviews. NCDDPs have requested the scientific basis for our recommendations regarding the use of drugs in children. We are finalizing a review of most commonly used drugs regarding their efficacy, interactions and side effects. This WHO document will be published mid 1990.

2. The new TC and all clinical training materials include rational drug use.
   We are developing a training package for pharmacists to influence their prescribing habits.

3. Most important is support to countries in assessing their drug use problem, develop a plan of action, evaluate the activities - a priority over the next years. Very little research has been done in developing countries regarding drug prescribing, drug dispensing and drug use behaviors and the effect of selected interventions.

We do believe that to expand our CDD activities, to increase ORS/ORT use, NCDDPs should include rational drug use as an important component of their programmes: training communications, legislative actions.

PRATIQUES COMMUNAUTAIRES POUR LE TRAITEMENT DE LA DIARRHEE AU BURUNDI

M. Ntakibirora

Mesdames et Messieurs,
L'objet de notre exposé est la présentation des résultats d'une enquète par la méthode des groupes focaux menée au Burundi en Janvier-Fevrier 1990 par direction du CCCD en collaboration avec le CDC d'Atlanta. L'enquète avait double mission d"abord:

- La formation d'une équipe nationale de l'Unité EPS à cette méthodologie ensuite, une satisfaction aux besoins du programme LMD en ce qui concerne les attitudes, les connaissances et les pratiques pour le traitement de la Diarrhée. En effet ces résultats serviront de base à l'élaboration des messages d'Education au cours d'une campagne intensive prévue pour cette année 90.

La méthode à étée choisie pour son coût bas en ce qui concerne le temps, le personnel et la logistique.

Le pays a été divisé en deux strates: - urbaine
- rurale

parce que les différences de comportement sont surtout remarquables pour ces 2 endroits.
Les sites ont été choisi suivant les données du bulletin épidémiologique et la situation géographique (cartes du Burundi). (1 site avec beaucoup de cas, 1 site peu de cas)
On a interrogé les groupes de jeunes mères (moins de 30 ans et mères plus agées que 30 ans)
La séparation était difficile, la discussion s'est déroulée au centre de santé ce qui est un biais très important mais ceci est du au fait que la consultante avait un séjour limité au pays. On ne pouvait pas avoir assez de temps pour attendre les rassemblements (messes - marché etc...). Les résultats n'ont pas montré de differences significatives dans les strates et les groupes du moins pour ce qui nous interesse c.à.d les pratiques pour le traitement.

RESULTATS:

Tableau 1 nous montre la place de la diarrhée dans la morbidité infantile.

La diarrhée est la deuxième cause de morbidité après la rougeole. Elle est réellement plus importante dans la mesure où elle presque toujours présente dans la rougeole, et qu'elle est une manifestation fréquente des verminoses,(chiffre réel serait le total des 3).
NB: l'enquète se déroule à une période de faible incidence des diarrhée.

Tableau II: ce tableau révèle que la diarrhée est reconnue comme mortelle après la rougeole.

Citons en passant que la coqueluche est citée car on est au CS et on cite les maladies cibles du PEV forcément. Certainement qu'il y a une confusion entre les Infections des voies

respiratoires aigues et la coqueluche.

Tableau III: Pourquoi la diarrhée est elle dangereuse?

La déshydratation n'est pas connue comme un danger.

Tableau IV: Quand estimez-vous qu'une diarrhée est grave

D'une maniére générale, les mères seront capables de reconnaître les signe de gravité si on leur apprend cela. Ceci est important pour l'éducation des mères.

Tableau V: Les aspects de selles diarrhéiques et leurs causes.

Une longue liste des aspects de selles a été énuméré, nous en avons retenu les plus fréquents et nous les avons rattachés à leurs causes.

- les verminoses
- les coliques
- mauvais lait maternel

Pour la petite histoire " la colique" a été retenue pour définir un groupe de cause de croyances traditionnelles. Il s'agit d'un monstre qui habite le tube digestif de l'homme qui nait avec lui, qui meurt avec lui, qui peut se révolter provoquant la diarrhée, la constipation. Il peut même sortir (prolapsus)

Le mauvais lait maternel est le lait d'une femme enceinte, ou en menstruation, ou du lait secrété au delà de la période ou l'enfant précédent est mort.

Ces croyances pose un problême d'acceptabilité de la S.R.O. dans la mesure ou les mères consultent pour verminose et traitement serait un vermifuge et pour " la colique" dont le traitement serait un calmant.

Tableau VI: où traite-on la diarrhée

Le centre de santé semble ètre très sollicité contrairement aux résultats des enquètes antérieures qui montre que seul 30% des cas de diarrhée consultent un centre de santé (enquète Westinghouse 87) Les réponses ont certainement souffert du biais du lieu de discussion.

Tableau VII: L'alimentation au cours de la diarrhée.

- LA QUANTITE ET QUALITE

Tous les groupes de mères avouent changer le régime habituel pendant la diarrhée (coutume valable pour toutes les maladies au Burundi)

Les mères reconnaissent que l'enfant mange moins pendant la diarrhée, les raisons sont variées:

- l'enfant n'a pas d'appétit 17
- à cause de la maladie 4.

Tableau VIII: Les aliments interdits et les aliments donnés pendant la diarrhée.

Il y a lieu de faire de la promotion des légumes, de la bouillie et du riz dans le traitement de la diarrhée, (Etude approfondie sur la disponibilité, le coût etc...).
NB: Les légumes sont les feuilles vertes cuites.
Les aliments lègers sont des aliments de mastication facile (préparés sous forme de purée)
Il y a un problème supplementaire au niveau de la préparation. En effet, les mères ne salent pas ou salent très peu le plats des enfants.
Trois groupes affirment que le sel aggrave la diarrhée. Pour l'introduction du sel dans la bouillie, 12 groupes sont catégoriques: on ne met que du sucre dans la bouillie. 10 groupes accepteraient d'ajouter du sel.
Ceci aura des implications réelles pour la promotion d'un fluide local.

Tableau IX: Les boissons pendant la diarrhée.

La quantité est difficile à préciser en l'absence d'une unité de mesure standard connue. Il sera indispensable de convaincre les mères pour augmenter les liquides.

Tableau X: Acceptabilité S.R.O.

La S.R.O. est connue d'une manière générale (14 groupes sur 22). Il faut citer un groupe d'un centre de santé avec un coin TRO en place qui ignorait la SRO (problème d'éducation pour la santé ou d' exposition au public)
A la question de savoir si les mères donneraient la SRO pendant la diarrhée, les réponses des mères sont répartis comme suit:

- oui	12
- oui, on ajoute de la bouillie	7
- sur demande du médecin	3
- oui, avec nourriture	2
- oui, si l'enfant mange	1

Il est heureux de constater que tous les groupes acceptent la SRO comme SEUL traitement de la diarrhée et surtout qu'un grand nombre perçois la nécéssité d'une alimentation en plus. (10 groupes sur 22).

CONCLUSIONS:

L'étude nous aura permis de pénétrer un domaine jusque là inexploré dans notre pays en l'occurence les pratiques communautaires pour le traitement de la diarrhée.

Elle permettra au programme de luttes contre les maladies diarrhéeiques d'élaborer des messages d'éducation sur:
- l'alimentation
- les liquides
- les signes qui doivent inquiéter les mères et motiver une consultation.

L'étude nous rassure quand à notre politique de programme c.à.d

l'utilisation de la SRO à domicile. Il ressort de l'étude que la SRO serait mieux acceptée comme un médicament de la cause et non comme un traitement pour corriger la déshydratation.
A la lumière de cette étude, les services concernés feront de leur mieux pour renforcer le rôle de l'infirmier dans l'éducation pour la santé.
Enfin nous une ébauche d'information sur les possibilités de promotion d'un fluide à domicile.

Je terminerai par des considerations sur cette étude, excusez-moi de relever les imperfections du travail, comme je l'ai signaler au début, vus les conditions de son déroulement il serait
très important de compléterl'étude avec des groupes en dehors des centres de santé et peut être à une période de haute incidence de diarrhée.
Je vous remercie.

L'EVALUATION DE LA PERFORMANCE DES AGENTS DE SANTE EN MATIERE DE LUTTE CONTRE LES MALADIES DIARRHEIQUES EN REPUBLIQUE CENTRAFRICAINE

RUTH DOUTIZONGA

RESUME DE L'EXPOSE

CETTE PRESENTATION COMPRENDRA QUATRE ELEMENTS:

1. LES OBJECTIFS DE L'EVALUATION
2. LA CONDUITE DE L'EVALUATION
3. LES RESULTATS
4. L'UTILISATION DES RESULTATS

1. OBJECTIFS DE L'EVALUATION

LA DIRECTION DE LA MEDECINE PREVENTIVE ET DE LUTTE CONTRE LES GRANDES ENDEMIES DE LA REPUBLIQUE CENTRAFRICAINE A FIXE QUATRE OBJECTIFS POUR CETTE EVALUATION DE LA PERFORMANCE DES AGENTS DE SANTE EN MATIERE DE LUTTE CONTRE LES MALADIES DIARRHEIQUES. LA DIRECTION A VOULU COLLECTER DES INFORMATIONS DE BASE EN VUE DE:

* PLANIFIER LA FORMATION CONTINUE DE PERSONNEL SANITAIRE
* EVALUER ULTERIEUREMENT L'IMPACT DE LA FORMATION SUR LA PERFORMANCE DU PERSONNEL
* IDENTIFIER LES DEFAILLANCES DANS LA FOURNITURE DU MATERIEL ESSENTIEL A L'EXECUTION DU PROGRAMME DE LUTTE CONTRE LES MALADIES DIARRHEIQUES DANS LES FORMATIONS SANITAIRES
* MOTIVER LES SUPERVISEURS REGIONAUX ET LES AGENTS DE SANTE SUR LE TERRAIN A TRAVERS LA RETROINFORMATION

2. CONDUITE DE L'EVALUATION

LES METHODES QUI ONT ETE UTILISEES DANS L'EVALUATION DE PERFORMANCE COMPRENNAIENT L'OBSERVATION SUR PLACE DES PRATIQUES DES AGENTS DE SANTE EN UTILISANT UN FORMULAIRE STANDARD PREETABLI ET LA REVUE DES REGISTRES POUR S'ASSURER QUE LES DOSSIERS SONT CORRECTEMENT REMPLIS.

L'ECHANTILLON SUR LEQUEL A PORTE L'EVALUATION REPRESENTAIT 50% DES FORMATIONS SANITAIRES QUI RECOIVENT LES SACHETS SRO DANS CHAQUE REGION. DES FORMATIONS DE TOUTES LES DIFFERENTES CATEGORIES ONT FAIT PARTIE DE L'ECHANTILLON DANS CHAQUE REGION ET ONE ETE CHOISIES AU HASARD.

LES EQUIPES REGIONALES QUI ONT MENE CES EVALUATIONS ETAIENT CONSTITUEES DE DEUX PERSONNES CHACUNE AU MINIMUM. LES EQUIPES ONT ETUDIE UN CENTRE PAR JOUR ET L'EVALUATION A ETE INOPPINEE.

3. RESULTATS

SOIXANTE-CINQ FORMATIONS SANITAIRES ONT ETE EVALUEES ET 144 ENFANTS OBSERVES. LES RESULTATS DE L'EVALUATION PORTENT SUR QUATRE REGIONS SANITAIRES. LES RESULTATS QUI VOUS SERONT PRESENTES CONCERNENT 32 DES 88 ELEMENTS DE CONTROLE ET SONT REGROUPES EN SIX GRANDES RUBRIQUES.

* ORGANISATION/MATERIEL

EN CE QUI CONCERNE L'ORGANISATION DES UNITES ET COINS RVO, LES RESULTATS DE L'EVALUATION SOULEVENT CERTAINES INQUIETUDES AU SUJET DE LA CAPACITE DU PERSONNEL SANITAIRE A PRENDRE EN CHARGE CORRECTEMENT LES ENFANTS DIARRHEIQUES.

TANDIS QUE LES SACHETS DE SRO ETAIENT DISPONIBLES A LA CONSULTATION DANS 80% DES CENTRES OBSERVES, SEULEMENT LA MOITIE DES CENTRES DISPOSAIENT DES RESERVES ADEQUATES. LA MAJORITE DES CENTRES NE DISPOSAIT PAS DU MATERIEL ESSENTIEL POUR LA PREPARATION ET L'ADMINISTRATION DE LA SOLUTION.

SEULEMENT UNE SUR CINQ PARMI LES FORMATIONS SANITAIRES EVALUEES DISPOSAIT D'UNE BOUTEILLE D'UN LITRE AU MOMENT DE L'EVALUATION ET L'EAU POTABLE ETAIT DISPONIBLE DANS MOINS DE LA MOITIE DES CENTRES EVALUES.

* INTERROGATOIRE

POUR L'INTERROGATOIRE DES MERES, LES RESULTATS REVELENT QUE LE PERSONNEL N'EST PAS CONSISTANT.

EXEMPLE: PRESQUE TROIS QUART DES MERES DES ENFANTS OBSERVES ONT ETE INTERROGEES SUR LA DUREE DE LA DIARRHEE MAIS SEULEMENT UN TIERS DES MERES ONT ETE INTERROGEES SUR LA CONSISTANCE DES SELLES, LA MOITIE SUR LA FREQUENCE DES SELLES, ET SEULEMENT UNE SUR CINQ A ETE INTERROGEE SUR LA PRESENCE DU SANG DANS LES SELLES. SEULEMENT 25% DES MERES ONT ETE INTERROGE SUR LE TRAITEMENT DONNE A DOMICILE.

* EXAMEN CLINIQUE

EN CE QUI CONCERNE L'EXAMEN CLINIQUE DES ENFANTS DIARRHEIQUES, LES RESULTATS REVELENT QUE LE PERSONNEL A D'IMPORTANTES LACUNES.

EXEMPLE: MOINS DE 40% DES ENFANTS OBSERVES ONT ETE PESES; SEULEMENT UN TIERS DES ENFANTS OBSERVES ONT ETE PALPES A LA RECHERCHE DU PLI CUTANE, ET PRESQUE 90% DES ENFANTS OBSERVES N'ONT PAS ETE CLASSES EN PLAN DE TRAITEMENT SELON LEUR DEGRE DE DESHYDRATATION.

* CONDUITE THERAPEUTIQUE

DANS LE CADRE DE LA CONDUITE THERAPEUTIQUE, TANDIS QUE LA SRO A ETE PRESCRITE POUR A PEU PRES 9 SUR 10 DES CAS DE DIARRHEE CHEZ LES ENFANTS OBSERVES, DANS PLUS DE LA MOITIE DES ETABLISSEMENTS LA SOLUTION DE REHYDRATATION ETAIT INCORRECTEMENT PREPAREE. L'ADMINISTRATION DE LA SOLUTION N'A ETE SURVEILLEE ET VERIFIEE PAR LES AGENTS DE SANTE QUE DANS DEUX CAS SUR DIX. QUINZE POURCENT DES CAS DE DIARRHEE CHEZ LES ENFANTS OBSERVES ONT ETE TRAITES AVEC UN ANTIDIARRHEIQUE ET 4.2% AVEC UN ANTIBIOTIQUE.

* EVALUATION

L'IMPACT DU TRAITEMENT PAR VOIE ORALE N'A PAS ETE EVALUE DANS 80% OU PLUS CHEZ LES ENFANTS OBSERVES AVANT LEUR SORTIE DU CENTRE.

*CONSEILS SUR L'ADMINISTRATION DU TRAITEMENT AU CENTRE

LES CONSEILS DONNES A LA MERE CONCERNANT L'ADMINISTRATION DE LA SOLUTION AU CENTRE CONSTITUENT UN ELEMENT TRES IMPORTANT DANS LA PRISE EN CHARGE DES ENFANTS DIARRHEIQUES.

MALHEUREUSEMENT, 80% DES MERES DES ENFANTS OBSERVES ONT QUITTE LE CENTRE SANS AVOIR PARTICIPE A UNE DEMONSTRATION DE LA PREPARATION DE LA SOLUTION. MOINS DE 10% ONT RECU DES INFORMATIONS SUR LA QUANTITE DE SOLUTION A ADMINISTRER ET A PEU PRES LA MOITIE SUR LA MANIERE D'ADMINISTRATION.

* CONSEILS SUR LE TRAITEMENT A DOMICILE

LES SOINS DONNES A DOMICILE PAR LES MERES A LEURS ENFANTS QUI FONT LA DIARRHEE SONT TRES IMPORTANTS DANS LA MAINTENANCE DE L'ETAT D'HYDRATATION DES ENFANTS. MAIS, LA GRANDE MAJORITE DES MERES DES ENFANTS OBSERVES AUX CENTRES N'ONT PAS RECU DES CONSEILS SUR LES SOINS A DOMICILE EN CAS DE DIARRHEE, A SAVOIR: LA QUANTITE DE SRO A ADMINISTRER ET L'IMPORTANCE DE L'ALIMENTATION N'ONT ETE EXPLIQUEES QU'A MOINS DE 10% DES MERES, ET L'IMPORTANCE DE CONTINUER L'ALLAITEMENT N'A ETE EXPLIQUEE QU'A 16% DES MERES DES ENFANTS OBSERVES. MOINS D'UN TIERS DES MERES DES ENFANTS OBSERVES ONT ETE CONSEILLEES SUR L'IMPORTANCE D'AUGMENTER LES LIQUIDES PENDANT LA DIARRHEE ET DE RAMENER L'ENFANT AU CENTRE SI SON ETAT S'AGGRAVE.

4. UTILISATION DES RESULTATS

LES RESULTATS REVELENT L'IMPORTANCE DE LA FORMATION ET LA SUPERVISION CONTINUE DU PERSONNEL SANITIARE SUR LE TERRAIN ET DE LA MISE EN PLACE D'EQUIPEMENTS ESSENTIELS A L'EXECUTION DU PROGRAMME DE LUTTE CONTRE LES MALADIES DIARRHEIQUES DANS LES FORMATIONS SANITAIRES. L'EVALUATION A DEJA MIS EN EXERGUE CERTAINES PRIORITIES DE FORMATION QUI NOUS ONT OBLIGE A REVOIR NOTRE EBAUCHE DU GUIDE ET LE PROGRAMME DE FORMATION.
LES RESULTATS ONT AUSSI ETE INTEGRES DANS LA COMOPOSANTE "INTERET" DE CHAQUE PLAN DE COURS DU PROGRAMME DE FORMATION.

L'EVALUATION A AUSSI SOULEVE CERTAINES PRIORITES DE SUPERVISION QUI EXIGENT QUE NOUS REVOYONS LE SYSTEME ACTUEL. LA FICHE D'OBSERVATION UTILISEE LORS DE L'ENQUETE REPRESENTE UN GRAND PAS VERS UNE FICHE DE SUPERVISION DEFINITIVE ET L'APPROCHE ADOPTEE POUR CETTE EVALUATION REPRESENTE UN AUTRE GRAND PAS VERS L'INTEGRATION DES NOUVEAUX ELEMENTS DANS LE SYSTEME ACTUEL DE SUPERVISION.

LES RESULTATS ONT SOULIGNE L'IMPORTANCE DES FOURNITURES. AUSSI DEVONS-NOUS REVOIR LE SYSTEME ACTUEL D'APPROVISIONNEMENTS EN SACHETS SRO ET EN MATERIEL DE BASE POUR LES COINS ET UNITES DE REHYDRATATION PAR VOIE ORALE.

LES RESULTATS DE CES ENQUETES ONT ETE UTILISES POUR MOTIVER LES SUPERVISEURS DES REGIONS SANITAIRES ET LES AGENTS SUR LE TERRAIN. UNE RETROINFORMATION A ETE FAITE AUX EQUIPES REGIONALES A TRAVERS DES PRESENTATIONS SUR PLACE LORS DES SEMINAIRES DE FORMATION, DES RAPPORTS ECRITS ET DES ARTICLES DANS LE BULLETIN TRIMESTRIEL DE LA DIRECTION "DMPGE ECHO."
MESDAMES ET MESSIEURS

JE VOUS REMERCIE POUR L'INTERET QUE VOUS AVEZ BIEN VOULU PORTE A CET EXPOSE.

DEVELOPPEMENT D'UNE POLITIQUE D'AUTOFINANCEMENT DES SOINS DE SANTE

DR. JEAN BAPTISTE ROUNGOU

L'UN DES HERITAGES DE LA COLONISATION DANS LES PAYS FRANCOPHONES EST LE SYSTEME DE SANTE BASE SUR L'ASSISTANCE PUBLIQUE. L'ETAT PREND EN CHARGE TOUS LES FRAIS DE SANTE DE TOUTE LA POPULATION.

EN CETTE PERIODE DE CRISE ECONOMIQUE MONDIALE, LA PRISE EN CHARGE DES SOINS DE SANTE PAR L'ETAT SEUL CONSTITUE UN LOURD FARDEAU QUAND ON SAIT A QUEL POINT LES ECONOMIES DES PAYS EN VOIE DE DEVELOPPEMENT ONT ETE DUREMENT TOUCHEES.

LA PARTICIPATION DE LA POPULATION AU FINANCEMENT DES FRAIS DE SANTE CONSTITUE UNE POSSIBILITE PERMETTANT D'ALLEGER LE FARDEAU QUI PESE SUR LES GOUVERNEMENTS ET D'AMELIORER LA QUALITE DES PRESTATIONS.

MAIS CECI NE VA PAS SANS MAL CAR, L'ON SE TROUVE RAPIDEMMENT DEVANT UNE CONTRAINTE MAJEUR, CELLE DE LA FAIBLESSE DES REVENUS DE LA POPULATION: EN REPUBLIQUE CENTRAFRICAINE LE PNB PAR HABITANT EST ESTIME A $260/AN, SOIT 72800 FCFA SOIT ENVIRON 6000 FCFA/MOIS.

PAR AILLEURS, EN 1974, IL AVAIT ETE INSTITUE UN SYSTEM DE PARTICIPATION SOUS FORME DE PAIEMENT OBLIGATOIRE A L'AVANCE D'UN MONTANT DE 500 F/AN POUR LES ADULTES ET 200 FCFA PAR LES ELEVES, LES ETUDIANTS ET LES ENFANTS. CE SYSTEME QUI AVAIT CONNU UN ECHEC SUITE A UNE MAUVAISE UTILISATION DES FONDS COLLECTES, CEUX-CI ETANT REVERSES AU TRESOR PUBLIC, EST RESTE UN MAUVAIS SOUVENIR POUR LA POPULATION EN CONSTITUAIT AUSSI UNE CONTRAINTE.

MAIS LA PRTICIPATION DE LA POPULATION DEVENAIT DE PLUS EN PLUS INCONTOURNABLE. AUSSI, LE GOUVERNEMENT A-T-IL DECIDE D'ABORDER LA QUESTION MAIS DE FACON PRUDENTE ET PROGRESSIVE ETAPE PAR ETAPE.

LA PREMIERE ETAPE CONSISTA EN DEUX ETUDES QUI VISAIENT A OBTENIR DES INFORMATIONS SUR L'OPINION DES UTILISATEURS DES SERVICES ET L'AVIS DES DIFFERENTES COUCHES DIRIGEANTES DU PAYS. LA REALITE DU TERRAIN A AUSSI INVESTIGUEE AU COURS DE CES DEUX PREMIERES ETUDES. LES DEUX ETUDES ONT ABOUTI, PARTICULIEREMENT CELLE MENEE EN 1987, AUX CONCLUSIONS SUIVANTES:

1. ON A CONSTATE QUE PRATIQUEMMENT TOUTES LES CATEGORIES SOCIALES DE LA POPULATION CENTRAFRICAINE PAIENT DEJA LES SOINS DANS LES ETABLISSEMENTS PRIVES ET SE DECLARENT SATISFAITES DES PRESTATIONS EN CE QUI CONCERNE LA DISPONIBILITE DES RESSOURCES ET LA QUALITE DES SOINS.

2. LA PLUPART DES PERSONNES INTERROGEES SE DECLARENT PRETES A PARTICIPER A LA PRISE EN CHARGE DES SOINS DANS LES ETABLISSEMENTS PUBLICS A CONDITION QUE L'ON AMELIORE LA QUANTITE ET LA QUALITE DES SERVICES.

3. LES AUTORITES DU MINISTERE DE LA SANTE PUBLIQUE ET DES AFFAIRES SOCIALES PENSENT QUE LA PARTICIPATION DE LA POPULATION A LA PRISE EN CHARGE DES FRAIS DE SA SANTE EST INEVITABLE.

4. LES DECIDEURS POLITIQUES PENSENT QUE LA PARTICIPATION DE LA POPULATION A LA PRISE EN CHARGE DES FRAIS DE SANTE EST POSSIBLE, MAIS ILS N'ONT AUCUNE IDEE PRECISE DE LA FACON DONT CELA POURRAIT ETRE MIS EN OEUVRE.

L'UNE DES RECOMMANDANTIONS FORMULEES PAR LES AUTEURS DES ETUDES EST L'ORGANISATION D'UNE TABLE RONDE A L'INTENTION DES HAUTS RESPONSABLES POUR MIEUX LES INFORMER ET LES SENSIBILISER AU PROBLEME DE L'AUTOFINANCEMENT DES SOINS DE SANTE. FORT DES RESULTATS DE CETTE ETUDE, LE GOUVERNEMENT EST PASSE A L'ETAPE SUIVANTE: CELLE DE L'ETABLISSEMENT D'UN CADRE JURIDIQUE. C'EST AUSSI QU'UN PROJET DE LOI A ETE SOUMIS A L'ASSEMBLEE NATIONALE QUI L'A VOTEE PUIS ELLA A ETE PROMULGUEE PAR LE CHEF DE L'ETAT. IL S'AGIT DE LA LOI 89/003 DU 23 MARS 1989 FIXANT LES PRINCIPES GENERAUX RELATIFS A LA SANTE PUBLIQUE EN REPUBLIQUE CENTRAFRICAINE.

CETTE LOI STIPPULE EN ARTICLE 3 JE CITE: LES DROITS VISES AUX ARTICLES 1 ET 2 CI-DESSUS SONT ASSUJETIS A LA PARTICIPATION FINANCIERE DU CITOYEN, POUR LA DIFFERENTES PRESTATIONS DE SANTE QUI LUI SONT PROPOSES PAR L'ENSEMBLE DES FORMATIONS SANITAIRES PUBLIQUES. FIN DE CITATIONS.

L'ARTICLE 5 DE LA MEME LOI PRECISE QU'AFIN DE GARANTIR LE FONCTIONNEMENT REGULIER DES ETABLISSEMENTS DU SECTEUR PUBLIC, LEUR GESTION SERA ASSUREE SOIT DANS LE CADRE NORMAL DU REGIME FINANCIER DU SECTEUR PUBLIC SOIT EN AUTONOMIE PARTIELLE DE GESTION.

LA TROISIEME ETAPE DE LA DEMARCHE FUT CELLE D'ORGANISATION D'UN ATELIER A L'INTENTION DE TOUS LES REPRESENTANTS DE LA SOCIETE CENTRAFRICAINES POUR LES INFORMER SUR LES TENANTS ET LES ABOUTISSANTS DE LA LOI ET RECHERCHER ENSEMBLE LES MEILLEURS FORMULES DEVANT PERMETTRE LA MISE EN APPLICATION DES DISPOSITIONS DE LA LOI. CET ATELIER A ETE ORGANISE EN AVRIL 1989 AVEC LE CONCOURS DE L'USAID ET DE REACH ET JE VOUDRAIS SALUER ICI LE DOCTEUR MARTY MAKINEN QUI A ETE LE PRINCIPAL ANIMATEUR DE CET ATELIER DONT VOICI LES PRINCIPALES CONCLUSIONS.

CONCLUSIONS

QUATRIEME ETAPE: CE FUT LES DISPOSITIONS PRATIQUES POUR LE DEMARRAGE DE L'APPLICATION DE LA LOI:

A. UNE CELLULE D'ECONOMIE DE LA SANTE A ETE CREE AU SEIN DE LA DIRECTION DES ETUDES DE LA PLANIFICATION ET DE STATISTIQUES.

5.- UNE COMMISSION D'ELABORATION DES TEXTES REGLEMENTAIRES A ETE CONSTITUEE ET EST A PIED D'OEUVRE DEPUIS 6 MOIS.

CONCLUSION:

LE DEVELOPPEMENT D'UNE POLITIQUE DE FINANCEMENT DE LA SANTE AVEC LA PARTICIPATION DE LA POPULATION EST UN PROCESSUS LONG QUI NECESSITE PLUSIEURS ANALYSES ET DE LA CONCERTATION.

"REVOLVING DRUG FUNDS AND FEE FOR SERVICE IN LIBERIA"

Mr. Peter N. Wonokay
Director
National Drug Service

ABSTRACT

In response to increased economic constraints and a declining proportion of the gross national product allotted for health programs, Liberia in 1986 adopted a two tier health finance system which includes Fee-For-Service (FFS) and Revolving Drug Funds (RDF). The FFS system operates nationwide and RDF systems have been established in ten of the thirteen counties. Liberia's experience with FFS has shown the following elements to be essential: 1) simple and equitable fee structure, 2) simple financial accounting system for monitoring FFS, 3) regular supervision of health workers. The critical elements for RDF operation include: 1) community participation in raising seed stock and managing RDF, 2) sound pricing policy that is adhered to, 3) simple accounting and inventory control system, and 4) supervision of revenues and drug prescription practices. Major emphasis is now being placed on integration of the existing health finance system with the goals of the Bamako Initiative. While experience to date has proven that Liberians are willing to pay for drugs and health services, the sustainability of these health finance schemes depends on the availability of foreign exchange to provide the necessary high quality and low cost essential drugs.

"REVOLVING DRUG FUNDS AND FEE FOR SERVICE IN LIBERIA"

During the past several years, many African countries that previously provided free health services and drugs to their populations have been forced to deal with the reality that these free services cannot continue. Increased economic constraints and a declining proportion of the gross national product allotted for health programs have necessitated this change. A variety of approaches to health care financing, including social insurance, per capita health taxes, and prepayment schemes have been experimented with in different countries. Liberia has opted to use a two tier payment system which includes Fee-For-Service (that is, a fee for each health facility consultation) with a separate payment for drugs.

SLIDE 1 (OBJECTIVES)

The objectives of this presentation are: 1) to describe the Fee-For-Service structure in Liberia and issues related to its use 2) to provide an overview of Revolving Drug Funds, and 3) to discuss future plans for health care financing in Liberia.

SLIDE 2 (FEE-FOR-SERVICE)

The Fee-For-Service structure in effect in Liberia from 1975 through 1986 was one in which very low fees were charged. During that period, a number of categories existed for persons who were exempt from paying fees: soldiers, police and their dependents, all indigent persons, school children, Ministry of Health employees and their dependents, etc. The result of these two factors (that is, very low fees and a large number of exemptions) was that practically no fees were realized. Furthermore, it was mandatory that all fees collected were remitted to the Central Treasury.

In 1986, a national Fee-For-Service policy was developed which outlined a new relatively simple and equitable fee structure under which all recipients of curative services pay, with very few exeptions. Although the Ministry of Health intended for this fee structure to be uniform throughout the country, enforcement has been difficult. At present, fees charged vary from county to county. It has also been our experience that people are more willing to pay for drugs than for consultation. Thus, when drugs are known to be available, collecting fees for service is less of a problem.

Financial management and accounting systems for monitoring fee for service are essential. In Liberia, there is at present no standardized financial management system for nationwide use. Rather, individual counties and projects have developed financial management systems, which range from relatively complex (with a large number of forms) in the two counties supported by the USAID funded Southeastern Region Primary Health Care Project (SERPHC) to a much simpler system used in Bong County.

Under the policy of decentralization, all funds generated through fee for service are retained at the county or community level. According to national policy, these funds are intended to cover all routine operating costs of the health facility, aside from salaries. Recently, concern has been raised by many County Health Officers that this may be an unrealistic expectation. The average FFS generated per patient per visit is approximately 18 to 20 cents. At this rate, an average clinic in Liberia can be expected to generate approximately 400 to 450 Liberian dollars per year. It may be relevant to note here that, while the official exchange rate with the U.S. dollar is one to one, the actual market value of the Liberian dollar is now approximately 35 cents. Research is needed to determine the total annual operating expenses of a typical health center or clinic to know what portion of total recurrent costs can realistically be covered by fee for service.

At the facility level, the health worker is the key person responsible for managing funds generated through the fee for service. In Liberia, the clinic level health worker is often cast in the dual role of fee collector and provider of health services. With the tough economic constraints imposed on Ministry of Health employees due to inadequate salaries and delays in receiving salaries, regular supervision of the fee for service account is essential to assure that funds collected are used for their intended purpose.

Exactly who supervises the health worker is another issue. In Bong County, supervision is carried out by a specially designated FFS/RDF Supervisor. In the SERPHC counties, there is a County Finance Officer. In the majority of counties, however, supervision is carried out by the same PA Supervisor who is also responsible for EPI, CDD, Malaria, HIS and other PHC activities. The effectiveness of supervision by an already overburdened supervisor is a problem.

SLIDE 3 (MAP)

In addition to the Fee-For-Service system which operates nationwide, Revolving Drug Fund schemes are operational in ten of the thirteen counties in Liberia, as indicated on the map. The purpose of these RDF systems is to assure the continuous availability of high quality drugs and medical supplies at the health facility level. The RDF systems operating in Liberia have enjoyed some successes and are found in villages, health centers, health posts and some county hospitals.

SLIDE 4 (REVOLVING DRUG FUNDS)

Based on Liberia's experience with Revolving Drug Funds, the following key elements are deemed essential:

Active community participation is essential in two areas. First, the community must participate in raising funds to provide the initial seed stock of drugs to capitalize the RDF. This instills a sense of community ownership. Second, the community should be directly involved in the management of the RDF. Community RDF Committees in the SERPHC counties, and Community Advisory Councils in other areas, have been established as a mechanism for monitoring RDF activities.

Since 1986, the Ministry of Health has stood firm on its policy of no money, no drugs. Although this type of policy has been recognized as important to ensure the long term viability of the RDF, there are many concerns. With continued economic deterioration, the number of poor people and indigents who cannot afford to pay for drugs is increasing. This has been recognized as a problem that needs to be addressed. Consideration is being given to conducting an operational research study to ascertain people's ability to pay and to explore alternatives to cash payment such as payment in-kind.

With the current lack of availability of hard currency in Liberia, maintaining stable drug prices through the National Drug Service (which is the major supplier of drugs for the public sector) has become increasingly difficult. At this time, counties purchase drugs from NDS with Liberian dollars. NDS, on the other hand, must obtain foreign exchange at varying rates. Thus, prices cannot be guaranteed to remain stable over time.

To ensure the sustainability of RDF systems at the county and clinic levels, simple accounting and inventory systems are necessary to monitor revenues, drug use and supply.

Monitoring drug inventories will also assist in assuring that appropriate treatment protocols are adhered to. As with fee for service, there is a potential conflict between the role of the health worker as drug salesman and the role of the health worker as drug prescriber. Currently, supervision is ongoing to monitor drug supplies and revenues. In the future, supervisors should also monitor drug prescribing practices of health workers.

SLIDE 5 (FUTURE PLANS)

Over the next several years, Liberia must build on the experience gathered to date in order to improve the financing and delivery of health services. A major initiative which we are now embarking upon is the integration of the existing health finance system with the goals of the Bamako Initiative. The major aim of the Bamako Initiative is to "strengthen maternal and child health services by developing a system of community financing, principally based on the supply and sale of essential drugs." It is felt that the attainment of this goal would require substantial decentralization of health decision making to the county and community levels. Decentralized management of Primary Health Care, user financing under community control, and a realistic national drug policy are essential components of both the Bamako Initiative and Liberia's new National Health Policy, Five Year Health Plan, and National Drug Policy.

A core group of representatives from the Ministry of Health, WHO, UNICEF, NDS, CHAL, SERPHC and other donors have met to consider the next steps in the implementation of the Bamako Initiative. It is hoped that bureaucratic formalities can be finalized as quickly as possible so that funding can be made available for the implementation of the Bamako Initiative in Liberia.

Several Liberian counties are currently positioned to implement the approaches in the Bamako Initiative through the County Health Services mechanism. The CHS is headed by a County Health Officer who is responsible for all PHC activities in the county. User fees are collected and retained for local use, efficient Revolving Drug Fund programs are functioning, and a National Drug Formulary which lists essential drugs for use at each level of the health system is in place.

Several unresolved issues which would enhance Liberia's capabilities in health financing and primary health care (such as quality control, local production, and drug import controls) will be addressed in the National Drug Policy.

In conclusion, experience with Revolving Drug Funds and Fee-For-Service has shown that Liberians are willing to pay for high quality drugs and health services. Local currency can and is being generated and a desire and expectation for services has developed at the community level. A key issue for the sustainability of these health finance systems in Liberia relates to the availability of foreign exchange to provide high quality and low cost essential drugs. Both major suppliers of drugs in Liberia, the National Drug Service and the Christian Health Association of Liberia, face this problem.

Thank you for your kind attention.

COST ANALYSIS OF SWAZILAND EPI AND CDD PROGRAMMES

PRESENTER: MR EPHRAIM HLOPHE, UNDER SECRETARY OF HEALTH,
MINISTRY OF HEALTH, SWAZILAND

GOOD MORNING, LADIES AND GENTLEMEN. HEALTH FINANCING IS AN IMPORTANT TOPIC TO OUR DELIBERATIONS AND IT IS APPROPRIATE THAT IT SHOULD BE A MAJOR TOPIC ON OUR LAST DAY OF THE CONSULTATIVE MEETING SINCE IT RELATES TO SUSTAINABILITY.

I WANT TO REPORT ON A COST ANALYSIS OF THE SWAZILAND EPI AND CDD PROGRAMMES WHICH WAS UNDERTAKEN IN 1989. THE RESULTS POINT TO SEVERAL IMPORTANT ISSUES RELATED TO THE COST OF OPERATING THESE TWO KEY PRIMARY HEALTH CARE PROGRAMMES. THIS PRESENTATION WILL PRIMARILY PRESENT DATA FROM THE EPI COST ANALYSIS ALTHOUGH THE DATA FROM THE CDD PROGRAMME ARE SIMILAR. I HOPE THAT THIS BRIEF PRESENTATION WILL STIMULATE OUR DISCUSSION ON THE CONTRIBUTIONS WHICH BOTH MINISTRIES OF HEALTH AND DONORS MAKE TO THE SUSTAINABILITY OF EPI AND CDD.

WHILE I WILL NOT DWELL ON THE METHODOLOGY IN THIS PRESENTATION, LET ME SAY A BRIEF WORD ABOUT HOW THE DATA WERE COLLECTED AND ANALYZED. INVESTIGATORS ADAPTED A SOFTWARE PACKAGE, KNOWN AS EPICOST, DEVELOPED BY W.H.O. FOR USE BY EPI PROGRAM MANAGERS. EPICOST IS MEANT TO ASSIST PROGRAMME MANAGERS IN STANDARDIZING

OPERATIONAL COST AND MANAGEMENT INDICATORS TO ALLOW FOR COMPARISON OF EPI PROGRAMS WORLDWIDE. ALTHOUGH EPICOST WAS DEVELOPED FOR ANALYSIS OF EPI PROGRAMMES, IT WAS USED IN SWAZILAND TO ANALYZE THE COST OF THE CDD PROGRAMME AS WELL.

THE EPI PROGRAMME IN SWAZILAND IS CHARACTERIZED BY SOME UNIQUE FACTORS. THE PROGRAMME HAS ACHIEVED THE HIGHEST COVERAGE RATES IN AFRICA. IN 1989, 80% OF THE TARGET POPULATION WAS FULLY IMMUNIZED. IN ADDITION, THE HEALTH CARE SYSTEM IS READILY ACCESSIBLE TO THE VAST MAJORITY OF THE POPULATION. OVER 80% OF THE POPULATION IS WITHIN 8 KMS. OF A HEALTH FACILITY. THE DISTRIBUTION SYSTEM FOR VACCINES AND MEDICAL SUPPLIES AND DRUGS IS WELL ESTABLISHED. ALL HEALTH FACILITIES ARE WELL STAFFED RELATIVE TO OTHER AFRICAN COUNTRIES. THE POPULATION OF SWAZILAND IS APPROXIMATELY 700,000 WITH 24,000 CHILDREN BETWEEN THE AGES OF 12 AND 23 MONTHS, THE TARGET POPULATION FOR MOST EPI SERVICES.

COST COMPONENTS OF THE EPI PROGRAMME, AS WELL AS THE CDD PROGRAMME, ARE COMPRISED OF BOTH FIXED AND VARIABLE COSTS. FIXED COSTS INCLUDE FACILITIES, VEHICLES, CAPITAL EQUIPMENT AND A CORE STAFF. FIXED COSTS DO NOT CHANGE REGARDLESS OF THE VOLUME OF SERVICES DELIVERED IN A HEALTH FACILITY. THUS THE SWAZILAND PROGRAMME, WITH ITS STRONG AND ACCESSIBLE FACILITY INFRASTRUCTURE, HAS HIGH FIXED COSTS RELATIVE TO ITS SMALL POPULATION. THE MAJOR

VARIABLE COST ITEMS FOR EPI ARE VACCINES AND IMMUNIZATION SUPPLIES. THESE COSTS, BY DEFINITION, CHANGE DEPENDENT UPON THE VOLUME OF SERVICES DELIVERED.

THE FIRST TRANSPARENCY SHOWS THE MAJOR COST COMPONENTS OF THE SWAZILAND EPI PROGRAMME. NOTICE THAT LABOUR IS 38% OF TOTAL COSTS, THAT CAPITAL COSTS ARE 19% AND THAT VACCINES AND SUPPLIES ARE 16% OF TOTAL COSTS. YOU WILL NOTICE THAT TRAINING COSTS ARE QUITE LOW. THIS IS BECAUSE OF THE DIFFICULTY OF GETTING ACTUAL COST FIGURES FROM DONORS REGARDING THEIR TRAINING ACTIVITIES. TRANSPORTATION CONSTITUTES 22% OF TOTAL COSTS AND REPRESENTS A GREATER PROPORTION THAN VACCINES. ALTHOUGH MOST EPI VEHICLES WERE INITIALLY PURCHASED BY DONORS, VIRTUALLY ALL RECURRENT TRANSPORTATION COSTS, E.G. PETROL AND MAINTENANCE, ARE PAID BY THE MOH AS ARE DEPRECIATION COSTS WHICH WILL ALLOW THE EVENTUAL REPLACEMENT OF VEHICLES.

THE NEXT TRANSPARENCY SHOWS A SIMILAR COST PROFILE FOR THE SWAZILAND CDD PROGRAMME. AS WITH EPI THE LARGEST COST COMPONENT IS FOR LABOUR, 42%. TOTAL CAPITAL COSTS ARE 23%, DRUG COSTS ARE 16% AND TRANSPORTATION COSTS ARE 13%.

ONE INDICATOR WHICH HAS BEEN USED TO COMPARE THE COST OF EPI PROGRAMMES IS THE COST PER DOSE ADMINISTERED AND THE COST PER FULLY IMMUNIZED CHILD. IN THE NEXT TRANSPARENCY,W E COMPARE THE COST PER DOSE IN SWAZILAND INN 1984 AND 1988 WITH THE COST PER DOSE IN OTHER AFRICAN COUNTRIES. IN 1984 THE COST PER DOSE WAS $2.24 WHILE IN 1988 IT WAS $3.58. THE FIGURES ARE SWAZILAND ARE HIGHER THAN THOSE REPORTED FOR OTHER COUNTRIES.

THE FOLLOWING TRANSPARENCY SHOWS THE COST PER FULLY IMMUNIZED CHILD IN 1984 AND 1988 COMPARED WITH SELECTED AFRICAN COUNTRIES. IN 1984 THE COST PER FULLY IMMUNIZED CHILD WAS $55.32 AND IN 1988 IT HAD DECLINED SLIGHTLY TO $54.89. THIS IS CONSIDERABLY HIGHER THAN THE OTHER COUNTRIES SHOWN.

WHY DOES SWAZILAND HAVE HIGHER COSTS PER DOSE AND HIGHER COSTS PER FULLY IMMUNIZED CHILD THAN OTHER COUNTRIES HAVE REPORTED? AS MENTIONED EARLIER, COVERAGE AND ACCESS RATES ARE QUITE HIGH. THIS SUCCESS COMES AT A COST TO THE GOVERNMENT OF SWAZILAND WHICH HAS

CONSCIOUSLY TRADED OFF THE BENEFITS OF INCREASED ACCESS WITH RELATIVELY HIGHER COSTS OF DEVELOPING AND MAINTAINING THE HEALTH INFRASTRUCTURE. THESE HIGH COSTS ARE SPREAD OVER A SMALL POPULATION OF CHILDREN IN THE TARGET GROUP. SINCE THE CLINICS ARE CLOSER TO THE POPULATION, THE POTENTIAL VOLUME OF SERVICES IS REDUCED.

IT IS TRUE THAT ECONOMIES OF SCALE PREVAIL AS CAN BE SEEN IN THE NEXT TRANSPARENCY. AS VOLUME INCREASES, THE COST PER DOSE ADMINISTERED DECREASES. WHILE THIS IS DESIRABLE FROM AN ECONOMIC PERSPECTIVE, THE FACT IS THAT IN SWAZILAND FEW CLINICS HAVE THE VOLUME OF SERVICES NECESSARY TO ACHIEVE THESE ECONOMIES OFF SCALE. AGAIN THIS REPRESENTS A TRADE OFF OF ACCESS WITH COST.

ANOTHER FACTOR WHICH HAS BEEN OFFERED TO EXPLAIN HIGHER COSTS IS THE CONTRIBUTION OF VACCINE WASTAGE RATES TO TOTAL COSTS. THE POLICY OF THE MOH IN SWAZILAND IS TO VACCINATE AT EVERY HEALTH CENTER CONTACT. THIS RESULTS IN THE VACCINE USAGE RATES WHICH ARE SHOWN ON THE NEXT TRANSPARENCY. FOR EXAMPLE, FOR EVERY DOSE OF MEASLES GIVEN, 3.7 DOSES ARE DISCARDED ON AVERAGE AT THE CLINIC LEVEL. WHILE THIS MAY SEEM HIGH, IT IS CONSONANT WITH THE MOH'S POLICY AND SHOULD NOT BE SEEN AS A NEGATIVE FACTOR. THE ACTUAL COST OF WASTAGE IS ONLY 3.5% OF THE TOTAL COST OF THE SWAZILAND EPI PROGRAMME. POLICY MAKERS SHOULD NOT REACT NEGATIVELY TO THE

REPORTED WASTAGE RATES IF THE RATES REFLECT ADHERENCE TO THE POLICY OF THE MOH.

ONE FACTOR IN THE CDD COST ANALYSIS WHICH MAY CAUSE CONCERN IS THE PERCENTAGE OF TOTAL COSTS REPRESENTED BY DRUGS. WHEN AN ANALYSIS OF DRUG USAGE WAS CARRIED OUT AT THE CLINIC LEVEL, IT WAS FOUND THAT DRUGS, OTHER THAN ORS, WERE ROUTINELY PRESCRIBED FOR CASES LISTED IN THE REGISTER AS SIMPLE DIARRHEA. THIS CAN BE VIEWED AS INAPPROPRIATE USE OF DRUGS WHICH RESULTS IN 15% OF THE TOTAL COSTS OF THE CDD PROGRAMME. THE PRACTICE OF PRESCRIBING MULTIPLE DRUGS IS AMENABLE TO INCREASED SUPERVISION AND TRAINING OF HEALTH WORKERS.

IN SUMMARY, AS SHOWN ON THE NEXT TRANSPARENCY, THE SUCCESSES OF THE SWAZILAND EPI AND CDD PROGRAMMES WHICH ARE REPRESENTED HIGH COVERAGE RATES AND HIGH ACCESS RATES, HAVE COME AT A COST. HIGH COVERAGE AND HIGH ACCESS HAVE RESULTED IN LOWER VOLUME AT THE CLINIC LEVEL AND THUS HAVE RESULTED IN HIGHER FIXED COSTS PER DOSE AND PER FULLY IMMUNIZED CHILD.

HOWEVER, THE WELL DEVELOPED INFRASTRUCTURE HAS CERTAIN BENEFITS WHICH ARE NOT AS OBVIOUS. AS NEW SERVICES ARE INTRODUCED, THE MARGINAL COST OF ADDING THESE SERVICES TO THE EXISTING SYSTEM SHOULD BE LOW. ALL THE BASIC INFRASTRUCTURE, REPRESENTING THE

INITIAL FIXED COSTS, ARE PRESENT.

MANAGERS AND POLICY MAKERS MUST BE AWARE OF THE TRADE OFFS BETWEEN ACCESS, COST AND COVERAGE TARGETS. THEY ARE NOT NECESSARILY COMPATIBLE. TOO OFTEN INCOMPATIBLE POLICY OPTIONS ARE INCLUDED IN PLANNING DOCUMENTS WITHOUT FULLY UNDERSTANDING THE IMPLICATIONS.

THE LAST TRANSPARENCY ADDRESSES THE ISSUES OF THE COST RESULTS FOR DONOR FUNDING. APPROXIMATELY 35% OF TOTAL EPI COSTS ARE DONOR FUNDED. THESE COSTS ARE PRIMARILY VACCINES, INITIAL VEHICLE ACQUISITION AND TRAINING. UNTIL RECENTLY THE MOH HAD LITTLE ACCURATE INFORMATION ABOUT THE MAGNITUDE AND KIND OF DONOR SUPPORT. IN ORDER FOR THE MOH TO PLAN AND BUDGET EFFECTIVELY COST DATA SUCH AS THOSE PRESENTED MUST BE AVAILABLE TO DECISION MAKERS PRIOR TO ENGAGING IN STRATEGIC PROGRAM MANAGEMENT AND FUNDING.

THANK YOU VERY MUCH.

THE ROLE OF CCCD OPERATIONAL RESEARCH IN

CHILD SURVIVAL ACTIVITIES IN NIGERIA

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Text of Paper for ACSI-CCCD Project Consultative Meeting,

Swaziland,

April 2-6, 1990

Introduction

The CCCD Research Review Committee was formed in August 1987 in the belief that applied research and the development of an operational research capacity are essential tools which play a significant role in promoting Primary Health Care (PHC) by reducing childhood morbidity and mortality. The Committee was appointed by the Honourable Minister of Health and consists of a total of ten members with representatives from the National and Zonal levels of the Federal Ministry of Health, the Federal Ministry of Science and Technology, two University Schools of Medicine and a member of the general public.

The Committee's mandate included:

(1) identifying and encouraging institutions and individual investigators to submit appropriate PHC-oriented research proposals,

(2) reviewing research proposals using international scientific and ethical standards, and

(3) providing technical support for approved studies.

Background

The latest estimate of the population of Nigeria is 120 million and, like many other developing countries, almost 50% are children below the age of 15 years. Available data on causes of morbidity and mortality are hospital-based (1-4) and may not reflect national data nor the situation at the community level. Hospitals are unevenly distributed in favour of urban areas and many hospitals are selective in the types and severity of conditions reported. The following Table lists the leading causes of childhood mortality reported from hospitals in Nigeria:

Table 1: Top Ten Causes of Childhood Mortality in Nigeria

1. Diarrhoeal illness
2. Malaria
3. Pneumonias
4. Measles
5. Tuberculosis
6. Tetanus including neonatal tetanus
7. Meningitis
8. Malnutrition
9. Whooping Cough
10. Prematurity

Most of these diseases and the deaths resulting from these diseases are widely recognized to be preventable through the application of appropriate interventions. Therefore, Nigerian CCCD Operational Research activities have been designed to identify scientifically-sound, culturally-acceptable and cost-effective methods for the implementation of proven interventions to address the leading causes of childhood morbidity and mortality.

Operational Research in Nigeria

Primary Health Care is generally regarded to represent the most appropriate strategy for achieving sustainable improvements in health status in developing countries. On the 17th of August, 1987, the President and Commander-in-Chief of the Armed Forces Ruling Council, Federal Republic of Nigeria, launched PHC as the cornerstone of the nation's health policy and the template on which to develop national health services. Operational research was acknowledged to be an important component of successful PHC and international agencies were requested to assist with activities to strengthen the national capacity for child survival development activities. Emphasis was to be given to identify ways in which health care providers and communities could work together to address their own problems by creating self-reliance in the implementation of PHC programmes.

The CCCD Research Review Committee plays an important role in the promotion of PHC in Nigeria. The Committee believes that operational research is a critical strategy to improve the delivery of basic health services and to test alternative approaches to PHC implementation. In view of this, the Committee advised that high priority in PHC operational research funding be given to the EPI target diseases, diarrhoeal diseases, malaria, acute respiratory infections and nutrition. Behavioural factors involved in parents' practices related to child health have also attracted the attention of the Committee. In addition, importance was placed on manpower development such as training in research methodology for the purposes of sustainability and replication. The dissemination and utilization of research results were also identified as essential for the eventual improvement of PHC services.

The Committee conceived operational research to include:

(1) Practical epidemiologic studies which would lead to the definition and analysis of significant health problems at the community level,

(2) Studies to test acceptable and affordable methods for the application of tested child survival interventions,

(3) Applied studies addressing deficits in knowledge, cultural beliefs and behavioural practices associated with child health priorities.

Detailed Guidelines (5) suggesting appropriate research topics and outlining the format for the submission of proposals were developed and distributed widely throughout the country. Members of the Committee have assisted in the identification of potential investigators and technical assistance has been provided in the development of research proposals for consideration by the Committee. Special efforts have been made to provide relevant literature and background information. Proposals are generally planned for less than 18 months in duration and are budgeted at a maximum of the equivalent of $5,000 in local currency. Ethical approvals of submitted proposals are required at the University or State Ministry level prior to the ethical review of the national Committee. Studies involving invasive procedures, unlicensed drugs or vaccines, or issues of confidentiality are referred to the CDC Institutional Review Board for approval. The Committee decides to approve proposals as submitted, to approve proposals with modifications or to reject proposals.

Since its inception, the Committee has held 10 meetings at quarterly intervals at various sites throughout Nigeria. Figure 1 summarizes the experience from November 1987 through February 1990. Of 72 proposals reviewed, the Committee has approved 46% or a total of 33 studies. Figure 2 shows the distribution of approved studies by disease intervention. Table 2 lists the specific topics of the approved studies.

Table 2: Approved Operational Research Topics (1987-90)

(1) Efficacy of antimalarial drugs in 0-4 year olds
(2) Risk factors for cerebral malaria
(3) Incidence of poliomyelitis and neonatal tetanus
(4) Maternal measles antibodies in 0-9 month olds
(5) Home capability to mix salt and sugar solution
(6) Drug utilization for childhood out-patient visits
(7) Quality assurance of chloroquine
(8) Acute respiratory infections
(9) Otitis media in 0-4 year olds
(10) Morbidity and mortality in 0-4 year olds
(11) KAP studies on EPI and ORT

Committee members serve as preceptors for approved protocols to monitor progress and provide any necessary technical or administrative assistance. Of the 33 approved studies, 12 have been completed with full reports submitted (Appendix 1), 5 other studies have been completed with final reports being prepared and 8 studies are currently in progress. The remainder of the approved proposals are being revised for funding according to Committee recommendations.

Training and Dissemination of Results

In support of the objective to assist with the development of PHC-oriented investigators, the Committee sponsored a two-week research methods training course for 21 health care professionals in late 1988. Operational research proposals were developed during the training course and participants were encouraged to submit their proposals for consideration by the Research Review Committee. More than one-third of the participants have submitted proposals and five studies developed in the training course have been approved for funding.

Technical assistance has been provided in the preparation of publications of research results and a regional seminar was sponsored in late 1989 to disseminate research results to State Ministry of Health officials. A number of papers presenting the results of operational research studies have been given at national professional meetings.

Future Plans

Experience during the past two and one-half years has identified a number of areas for further attention. First of all, the need to broaden the topics for operational research has been identified by the Committee; one area of interest is improving child nutrition within PHC. Analogous operational research activities are currently being planned for population and demographic types of studies by the USAID-funded Family Health Services Project. Secondly, the need to intensify the monitoring of approved studies has been accepted by the Committee and consideration is being given to the requirement for periodic written progress reports for studies of more than one year in duration. Thirdly, efforts are being made to identify young, relatively inexperienced investigators for involvement with CCCD operational research studies. Additional training courses may be helpful in the development of an expanded PHC-oriented research capacity. Fourthly, additional support is anticipated for assisting investigators with the dissemination of results to promote the implementation of PHC based on research findings.

Perhaps most importantly, plans are currently underway to integrate the CCCD Research Review Committee into the Department of Planning, Research and Statistics, Federal Ministry of Health. The successful institutionalization of a mechanism for the coordination of PHC-oriented research activities has tremendous potential for the continued improvement of health sector programmes throughout the country.

Conclusion

The CCCD Research Review Committee, sponsored by USAID, has created an environment within Nigeria for the recognition of the contributions of operational research towards PHC implementation. The development of detailed Guidelines has focused potential investigators on childhood health priorities and has standardized the format for the submission of proposals. A wide range of topics has been addressed by studies funded since late 1987. Through this operational research effort, university-based investigators are using their talents to address the PHC implementation issues facing state and local health care providers. Medical and nursing professionals are collaborating with social scientists and communications specialists to adapt PHC activities for community implementation. Members of the Research Review Committee have played key roles in establishing the importance of PHC operational research and serve as a national resource for the further expansion of PHC research activities in the future. The institutionalization of Committee activities into the Federal Ministry of Health will solidify these early accomplishments and provide the foundation for sustained progress in PHC research.

As Chairman of this Committee it has been a joy working with a group of men and women who are so dedicated in their efforts to strengthen PHC and to improve the welfare of Nigerian children through encouraging operational research.

Appendix 1: Completed Operational Research Studies with Final Reports Submitted

1.	C.O. Oyejide	-	Treads in Drug Utilization Pattern for Various Causes of Childhood Morbidity in a General Out-patient Department
2.	O. Ogunbode B.L. Mahlen	-	*In Vivo* and *In Vitro* Sensitivity of *Plasmodium falciparum* to Pyrimethamine in Pregnant Women in Ilorin
3.	O.A. Babaniyi	-	Incidence of Poliomyelitis and Neonatal Tetanus in Ilorin
4.	M.K. Jinadu	-	Evaluation of Home Capacity to Mix and Use SSS in a Rural Area of Oyo State
5.	U. Yusuf	-	Otitis Media in Children 0-5 Years of Age in Zaria
6.	J.E. Ogbuokiri	-	Quality Assurance of Chloroquine in Eastern Nigeria
7.	O. Ogbeide	-	KAP Study for ORT Promotion, Bendel State
8.	I.O. Adigun	-	Formative Research on the Knowledge, Attitudes, Practice and Media Habits About EPI of Those Who Have Responsibility for the Care of Children Under 5 Years, Oyo State
9.	O. Walker	-	Studies on Cerebral Malaria in Nigeria: Risk Factors and Evaluation of Different Treatment Regimens
10.	R. Akinfeleye	-	Community Knowledge, Attitude and Practices of ORT in Lagos State
11.	M.O. Shoremi	-	Community-Based Research on Knowledge, Attitudes, Practices and Media Habits of the People of Ogun State About EPI
12.	J.K. Ikwueke	-	Determination of the Plasmodial Rates in Two Communities of Plateau State

References

1. Abdurrahman MB. Why our children die. A study of mortality pattern in an emergency paediatric unit in Zaria. Nig. Med. Pract. 1093: 5; 157.

2. Aikhionbare HA, Yakubu AM, Naida AM. Mortality pattern in the emergency paediatric unit of Ahmadu Bello University Teaching Hospital, Zaria. Central Afr. J. Med. 1989: 35; 393.

3. Adeyokunu AA et al. Childhood mortality amongst 22,255 consecutive admissions in UCH Ibadan. Nig. J. Paed. 1980: 7; 7.

4. Kaine WN, Okolie JB. A review of the causes of hospitalization as a guide to pattern of diseases among children in eastern Nigeria. Nig. Med. J. 1977, 7; 205.

5. Nigeria Federal Ministry of Health. Guidelines for CCCD operational research activities in Nigeria. Revised November 1989.

TITLE SLIDE

DEVELOPING A CONTINUING EDUCATION STRATEGY

Anu Adegoroye

INTRODUCTION

SLIDE 1

Studies of on health worker practices in treating African children under five have demonstrated repeatedly that we need to provide ongoing training for health personnel. This training is needed not only to maintain skills mastered in the past, but to ensure that new technologies and improvements in health care management are translated into effective treatment of children. As has been mentioned throughout this week of meetings, integrated systems of supervision and training are among the most important and least developed aspects of child survival programs.

SLIDE 2 (Map)

My purpose today is to describe the continuing education system

which has been developed by the Ministry of Health in Niger State, Nigeria over the past two years. I am speaking on behalf of my colleagues from the Ministry of Health, Dr. Nuhu, Commissioner for Health in Niger State, and Dr. Saba, the Director General, who are also present in the audience.

SLIDE 3

I will first discuss the structure and function of the continuing education system, and then briefly describe the needs assessments used for setting training priorities. I will close with a look to the future and a discussion of the lessons we have learned through this process.

THE CONTINUING EDUCATION SYSTEM IN NIGER STATE

The public health leadership in Niger State has long recognized that continuing education and increased supervision were necessary to upgrade the skills of their health personnel. In response to this need, and in collaboration with the CCCD project, a continuing education strategy was developed by the Niger State Ministry of Health.

NEXT PLEASE (4)

First, a Continuing Education Committee was established within

the Ministry of Health. Committee responsibilities include the coordination of all primary health care training, the provision of advice to organizations on training priorities, and the formulation of strategies to eliminate or minimize training and logistic problems in health service delivery. The Committee members are representative of the health service delivery system in Niger State.

A Continuing Education Unit (CEU) was also created. The Unit has a staff of three, and reports through the State Training Coordinator to the Continuing Education Committee. The Unit is physically located at one of the two Schools of Health Technology in Niger State, which provide pre-service training for health workers. This location further strengthens the link between basic training and the in-service training provided by the project. The Continuing Education Unit staff are responsible for the planning, organization, implementation and evaluation of training programmes for supervisors in the state's 10 Local Government Areas. The CEU staff also provide ongoing support and technical assistance to these supervisors as they implement further training activities in their own Local Government Areas (LGAs).

NEXT PLEASE (5)

The continuing education program represents close collaboration between the Ministry of Health, other Niger State Ministries, and several donor agencies.

In addition, the LGAs support training activities through the provision of travel allowances, some equipment and supplies. One LGA has given vehicle repair loans to health workers to enable them to use their personal vehicles for training and supervision activities.

TRAINING DESIGN AND CONTENT

Now I will describe the training design and content.

As a first step, facility needs assessments were carried out within the state to identify specific training needs in the treatment of children under age five. In both 1988 and 1989, representatives of the Ministry of Health visited a random sample of health facilities across the state. Within each facility, health workers were observed while they provided services to children, and mothers were interviewed as they left the center. In addition, interviews were conducted with the staff and the availability of equipment and supplies were assessed.

NEXT PLEASE (6)

You can see from this example that specific training needs were identified (here in the area of diarrheal disease). These and other deficiencies in health worker practices for children under five are a direct threat to their health, and can be improved through ongoing training and supervision. The survey also

clearly identified logistical constraints to improvements in health worker practice, and formed the basis for the development of a full action plan by the Ministry.

The materials which are currently being taught to participants comprise of a set of nine modules which were developed by the WHO adapted for use in Nigeria by the Federal Ministry of Health. The results of the needs assessments have been used to identify training priorities within this curriculum, and will serve as the baseline against which to measure program impact.

How does the training actually take place?

Twice a year, a one week workshop is organized by the Continuing Education Unit. The goal is to prepare a pool of facilitators within Niger State to implement training activities.

NEXT PLEASE (5)

As a part of the project, Facilitator's Guides have been prepared for each WHO module. Each guide provides simple instructions for adding skill training and interactive methods to the traditional WHO approach.

After the facilitators are trained, the Primary Health Care coordinator, zonal and LGA EPI managers and senior representatives from health facilities in each LGA are invited

to participate in the training of trainers' workshop.

The initial training workshop lasts two weeks and uses a variety of participatory training methods. Four of the nine modules in the curriculum are taught during this workshop. Each of the remaining five modules is taught during monthly follow-up workshops for all participants. These workshops are carried out during the regular visits of the supervisors to the Continuing Education Unit and last one or two days, depending upon the subject to be taught. Once the core modules have been taught the number of refresher meetings for supervisors will be reduced to three or four a year.

During both the initial and follow-up workshops the participants develop teaching plans for their training activities and monitoring checklists to enable them carry out effective supervision and evaluation of the impact of training on health worker performance.

The participants return to their LGAs and use their newly acquired knowledge and skills to train and supervise health workers at the facility level. Their monthly schedule of training and supervisory activities are monitored by the CEU staff.

They submit a monthly report of their activities, accomplishments and setbacks to the CEU staff. This information is used by the CEU staff as the basis for future training and supervision.

EVALUATION ACTIVITIES

We are confident that the Niger State Continuing Education Strategy will result in improved health worker performance, and will have an impact on child survival. We are also convinced that ongoing program evaluation is needed to assess our progress and improve program performance. The facility needs assessments I described a moment ago are one element in this evaluation design, and will be repeated at periodic intervals. In addition we have worked with the Continuing Education Unit to develop methods for assessing the skills gained by participants as a result of the training workshops. If the participants cannot perform the skills at the close of the workshop, we cannot expect them to transfer those skills to the workers in their facilities.

Each training workshop participant was asked to perform each of the skills identified in the program objectives, both at the start of the training and again at the end of the two week period. These results are summarized here for each of the four modules.

NEXT PLEASE (8)

As you can see, while there were dramatic improvements in participants' performance as a result of the training, skill levels remained below acceptable levels. The results indicate that participants can and do learn skills during workshops, but

also suggest that further training and supervision are needed. Remember, these are the results of a program which covered four modules in two weeks, rather than the nine or ten modules often covered within the same period in courses in other countries! Just presenting material is not enough, we must evaluate the skill levels of our training participants to ensure that the objectives are achieved.

The results of the practical skills-based examination can be used in three ways. These are illustrated in this graph, which shows the results for the specific skills tested in the area of assessing community needs.

SLIDE, PLEASE

First, the pre-test results can be used to adapt the course curriculum based on the demonstrated needs of participants. For example, in this content area more time should have been spent in teaching the first four content areas, while very little time should have been devoted to teaching participants how to communicate with village elders.

Second, the results can be used to provide information to supervisors about the content areas of the training, so they can monitor the application of new skills.

Third, the results can be used to modify and improve the training methods used. In this case, participants did not master the

skill of calculating access to health services. The methods used to teach this skill will be reviewed and revised prior to the next course.

ACHIEVEMENTS

I have been impressed with the achievements of the Niger State Ministry of Health in the area of continuing education. The nucleus of a continuing education system has been established. A programme of continuing education for mid-level LGA managers and supervisors has been developed. There is a pool of trained course facilitators at the state level, and 23 supervisors and managers at the LGA level have been trained for three of the ten LGAs. Arrangements have been completed to train 28 other LGA trainers in four of the remaining seven LGAs in May 1990. A system has been established for regular training of health workers and supervision of their performance at facility level. There is an established protocol for monitoring the training and supervisory activities of LGA trainers by the CEU staff.

CHALLENGES

This development process has not been without challenges. Perhaps the single greatest barrier has been the difficulty of ensuring coordination with other donor agencies in the training of health workers. Even as recently as last month there were training activities sponsored by other organizations which had

not been discussed with the Continuing Education Committee. Other challenges include the pervasive difficulties of transportation and logistics. We are attempting to address this issue through the development of special long-distance training methods which can be used by supervisors and health workers when conditions prevent face-to-face interaction.

CONCLUSIONS AND LESSONS LEARNED

As we look to the future, the Continuing Education Committee will be searching for ways to ensure that continuing education and supervision continue to improve health worker practices in Niger State. The training materials and facilitiators' guides will be modified based on the experience during this first year and our evaluation results. Behavioral checklists and other supervisory aides will continue to be developed and field tested. We will continue to search for more effective forms of collaboration, following the leadership of the Ministry.

Among the lessons we have learned through this process are:

First, that an effective and efficient system of regular, purposeful supervision appears to be critical to the success of a continuing education programme. Training workshops which lack follow-up supervision components are unlikely to result in behavioral change on the part of health workers.

Second, that the incorporation of skills assessment into the

training curriculum results in more focused training, generates excitement on the part of participants as they recognize what they have learned, and provides basic information needed for course modification post-training supervision.

ALTERNATIVES FOR COST RECOVERY

DR. K. DRAME

CONAKRY, GUINEA

RESUME

EN GUINEE, NOMBREUX FACTEURS ONT AMENE A L'ADOPTION D'UNE STRATEGIE DE RECOUVREMENT DES COUTS A PARTIR DES MEDICAMENTS ESSENTIELS. LA NECESSITE D'UNE MEILLEURE INTEGRATION DES SERVICES DE SANTE PERIPHERIQUES. lA POLITIQUE DE DECENTRALIZATION BASEE SUR LES INITIATIVES LOCALES; L'INSUFFISANCE DES RESSOURCES BUDGETAIRES POUR LA SANTE (SEULEMENT 2% DU BUDGET NATIONAL). C'EST AINSI QU'UN PROGRAMME
DE SOINS DE SANTE PRIMAIRES INCLUANT LA POLITIQUE DE MEDICAMENTS ESSENTIELS A ETE PROPOSE EN AVRIL 1986 AVEC LES OBJECTIFS SUIVANTS.
-ASSURER A LA MERE ET A L'ENFANT LES SERVICES CURATIFS ET PREVENTIFS, PRE ET POST NATAUX, EN PARTICULIER LES VACCINATIONS,
-ASSURER LA MISE EN PLACE D'UN SYSTEME DE RECOURVREMENT DES COUTS DE FONCTIONNEMENT DES CENTRES DE SANTE GRACE A LA FOURNITURE DE MEDICAMENTS ESSENTIELS DONT LES RECETTES SERONT GEREES PAR LES COMMUNAUTES.
-METTRE EN PLACE UN SYSTEME D'INFORMATION SANITAIRE ET DE SURVEILLANCE EPIDEMIOLOGIQUE. CE PROGRAMME DOIT COUVRIR DES 346 SOUS-PREFECTURES DU PAYS D'ICI 1995.

A LA FIN DE 1988, 98 CENTRES DE SANTE ETAIENT DEJA OPERATIONNELS DONT UN TIERS AVEC LE SOUTIEN D'UN INTERVENANT EXTERIEUR (ONG, ORGANISME DE COOPERATION BILATERALE ET MULTILATERALE).

CHOIX DU SYSTEME DE RECOUVREMENT DES COUTS

IL EXISTE PLUSIEURS ALTERNATIVES ISSUES DE 3 MODELES TRADITIONNELLEMENT CONNUS:
-LE PAIEMENT FORFAITAIRE DE LA CONSULTATION
-LE PAIEMENT DES MEDICAMENTS
-LE PAIEMENT D'UNE COTISATION PERIODIQUE.
CHACUNE DE CES ALTERNATIVES A SES AVANTAGES ET SES INCONVENIENTS.

EN GUINEE NOUS AVONS CHOISI UN SYSTEME QUI COMBINE LES DEUX PREMIERES ALTERNATIVES = UN PRIX PAR TRAITEMENT COMPLET FIXE EN FONCTION DU COUT REEL DES MEDICAMENTS AVEC SUBVENTION DE CERTAINS TRAITEMENTS CHERS.

LES AVANTAGES DE CE CHOIX SONT:
-DU POINT DE VUE GESTION, LE LIEN ENTRE MEDICAMENTS CONSOMMES ET RECETTES PERMET UN MEILLEUR CONTROLE.
-DU POINT DE VUE ECONOMIQUE, IL EVITE LES RISQUES DE FAILLITE CAR LES

DEPENSES EN MEDICAMENTSQUI SONT LES COUTS VARIABLES LES PLUS IMPORTANTS SONT LIEES AUX RECETTES. LES RECETTES SONT D'AUTANT PLUS IMPORTANTES QUE L'UTILISATION EST GRANDE.
-DU POINT DE VUE MEDICAL, IL STIMULE LES PATIENTS A SUIVRE UN TRAITEMENT COMPLET.
-AU POINT DE VUE ETHIQUE, IL Y A LE CONSENTEMENT DES MALADES A PAYER ET LA POSSIBILITE DE SUBENTION. L'INCONVENIENT MAJEUR EST CEPENDANT LE RISQUE DE NE PAS RECOUVRIR LES COUTS DE FONCTIONNNEMENT FIXES EN CAS DE FAIBLE UTILISATION.

ANALYSE DU TAUX DE RECOUVREMENT DES CENTRES DE SANTE

NOTONS QUE LES CENTRES DE SANTE SONT GERES PAR LES COMMUNAUTES A TRAVERS LES COMITES DE GESTION COMPOSES DE 4 MEMBRES DONT 3 ELUS; LE QUARTRIEME ETANT LE CHEF DU CENTRE DE SANTE.
L'ANALYSE SUR LA VIABILITE FINANCIERE ET LA CAPACITE DE RECOUVREMENT DES COUTS A PORTE SUR 73 CENTRES DE SANTE AYANT FAIT L'OBJET D'EXERCISES DE MONITORAGE ET DE BUDGETISATION EN NOVEMBER 1989.

A. RECOUVREMENT DES COUTS VARIABLES
1 JUIN AU 30 NOVEMBRE 1989

COUTS VARIABLES	HAUTE GUINEE	GUINEE FRONTIERES	MOYENNE GUINEE
MEDICAMENTS ESSENTIELS	40.8% (26-57%)	44.3% (33-54%)	36.4% (27-58%)
OUTILS DE GESTION ET DE SERVICE	12.4% (6-20%)	12.9% (7-19%)	10.9% (8-16%)

B. RECOUVREMENT DES COUTS FIXES

LES COUTS FIXES SE COMPOSENT DE:
-CARBURANT POUR LA CHAINE DE FROID, LES STERILISATEURS ET LES STRATEGIES AVANCEES,
-L'ENTRETIEN DU REFRIGERATEUR ET DE LA MOTO,
-LES FOURNITURES DE BUREAU ET DIVERS,
-LE PETIT MATERIEL D'EMBALLAGE,
-L'ENTRETIEN DU BATIMENT.

*LES COUTS D'AMORTISSEMENT NON INCLUS MAIS PRIS A PART A CAUSE DE LEUR POIDS IMPORTANT POUR LES CENTRES DE SANTE.

IL APPARAIT DANS CETTE ETUDE UNE DUALITE ENTRE CENTRES URBAINS ET CENTRES RURAUX:
-21 CENTRES URBAINS SUR LES 26 RECOUVRENT LA TOTALITE DES COUTS FIXES ET REALISENT POUR LA PLUPART UNE RESERVE SUPPLEMENTAIRE.
-POUR LES CENTRES RURAUX, SEULS 19 SUR LES 47 PEUVENT SUPPORTER LEURS

COUTS FIXES DE FONCTIONNEMENT.

IL EST A SIGNALER QUE LES PROBLEMES POSES PARE CES VARIATIONS SUR LE RECOUVREMENT DES FRAIS DE FONCTIONNEMENT NE CONCERNENT PAS LE CARBURANT POUR LES ACTIVITES DE VACCINATIONS QUI SONT CONSIDEREES COMME DES DEPENSES OBLIGATOIRES.

AUSSI LES PRIMES ALLOUEES AU PERSONNEL REPRESENTENT ENTRE 12 ET 17% DES BUDGETS DES CENTRES DE SANTE; CE QUI CONSTITUE UNE CHARGE TRES ELEVEE NOTAMENT POUR LES CENTRES DE SANTE RURAUX.

ANALYSE DE CERTAINS RATIO INFLUENCANT LE RECOUVREMENT DES COUTS

RATIO		HAUTE GUINEE	GUINEE FRONTIERE	MOYENNE GUINEE
CONTACT/HABITANT/ ANS		0.41 (0.09-1.56)	0.38 (0.08-1.19)	0.35 (0.08-0.99)
COEFFICIENT MULTIPLICATEUR	CU	1.85	1.64	2.02
DU MEDICAMENT	CR	1.97	1.74	2.12

DANS L'ENSEMBLE CE COEFFICIENT EST INFERIEUR AU COEFFICIENT THEORIQUE DE 2.5 POUR LEQUEL A ETE DEFINI LE MODELE DE TARIFICATION. CE NIVEAU PLUS BAS S'EXPLIQUE PAR LE FAIT QUE L'ON A PAS TENU COMPTE AU DEPART DE LA CHARGE QUE POURRAIENT REPRESENTER LES OUTILS DE GESTION ET AUSSI PAR LE FAIT QUE LES CENTRES DE SANTE PRESCRIVENT PLUS DE TRAITEMENTS "SUBVENTIONNES". LA MAUVAISE GESTION DES MEDICAMENTS (PERTES ET VOLS) NE SEMBLE PAS ETRE UNE RAISON ASSEZ SIGNIFICATIVES.

EN SOMME, LES RESULTATS DE CETTE ANALYSE FINANCIERE SOULIGNENT LA DIFFICULTE D'OBTENIR UN MODELE CLASSIQUE DE VIABILITE FINANCIERE DES CENTRES. AUSSI IL SEMBLE PREMATURE D'ANTICIPER SUR LAS CAPACITE FUTURE DE RECOUVREMENT DES CENTRES DE SANTE. MAIS APRES PLUS D'UN AN DE FONCTIONNEMENT, ON PEUT SUPPOSER QU'IL SERA TOUJOURS NECESSAIRE DE PREVOIR LA PRISE EN CHARGE EXTERIEURE DE CERTAINS COUTS. CETTE AIDE POURRA SE FAIRE A LES NIVEAUX D'INTERVENTIONS DIFFERENTS SELON LA CAPACITE DE FINANCEMENT DE CHAQUE CENTRE DE SANTE.

"IMPROVING VACCINATION FOLLOW-UP RATES IN LIBERIA: AN INTERVENTION TRIAL"

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ABSTRACT

Although coverage rates for the initial doses of DPT and Polio have improved significantly in Liberia since 1985, coverage rates for DPT2/Polio2 and DPT3/Polio3 remain disappointingly low. To address this problem, a two-phase operational research study was conducted in two counties. In Phase I, focus group discussions were held to assess the reasons mothers fail to bring their children for follow-up vaccinations. The reasons cited included fear of side effects, lack of knowledge about when to return, cost of the Road To Health Card and long waiting times. The strategy most highly recommended as a means of encouraging mothers to return was to involve influential community leaders (like village chiefs and traditional midwives) as a more integral part of vaccination activities. Phase II was therefore designed to field test the impact on vaccination follow-up rates of involving chiefs and midwives as "Extenders of the Vaccination Team." For the purposes of the study, four districts in each county were randomly assigned to one of four categories: 1) Chiefs only 2) Midwives only 3) Chiefs and Midwives and 4) Control. Ten chiefs and/or midwives from each district were invited to participate in a two-day Awareness Workshop designed to educate participants on the importance of vaccination, treatment of side effects, and strategies to improve vaccination follow-up rates. Strategies suggested by chiefs/midwives to improve vaccination follow-up included conducting meetings with community members to explain the importance of vaccination, imposing a penalty on defaulters, and using a village roster to record immunization status of children under five years. Three approaches were used to evaluate the impact of the intervention: 1) interviews with chiefs/midwives to assess knowledge retention, 2) interviews with mothers to assess knowledge transfer, and 3) coverage surveys to assess vaccination coverage for fully immunized children. Results showed that knowledge about vaccination, treatment of side effects and the importance of the RTH Card was greater among chiefs/midwives and mothers in the intervention districts vs the control districts. Coverage rates for fully immunized children were greater in the intervention districts (56% intervention vs 45% control). Coverage rates were highest in districts where chiefs participated (68%), perhaps reflecting the high degree of authority chiefs exercise in their respective communities. As a result of this study, the Ministry of Health has decided to extend this activity into other counties and to add additional information on other PHC messages.

Child Survival -- Challenges for the Next Decade

During the last decade, significant gains have been made in child survival. Still, eight of the 10 countries in the world with the highest infant mortality rates are in sub-Saharan Africa. Fertility rates are also high -- a doubling of the population is expected every 20-25 years, placing a further strain on limited resources and on already fragile environments. Malnutrition, after declining for almost three decades, is once again on the rise, perhaps spurred on by the global economic recession of the 1980s. National policy makers, faced with increasing demands from all sectors, have been unable to maintain their traditionally high investments in health infrastructure. To complete an already bleak landscape, epidemiologic conditions have also worsened. HIV infection and AIDS are bringing about accompanying increases in the incidence of tuberculosis and sexually transmitted diseases, and are at least partially responsible for a pattern of increasing incidence of more frequently fatal malaria. These factors will tend to make further progress more difficult to achieve.

Many of the gains to date have been made in the context of a small number of specific programs, all of which were relatively self-contained. Although these programs were all aimed at disease problems of obvious priority, the control programs were designed in ways which maximize their aggregate logistic and

managerial burdens. The Expanded Program on Immunization (EPI), the Control of Diarrheal Diseases program (CDD) and family planning programs all developed independent systems of training, health education, management information, and commodity distribution, even though most health systems are designed such that a small number of health workers in peripheral facilities are the target of most of the training and other support ~~and~~ implement all of the interventions. Most recently, AIDS control programs and accelerated immunization programs have further contributed to managerial duplication, resource allocation problems, and to the workload of the health worker. A bright spot on the horizon is the potential for newer interventions, such as ARI control, vitamin A supplementation, more effective and acceptable contraceptive technologies, and so on, to contribute to the health of African children and mothers. These new technological developments will only be helpful, however, if programs to bring them to the most peripheral levels of the health structure, including the community, can be more efficiently managed and more effectively implemented by health workers throughout the health care system.

CCCD is another project which was designed to address the priority diseases of childhood. It has been largely successful. The more timely vaccination of a larger proportion of the child population has been a major achievement. The development of diarrhea training units has resulted in significant reductions in

mortality and in rates of hospital admission, in addition to providing supervised sites where health care providers are trained in new techniques. In malaria control, the spread of chloroquine resistance across Africa prompted studies which clarified the epidemiology of the disease and highlighted its pervasive effect on childhood mortality.

During the 1990s, it will be necessary to build upon the successes of CCCD. CCCD was not intended to be a comprehensive program and insufficient attention has been paid to important contributors to mortality such as the lack of effective family planning services. No provision was made for addressing the problem of HIV infection, which may increase child mortality by as much as 45% during the coming decade in parts of Africa. Perhaps more importantly, although CCCD helped to improve treatment for episodes of acute illness, it was not designed to deal with the long-term consequences of the diseases it sought to treat, viz., the chronic and sometimes severe anemia which developed from repeated malaria infection, the malnutrition which results, in part, from repeated episodes of diarrhea, measles, and other illnesses, and the unacceptably high proportion of low birth weight children, a consequence of diverse, incompletely explored causes.

In spite of these gaps, CCCD has clearly demonstrated the feasibility and desirability of an integrated approach to child

survival issues in Africa. Because of the limited resources available to most African nations and because of the relatively restricted access of large portions of the population to the formal health care system, the key to success in the future will lie on the degree to which money, personnel, and technical knowledge can be efficiently delivered from central levels to the periphery and on the degree to which the community becomes more responsible for its health.

In order to more efficiently address the needs of the population, the many technological advances which can be made more available to it, disease-specific programs must better integrated. One way to do so would be to place the emphasis on the problems of the individual, not on the control of specific diseases. In the case of children, care should be available as often and conveniently as possible, and caretakers should be made aware of prevention strategies for diarrhea, for malaria, and for sexually transmissible diseases, including HIV infection. The ability to assess, diagnose, and treat life-threatening diseases early in their course should also exist in the community, as should the ability to recognize when there is a need for more advanced care.

At the clinic, a wide range of services should be available more frequently than current practice provides. Curative care offered for acute illness should be combined with greater attention to

the total health needs of the child and mother. Immunization services, counselling and commodities necessary for child spacing and the control of STDs should be routinely available, and health care personnel must be able to refer more severely ill children for appropriate care. The ability of the system to adapt itself to deal with the individual rather than with the diseases will bring about a more rapid and a more sustainable decline of what are still unacceptably high levels of mortality.

To move from a disease-specific to a child-oriented program which deals with many conditions simultaneously and seeks to combine, to the extent possible, the many intervention programs which exist, resources must be deployed in as efficient a manner as possible. Linkages between what are now essentially free-standing programs, such as EPI and CDD must be developed and exploited, so that the strong points of each program are incorporated into every program and so that the flow of knowledge, commodities, and resources is reinforced at every level of the system.

Areas of potential linkage can be readily identified. They include the following:

1. **technical strategies** -- some interventions contribute to the control of diseases for which they are not the primary target; for example, measles immunization is an essential feature of diarrheal disease control programs, the treatment of moderate

pneumonia with cotrimoxazole may eliminate malaria parasitemia, and the promotion of condom use may help increase birth intervals and reduce the spread of sexually transmissible diseases.

2. **program management** -- at the central level, programs such as diarrheal disease control and control of acute respiratory infection may be merged. Both rely primarily on curative strategies involving clinical training and both will require strong rational drug policies. Undoing the division which has been created between family planning/child spacing programs and other child survival programs which share a common objective should be explored.

3. **commodity management** -- oral rehydration salts, antibiotics, family planning commodities, and so forth could all be distributed from central level to the community along with vaccines. Procurement and inventory control procedures could be similarly combined for the sake of improved efficiency.

4. **physical facilities** -- the maintenance of separate structures for curative, and maternal and child health services should be reviewed. Similarly, where specialized units for oral rehydration, for example, exist, they might be used for other purposes.

5. **health care personnel** -- at the peripheral levels of the health care system, personnel are already polyvalent and expected to provide competent preventive and curative care to all children who present to the health center. An integrated health care delivery system would result in their being better able to do so.

Drugs and other commodities would be more frequently available in adequate quantity, training would be offered in a wider variety of interventions, and record keeping (form filling) tasks would hopefully be reduced.

6. **health education** -- mothers and other child caretakers (including community health workers) need to be able to recognize all of the more common illnesses which afflict their children. Because of limitations on access to health centers, early treatment for many of these conditions is required at the community level. Mothers must be educated to deal appropriately with health problems when they arise and to avail themselves of preventive services. Local pharmacists, market women, and others involved in the dispensing of medications also should be involved in the health care system.

7. **training and supervision** -- the separation of different child survival interventions is nowhere as blatantly reflected than in single-intervention training programs. Although minimum amounts of time for training in actually delivery of care (immunization practices, oral rehydration therapy, family planning counselling, etc.) are necessary in order to maintain a high level of quality which must not be sacrificed, other aspects of health care delivery, such as management, supervisory skills, and monitoring and evaluation are common to all programs. Consideration should be given to developing more efficient means of providing more comprehensive continuing education to health care personnel.

8. **health information systems (program monitoring and evaluation)** -- the collection of morbidity and service data provides an ideal example of an opportunity for program integration. A record of the health care received by a child can be recorded on a single "road to health" card, all clinic visits are recorded in a single register, and data are frequently collected and analyzed by a single statistical office. A HIS should ensure that the necessary information is seen by all those who need it.

9. **operational research** -- efforts to develop a more integrated system of health care provision will undoubtedly be met by many obstacles. Operational research is required in order to meld currently separate programs in such a way as to more adequately address the spectrum of child survival problems while maintaining the effectiveness of current programs.

If continued progress is to be made and further improvement of infant and childhood health is to occur, wasteful duplication of program activities must be eliminated; scarce executive, managerial, and technical manpower and other resources must be used more efficiently; multi-purpose clinic health workers must be trained, supplied, and supervised in the most effective manner; and mothers and community health workers must become knowledgeable of the means by which they might prevent or provide prompt treatment for important childhood illnesses. A great deal

of further thought and discussion is warranted. We hope that the conference this week will provide the opportunity to more thoroughly explore some of the issues presented in this paper.

MINISTERE DE LA SANTE
PUBLIQUE ET DE LA POPULATION

REPUBLIQUE DE COTE D'IVOIRE
UNION-DISCIPLINE-TRAVAIL

PROGRAMME DE LUTTE CONTRE LES MALADIES
TRANSMISSIBLES DE L'ENFANCE/CCCD

EVALUATION DES BESOINS DE FORMATION DES PERSONNELS DE SANTE

MARS 1990

TRAORE MOUSSA ET COLLABORATEURS
AVEC L'ASSISTANCE DE DR. JENNIFER BRYCE,
CENTERS FOR DISEASE CONTROL, ATLANTA.

Mesdames et Messieurs,

Je voudrais partager avec vous, la modeste expérience de la Côte d'Ivoire en matière d'évaluation sur le terrain des performances du personnel de santé et cela dans le cadre du volet formation du projet CCCD.

1. Depuis 1986, le projet CCCD-CI a collaboré avec le Ministère de la Santé Publique et de la populution pour élaborer et mettre en place un programme de formation destiné aux médecins et agents para médicaux des 26 SSR du pays y compris des formations sanitaires ou socio-sanitaires tels que les Centres de PMI et ceux affiliés à la C.N.P.S.

(Tableau 1) Ce programme de formation comprend deux niveaux:

- au premier niveau: les cours moyens qui regroupent les médecins-chefs des SSR, les coordonnateurs du PEV, les coordonnateurs de SSP et les respon sables des activités de consultation d'enfant dans chaque base de SSR. 4 cours moyens ont été prévus par le programme en 1986, tous ont été réalisés.

- au deuxiéme niveau: les cours relais. Ils sont organisés et dirigés par les médecins-chefs de SSR et leurs collaborateurs de la base du secteur plus un formateur du niveau central. Pour cette année 1990, deux cours relais par SSR sont prévus dans 8 SSR.

Mais avant, nous avons voulu avoir une idée sur les performances actuelles des participants à ces cours afin d'en mieux déterminer le contenu et aussi de mieux orienter l'approche quant à la conduite de ces cours. C'est ce qui a motivé notre étude dont les buts sont:

(Tableau 2) 1. Etablir les niveaux de base de PRESTATION des services de santé pour les enfants de moins de 5 ans, niveaux existants avant la réalisation des activités des cours relais.

2. Déterminer les besoins en formation et en supervision complémentaires des cadres et agents de santé à la périphérie.

(Tableau 3) L'étude s'est effectuée dans 41 formations sanitaires tirées ou hasard dans 8 SSR. Sur le terrain nous avons utilisé comme méthodes:

- l'observation directe des agents de santé en activité.

- l'interview des mères et des agents de santé.

- la revue du matériel et de l'équipement de chaque formation sanitaire.

Au total, nous avons utilisé 5 instruments de recueil de données.

(Tableau 4) Concernant la consultation des enfants malades, nous avons observé au total 136 enfants dans 31 formations sanitaires et cela par type de maladie selon les déclarations des mères et selon le diagnostic des personnels consultants. Puis nous avons repertorié les résultats dans des axes spécifiques qui nous semblent pertinents.

(Tableau 5) Au niveau de l'examen physique des enfants, les résultats montrent que d'une manière générale:

- la pratique qui consiste à regarder systématiquement les oreilles, la bouche et la gorge n'est pas effective.

- le test du pli cutané n'est pas non plus systématique dans les cas de fièvre plus diarrhée.

(Tableau 6) Concernant les prescriptions faites pour les enfants atteints de diarrhée, nous avons pu constaté que plus de 2/3 des enfants reçoivent une prescription de SRO. Cependant rares sont les enfants à qui l'on administre sur place la solution même si un état de déshydratation est apparent.

(Tableau 7) Cela peut s'expliquer par le fait que même lorque les sachets SRO sont disponibles, le petit matériel de préparation et de mesure n'est pas toujours présent dans les formations sanitaires.

(Tableau 8) S'agissant des informations que le personnel de santé est censé donner aux mères dont les enfants souffrent de diarrhée, il est apparu que l'on ne fait pas souvent allusion au fait que:

- la mère doit donner des liquides à l'enfant après chaque selle et après chaque vomissement.

- la mère doit continuer d'allaiter l'enfant s'il est au sein. Aussi il n'est pas évident que le personnel de santé se souci de savoir si la mère a compris les informations qui lui sont données quand c'est le cas.

(Tableau 9) Dans les cas de fièvre, presque 3/4 des prescriptions contiennent un antipaludique. Aussi nous nous sommes intéressés de savoir le % des formations sanitaires qui disposent de chloroquine sirop ou comprimé en stock.

(Tableau 10) Comme vous pouvez le constater le résultat n'est pas très sitisfaisant. Par exemple il n'y a que 20% des dispensaires visités qui ont un stock de chloroquine.

(Tableau 11) Aussi, lorsque la chloroquine est donnée ou prescrite dans les cas de fièvre, le personnel n'insiste pas souvent sur la nécessité de suivre un traitement complet. Une seule mère parmi celles qui ont reçu la chloroquine a été capable de nous dire à la sortie, la quantité à administrer à l'enfant et la durée du traitement

(Tableau 12) Concernant le domaine de la vaccination, nous avons suivi au total 178 enfants dans 15 formations sanitaires. Nous avons constaté que partout le personnel vaccinateur prend soin de consulter le carnet de santé ou la carte de vaccination - ce qui est une bonne chose. Par contre nous avons aussi vu l'utilisation de seringue et d'aiguille non stériles pour faire la vaccination. Cela est bien entendu à corriger.

(Tableau 13) S'agissant des informations données aux mères dont les enfants viennent d'être vaccinés, nous avons constaté qu'il n'est pas toujours dit aux mères:

- la nécessité de terminer la série pour les vaccins à plusieurs doses.
- les maladies contre lesquelles les enfants sont vaccinés.
- les réactions vaccinales possibles et les mésures à prendre au cas où elles

survenaient.

Voilà, Mesdames et Messieurs quelques points que nous avons retenus de la première analyse des données de notre étude et que nous avons voulu très modestement partager avec vous.

Une semaine avant notre arrivée ici, les premiers résultats ont été ~~déjà~~ présentés aux autorités sanitaires du pays afin de leur permettre de prendre des décisions qui serviront à corriger les performances des personnels de santé.

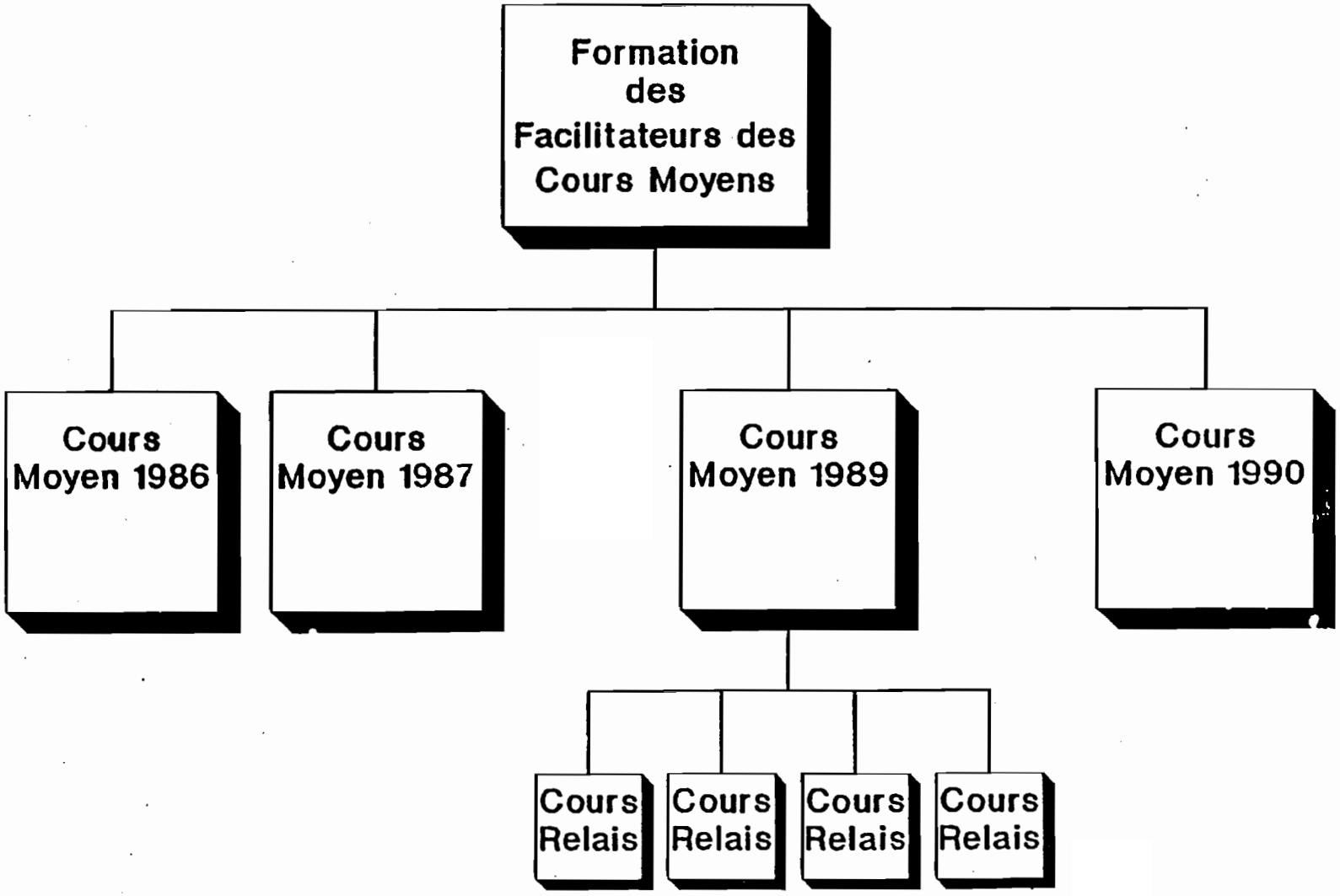
Nous continuons l'analyse des données pour en tirer le maximum d'information. Mais d'ores et déjà les premières conclusions qui se dégagent pourraient se présenter dans les formes suivantes:

1. Le niveau de base des prestations des personnels de santé, quand il s'agit des soins aux enfants, est bas. Il convient donc de le relever. C'est en cela que cette étude constitue un bon test de départ pour les cours relais. Suite aux cours relais les mêmes enquêtes seront repetées pour évaluer l'impact des formations à la périphérie.

2. Les modules, tels qu'ils se présentent actuellement doivent être distillés au maximum et exploités dans une orientation plus pratique suggérant des comportements plus concrets. Nous osons expérer que les cours relais qui seront entrepris très prochainement et qui développeront des aspects plus pratiques que théoriques nous permettront de combler les lacunes observées et amélorer ainsi les performances des agents de santé. Mais il reste évident que cela est intimement lié à la disponibilité dans les formations sanitaires d'un certain nombre de matériel et d'équipment indispensables.

Je vous remercie.

Strategie de Formation
Minisanté/Projet CCCD, Côte d'Ivoire



Evaluation sur Terrain des Performances des Personnels de Santé, Côte d'Ivoire

BUTS

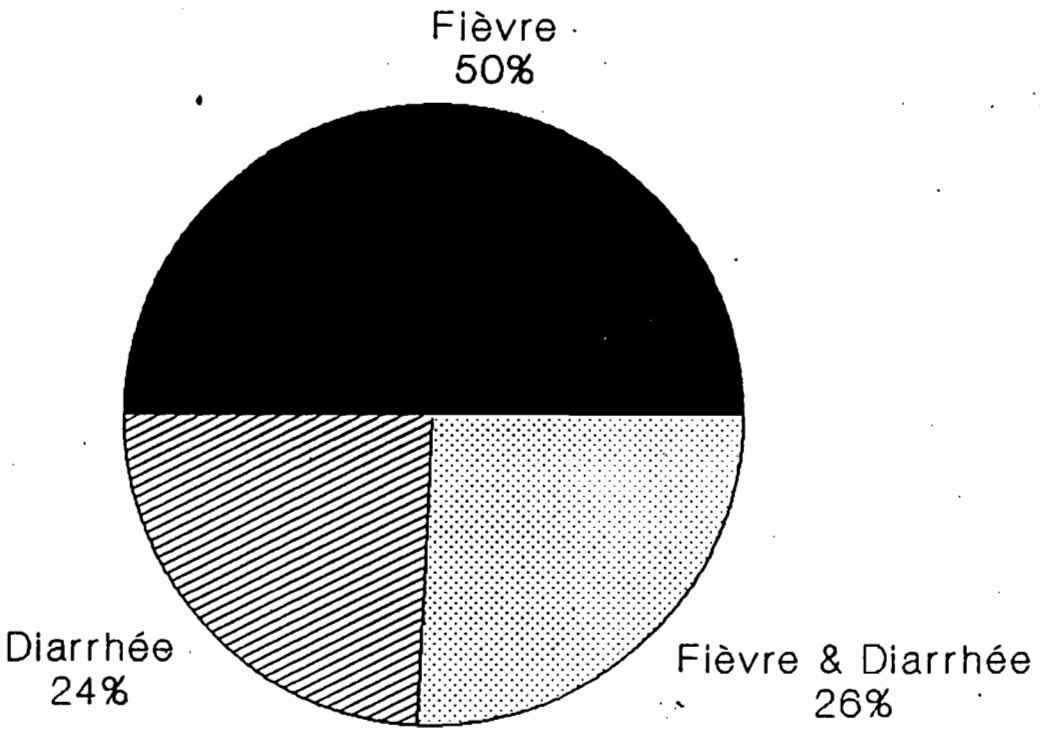
1. Etablir les niveaux de base de prestation des services de santé pour les enfants de moins de 5 ans, niveaux existants avant la realisation des activités de formation des cours relais.

2. Déterminer les besoins en formation et en supervision supplémentaires des cadres et agents de santé opérant à la périphérie.

Méthode

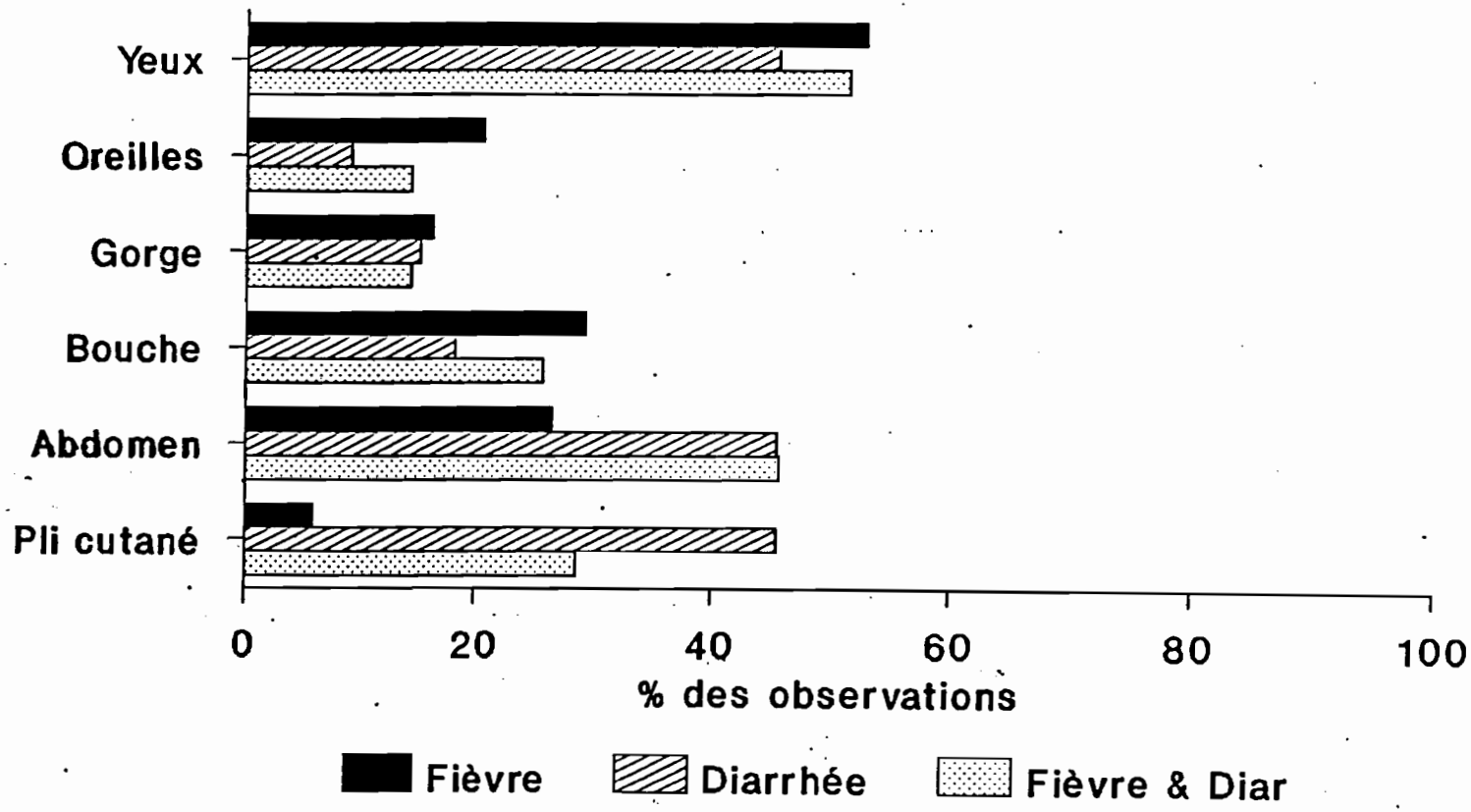
- 41 Formations Sanitaires dans 8 SSR
- Observation Directe des Agents de Santé
- Interview des Mères et des Agents de Santé
- Révue du Matériel et Equipement
- 5 Instruments

Nombre d'Enfants Observés par Type de Maladie Côte d'Ivoire, Mars 1990



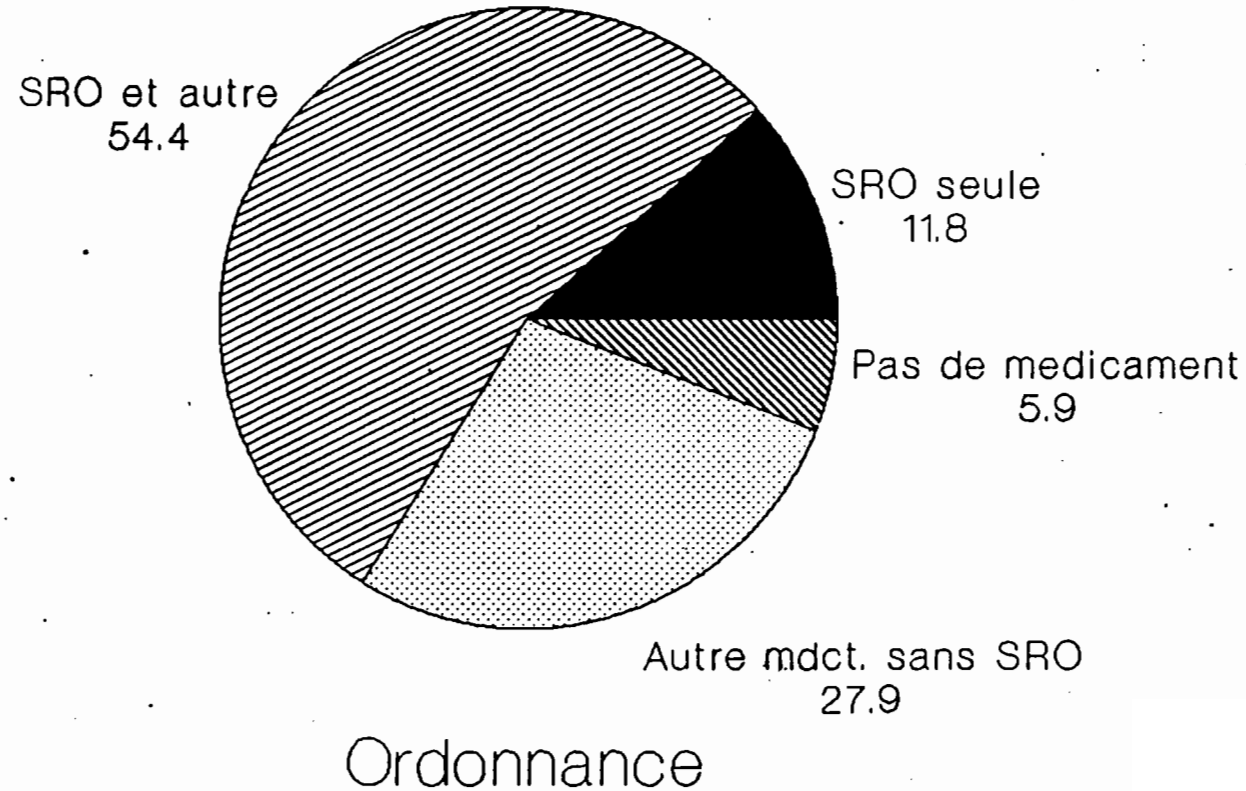
136 enfants dans 31 formations san.

Evaluation des Personnels de Santé sur l'Examen Physique des Enfants par Type de Maladie, Côte d'Ivoire



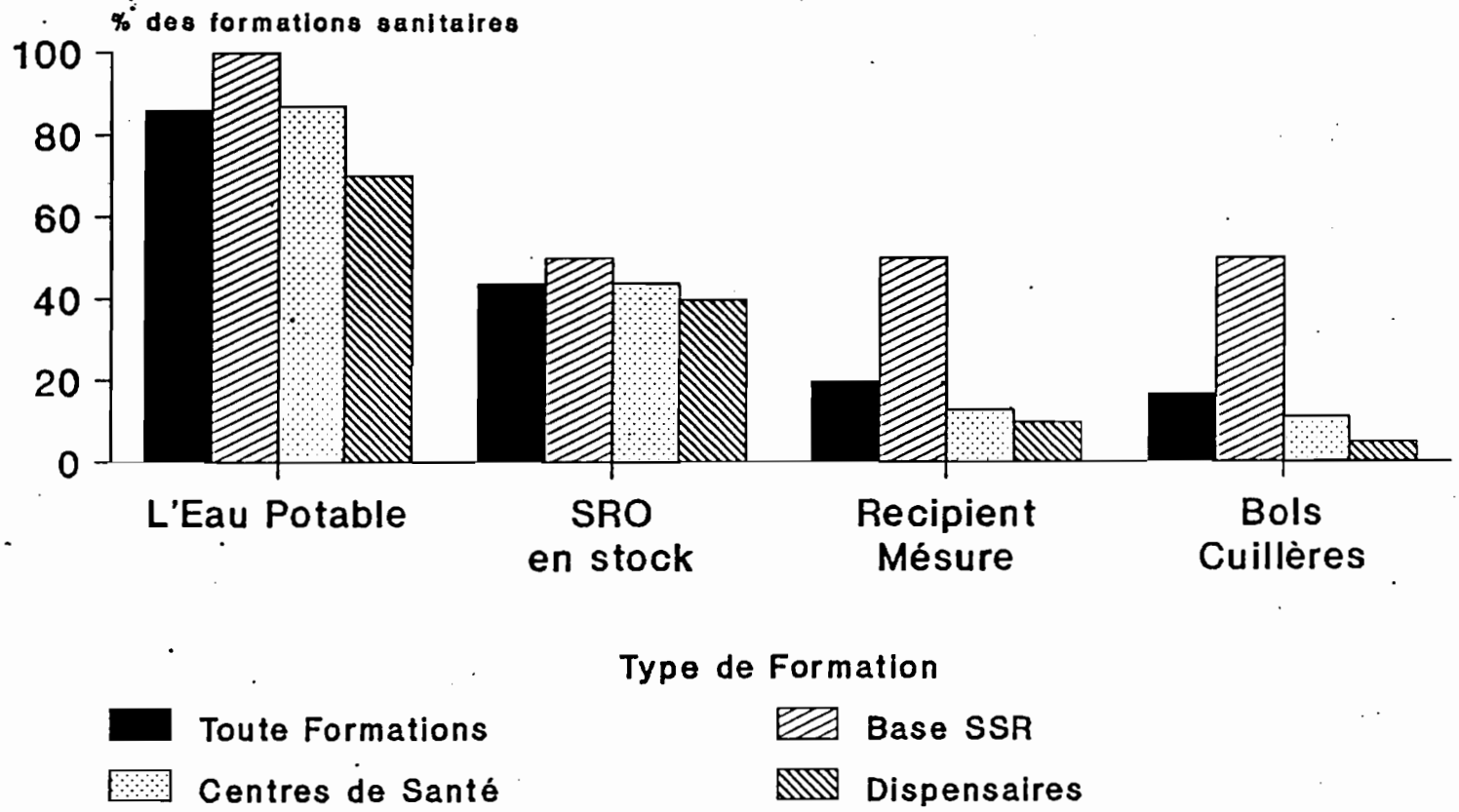
136 enfants dans 31 formations san.

Traitement des Enfants Diarrhéiques
Côte d'Ivoire, Mars, 1990



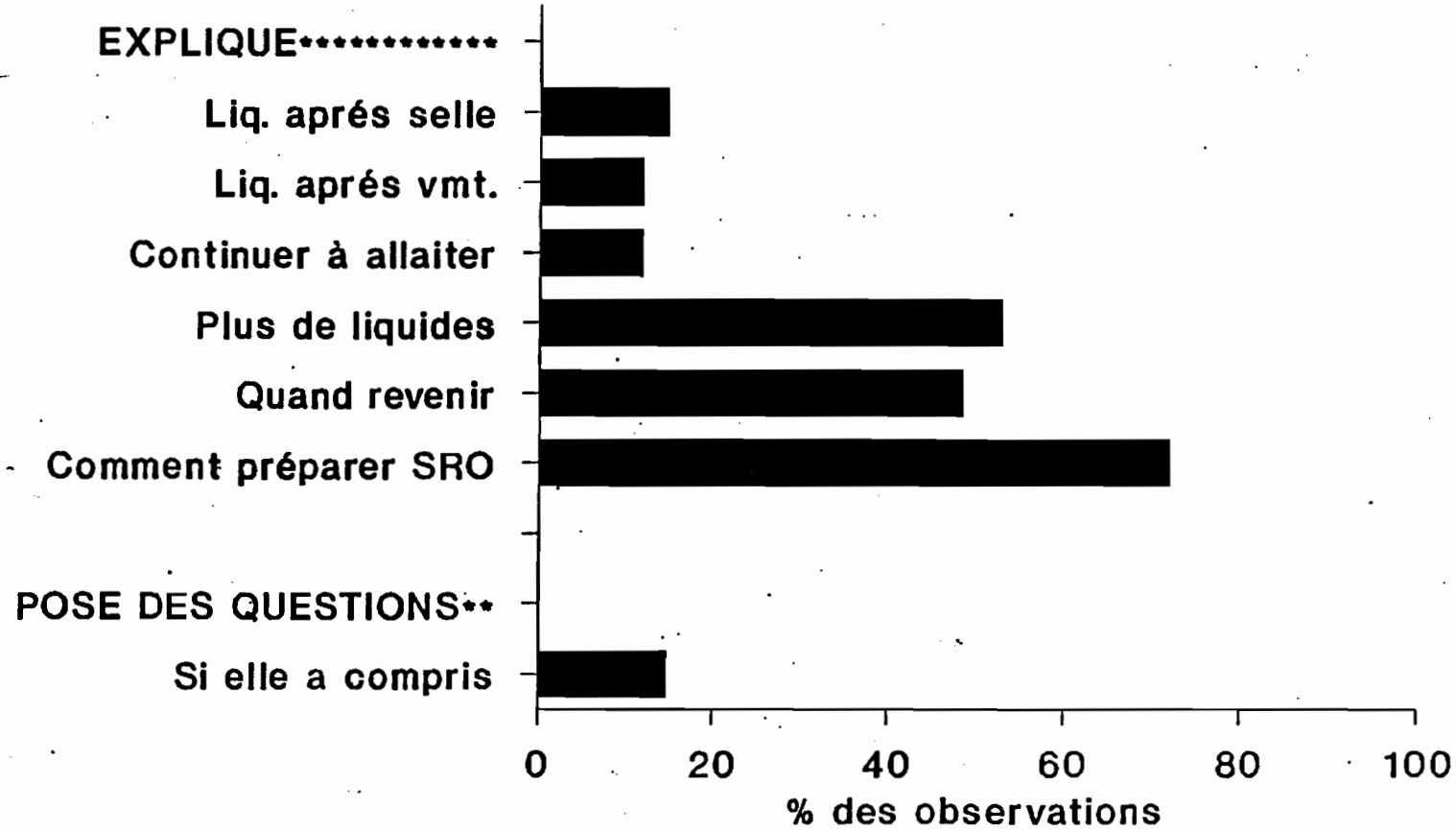
68 observations dans 24 formations san.

Disponibilité d'Eau, SRO et Fournitures pour le Traitement de la Deshydratation par Type de Formation Sanitaire



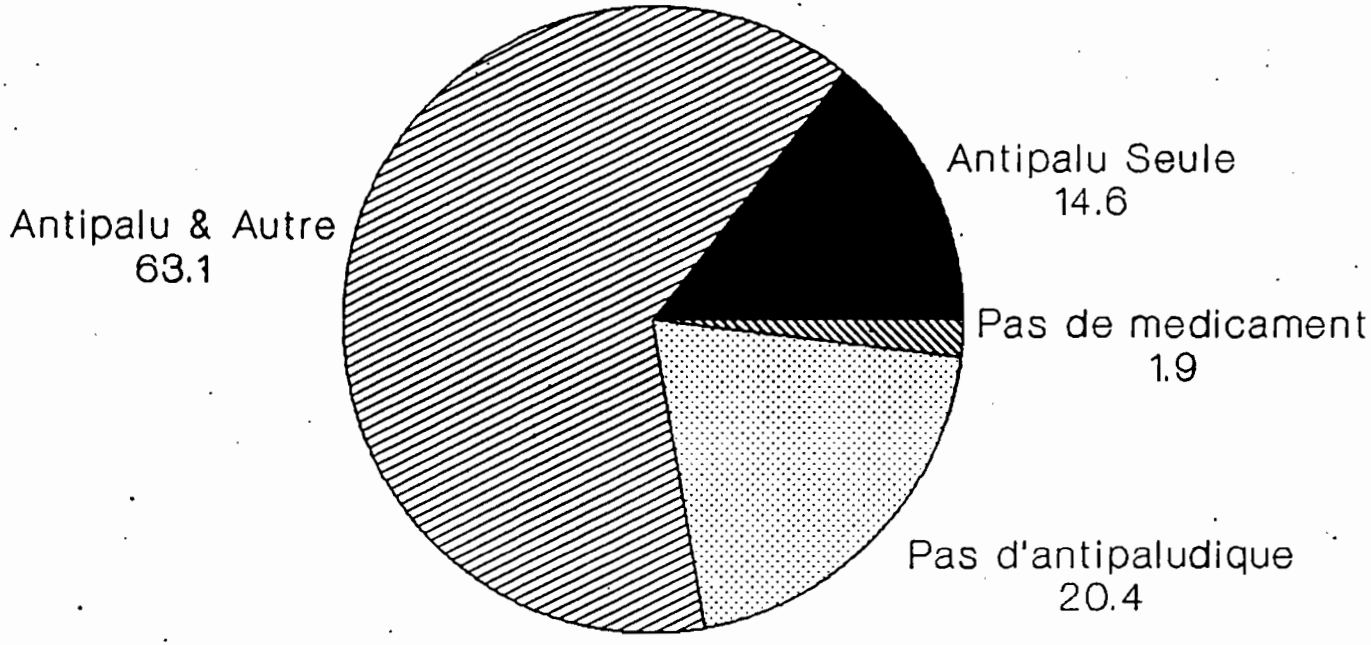
41 formations sanitaires

Informations Données aux Mères Dont les Enfants ont la Diarrhée Côte d'Ivoire, Mars, 1990



68 observations dans 24 formations san.

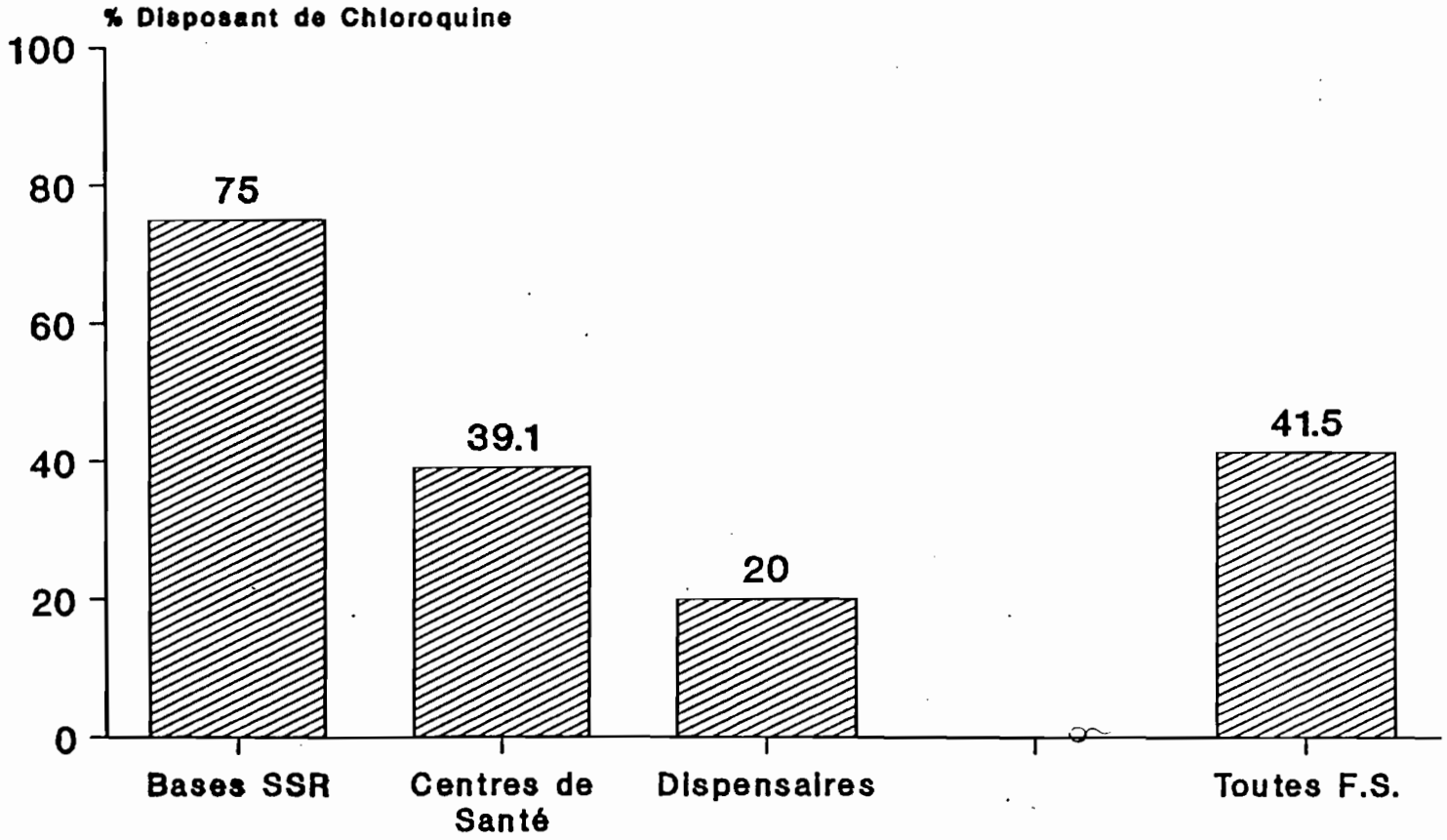
Traitement des Enfants Fébriles
Côte d'Ivoire, Mars, 1990



Ordonnance

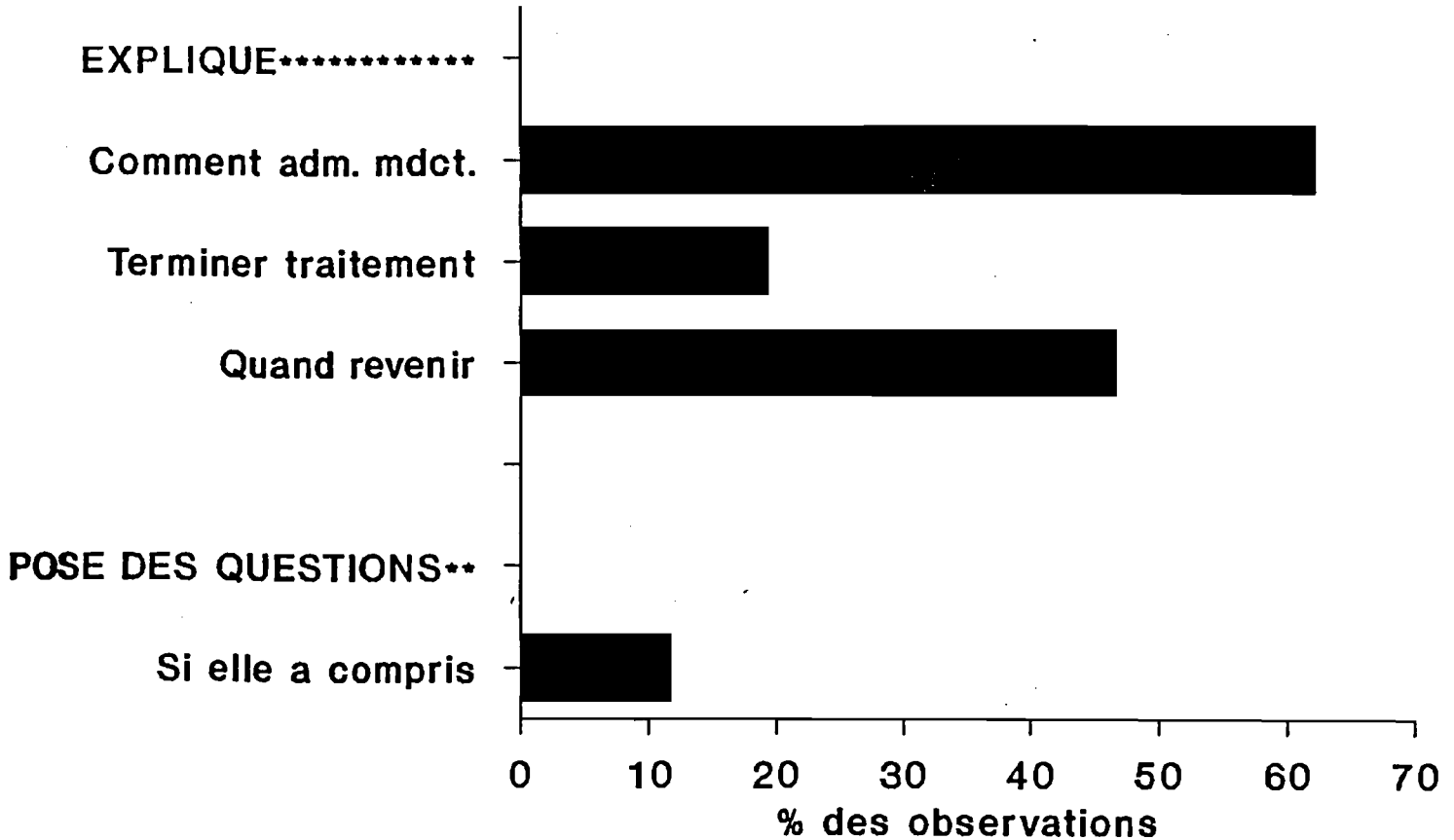
103 observations dans 29 formations

Pourcentage des Formations Sanitaires Disposant de Chloroquine en Sirop ou Comprimé par Type de Formation, C.I.



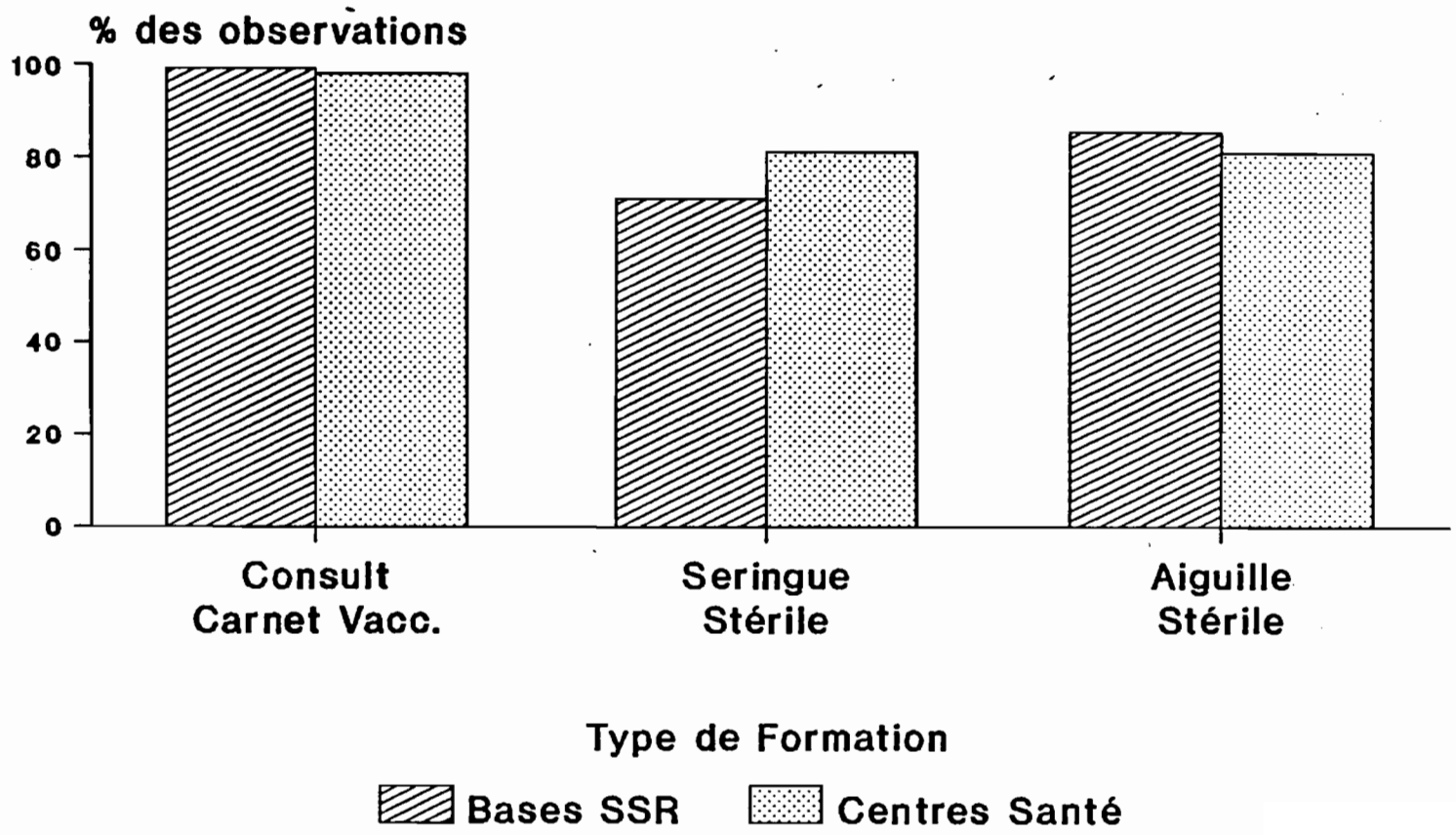
41 formations sanitaires

Informations Données aux Mères dont les Enfants ont la Fièvre
Côte d'Ivoire, Mars, 1990



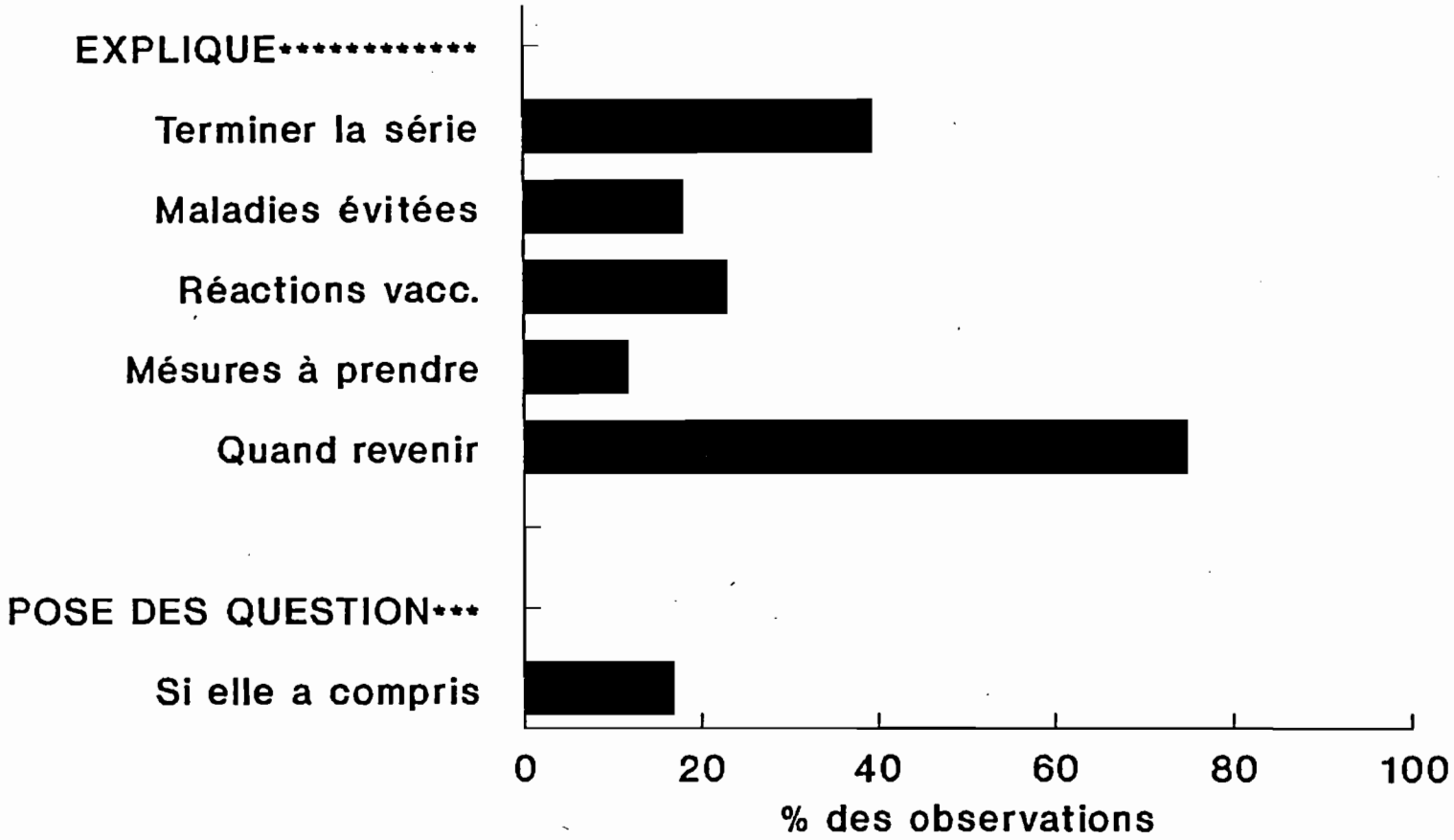
103 observations dans 29 formations

Pratiques Vaccinales des Personnels de la Santé Côte d'Ivoire, Mars, 1990



178 enfants dans 15 formations san.

Informations Données aux Mères dont les Enfants Reçoivent un Vaccin Côte d'Ivoire, Mars 1990



178 observations dans 15 formations san.

ACCELERATED VACCINATION CAMPAIGNS: A SUSTAINABLE STRATEGY?

Dr. Tchasseu Karsa
Director,Division of Epidemiology - TOGO

Author discusses Togo's experience with UNICEF generated accelerated vaccination campaigns. He presents advantages and disadvantages of such efforts and provides alternative strategies which provide long term benefits instead of short-term increases in vaccine coverage with subsequent declines in utilization of service.

Les campagnes de vaccinations accelerees: Une strategie a perenniser?

Par: Dr. Tchasseu KARSA

1.INTRODUCTION:

Histoire d'implantation du PEV au Togo

Savanes - 1980
Kara - 1981 - 1982
Centrale - 1982
Plateaux - 1983
Maritime - 1984

En 1987, une enquete de couverture vaccinale par region a ete effectuee a l'echelle nationale. La couverture variait plus ou moins selon la date d'implantation du PEV dans la region.

Savanes:	*DTCoq 1/Polio 1*	*= 78%*
	Rougeole	*= 64%*
	ECV	*= 42%*
Kara :	*DTCoq 1/Polio 1*	*= 58%*
	Rougeole	*= 46%*
	ECV	*= 30%*
Centrale:	*DTCoq 1/Polio 1*	*= 64%*
	Rougeole	*= 54%*
	ECV	*= 38%*
Plateaux:	*DTCoq 1/Polio 1*	*= 50%*
	Rougeole	*= 35%*
	ECV	*= 17%*
Maritime:	*DTCoq 1/Polio 1*	*= 58%*
	Rougeole	*= 37%*
	ECV	*= 25%*

Nationale: DTCoq 1/Polio 1 = 59%

2. QUESTIONS: Est-ce que les campagnes de vaccination atteignent les resultats escomptes?

Est-ce que les resultats obtenus valent le cout des telles campagnes?

Est-ce que les campagnes sont une strategie qu'on peut continuer a l'avenir?

3. AVANTAGES:

1. La couverture vaccinale a considerablement augmente.

		1987	1988
DTCoq/Polio 1	=	59%	92%
DTCoq/Polio 3	=	36%	62%
Rougeole	=	43%	74%
ECV	=	27%	48%

2. La campagne de vaccination a sensibilise et mobilise les politiciens et decideurs. Le President de la Republique a administre une dose symbolique de vaccin.

3. La campagne a sensibilise et informe une grande partie de la population cible.

   Evaluation 1987 - 59% des meres "au courant" de l'existence des vaccinations.

   Evaluation 1988 - 86% des meres "au courant" de l'existence des vaccinations.

4. La campagne a implique d'autres agences et ministeres dans les activities de vaccination.

4. DESAVANTAGES:

1. La campagne a coute cher. Presque $1 million US.

2. La campagne a paralyse d'autres activites et programmes prioritaires du Ministere de la Sante.

3. Les bonnes techniques d'administration des vaccins ont ete abandonnees par le personnel vaccinateur du a l'affluence des populations au postes fixes.

4. *La population croyait que la campagne de vaccination etait quelque chose de nouveau. Beaucoup deja vaccines sont venus sans les cartes de vaccination anterieures et on etait oblige de recommencer a zero avec eux. Ceci avait de serieuses repercussions sur la consommation des vaccins et la qualite du travail des agents vaccinateurs.*

5. *Une augmentation de l'activite des equipes mobiles avait un effet demobilisant sur les populations qu'on essayait d'attirer vers les postes fixes.*

6. *Les doses administrees par mois apres la campagne etaient moins qu'avant le commencement. Donc le rythme d'acceleration n'a pas ete maintenu.*

5. ALTERNATIVES

1. *Renforcement des strategies existentes:*

   a) *Postes fixes*

      Vaccination au quotidien.

      Reduction des occasions manquees.

      Amelioration des prestations de service et reduction des erreurs de vaccination par les agents.

   b) *Strategie avancee des postes fixes pour reduire le taux de deperdition entre les doses.*

   c) *Utilisation rationnelle des equipes mobiles.*

THE ARHEC EXPERIENCE

Presentation at the Fifth ACSI-CCCD Consultative Meeting
Mbabane, Swaziland
April 6, 1990

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Introduction

Since 1986, with funding from ACSI-CCCD, the African Regional Health Education Centre, in cooperation with the University of North Carolina and the Centers for Disease Control, has undertaken a comprehensive continuing education activity in health education planning and management. Three four-week workshops have been attended by 85 professionals comprising 46 senior health education officers and 39 child survival program managers, primary EPI managers from six countries - Nigeria, Liberia, The Gambia, Malawi, Lesotho and Swaziland.

Workshop objectives, based on needs identified by AID and CDC during ASCI-CCCD project design and initial implementation are two-fold:

- to strengthen planning and management of the behavioral component of large-scale child survival programs related to childhood immunization, diarrheal disease and malaria control in the ACSI-CCCD Anglophone countries;

- to promote and improve team work between health education officers and program managers in order to assure effective integration of educational activities into child survival interventions.

The workshop, while the most visible activity, has been only one component of the continuing education. Prior to the workshop, a structured needs assessment and a one-week planning/team-building session are conducted. Follow-up on-site visits are made to all participant teams - two visits within Nigeria and one to those in other countries.

Changes in 1988 and 1989 based on Evaluation of 1987

As a new activity for ARHEC, CDC, UNC and AID, high priority has been placed on program evaluation. At the 1988 Consultative Meeting in Yamoussoukro evaluation results of the first workshop cycle were presented by ARHEC and UNC staff.

We found that the design and content of the workshop had not adequately addressed the different organizational structures in which the health education plans were to be implemented. Presentation of the technical content areas was not successfully integrated so as to allow participants to appreciate the interrelatedness of the program planning process. Individual facilitators drew from their own experience, using their own examples that were at times contradictory. The didactic sessions did not adequately prepare participants to translate theoretical knowledge into practice, that is, preparation of a plan.

Based on these results and the discussion of the data by the interested parties, several modifications were made affecting each of the four components of the activity. Key among these were as follows:

1. The training needs assessment in Nigeria was broadened to include a protocol for on-site situation analysis, that is, a rapid assessment of the organizational structure and environment of the proposed workshop participants.

2. Given the priority to decentralize primary health care, Nigerian State teams in 1988 included one State officer (the chief health educator and one LGA staff (the EPI manager). Other countries were invited to nominate district/regional decision-makers/managers.

3. Technical content was made more structured through the use of a district-level case study and development of modules based on program planning elements. A single theme was selected for the workshop, rather than leaving the choice to participants.

4. To enhance the feasibility of implementing the action plans produced at the workshop, emphasis was placed on planning within existing financial and other constraints, or, alternatively, the need to be conservative and realistic about new resources that might be obtained.

5. The time allocated to assessment of participant training needs and didactic session was reduced to give more time to plan preparation, presentation, feedback and revision. More time was also spent on setting of realistic objectives, and selection of indicators to be monitored during the follow-up visits.

6. As the results of process evaluation became more predictable, some redundant evaluation activities were modified and/or deleted.

Evaluation of the 1988 and 1989 Workshops

Formative and summative evaluations were carried out before, during and after the workshop.

At the end of the workshop, participants are expected to demonstrate increased knowledge of the elements of health education program planning and management and an increased ability to use these elements in the preparation of a health education plan for EPI. With an action plan and timetable, health educators and program managers can better monitor health education activities and better quantify the contribution of health education to the success of the EPI program.

In 1988, knowledge of program planning was assessed in a traditional pre and post-test manner. The pre and post-tests were identical and consisted of open-ended questions related to a case study used in the workshop to illustrate the substantive areas of planning. Answers to the questions for both tests were assessed by the faculty on an arbitrary scale of 1 to 10 with 10 being an outstanding answer.

In 1989, a similar pre-test was administered, but the post-test was deleted. Rather, assessment of the health educators plans prepared by participant teams was used as a better indicator, not only of knowledge gained, but the ability to apply the knowledge by the actual development of a plan. A score card containing the substantive areas of planning was used to grade the plans.

A second expected outcome of the workshop is increased collaborative planning and advocacy for health education by EPI managers and health educators. During the workshop, each manager-educator team worked together to develop a take-home plan. Each team developed a strategy for approval of the plan and for mobilizing additional resources. The teams presented and defended their plans at the end of the workshop to a simulated panel of decision-makers. Feedback was provided by peers and workshop faculty.

Collaboration of health educators and program managers was measured by a needs assessment questionnaire sent to all participants prior to the workshop. In addition, at the beginning of the worksnop, a questionnaire was completed by the health educators assessing their own skills and perceptions of collaboration/team work. A similar questionnaire rating their own as well as health educators' abilities in the same areas was completed by the EPI managers at the same time.

In 1988 the self-efficacy questionnaire was administered at the end of the workshop and during the first follow-up visit, about six months later. In 1989, it was decided to administer it during the second follow-up visit, seven to 12 months after the 1989 workshop.

Follow-up visits to all participants by Workshop Faculty have been conducted as an integral part of the training process. In 1988, visits were conducted 3 to 4 months after the workshop to all participating Nigerian states and countries. A second visit only to Nigerian participants occurred 8 to 10 months after training. For 1989, a similar schedule was adopted. During the first visit, the status of the health education plan is assessed and consultation is provided to facilitate the plan approval process. The second visits are aimed at assessing the degree of plan implementation.

Results

The 1988 knowledge pre and post tests were completed by 24 of the 27 participants. The 1989 pre-test was completed by 26 of 36 participants, due to many participants arriving late. Twelve plans in 1988 and sixteen plans in 1989 were scored separately by the same two evaluators, using the same score card both year. Table 1 presents the knowledge pre and post tests results and average plan score for 1988 and the pretest and average plan score for 1989.

TABLE 1 OVERHEAD HERE

Table 2 shows the pre-workshop assessment of communications between health educators and EPI Managers in 1988 and 1989. Overall, levels of satisfaction were higher in 1989 (66%) than 1988 (52%). While the degree of satisfaction was stronger ("very satisfactory") among EPI Managers in 1988 (17%), the health educators expressed stronger satisfaction in 1989 (44%).

TABLE 2 OVERHEAD HERE

Concerning the self-assessment of abilities by health educators and EPI managers, Table 3 presents results from 1988 of pre and post workshop measures as well as assessment during the first follow-up visit. Of particular interest was how the workshop has succeeded in ~~reshaping~~ the EPI managers perceived notion of health education as a specialized professional activity. For example, with respect to formulation of health education objectives, the majority of the EPI managers (60%) who had felt "very confident" that they knew how to formulate health education objectives before the workshop, reduced significantly to 27% and 25% during the workshop and follow-up respectively. The EPI managers, few of whom (27%) felt "very confident" that they could justify a health education budget before the workshop increased to 64% and 71% during the workshop and follow-up respectively. There was also an increase from 46% before the workshop to 71% during the follow-up visit in the percentage of managers who felt "very confident" that they could develop a health education plan based on epidemiological data. It may be concluded that program managers were more familiar and more appreciative of the importance of the health education component in their programs after the workshop.

TABLE 3 OVERHEAD HERE

Table 4 shows selected indicators of progress from follow-up visits in Nigeria in 1988 and 1989. We can see from these results plan approval was not necessarily backed by funding.

TABLE 4 OVERHEAD HERE

Discussion

End-of-workshop knowledge and skills of participants as well as overall satisfaction with the training process appear to have increased considerably since the 1987 workshop. This is probably due in part to improved training as the result of repeated experience by faculty.

However, although our post-workshop evaluation measures need refinement, it is clear that many obstacles to improved participants performance leading to more effective health education programs continue to impede successful training outcomes.

Within Nigeria, we have improved participant selection through personal on-site visits to SMOH decision-makers. The visits have helped to improve pre-workshop communications related to workshop objectives, expectations of participants back home, role of ARHEC, data to be brought to the workshop and other areas.

With substantial organizational changes now occurring in State level PHC programs, many personnel changes are underway, funding mechanisms are changing and integration of a health education plan for EPI is a complex task.

Reflections on the post-workshop "bottlenecks". to implementation of health education activities have led ARHEC to raise the following questions about future efforts:

1. Are there other alternatives to bringing participants to Lagos to prepare a plan? By organizing an activity closer to home, can commitment from policy makers become part of the plan development process rather than having to obtain that commitment when the workshop is over?

2. What are the implications of any changes for other activities such as follow-up visits?

3. Is it really possible to help participants become better managers of their own time, thus enabling them to follow through on implementation?

4. Are budgets and other resources really that limited after all or just poorly managed?

While we contemplate these questions and consider the need for change, we are proceeding with plans for a fourth workshop in 1990 with the theme being on health education for malaria control.

We are grateful to USAID and CDC for the opportunity to expand ARHEC's activities. We observe with pleasure the number of States and countries who are sending people for long-term training in health education, perhaps indicating an increased awareness of policy makers about the role of health education in primary health care. We look forward to continued collaboration in health education for child survival.

LECONS APPRISES DES CINQ ANS D'EXPERIENCE.
PROGRAMME LMD/ZAIRE.
(Dr MUTOMBO wa MUTOMBO)

Le programme LMD/Zaire a demarre en Aout 1984 avec l'installation du centre TRO de l'hopital Mama Yemo.

Son domaine d'action couvre les aspects operationnels suivants:
- . la prise en charge des cas dans les formations medicales,
- . la prise en charge des cas au niveau domiciliaire,
- . les activites d'IEC,
- . la production locale des sachets SRO.

quelles sont les lecons apprises deans ces quatre axes d'action pendant les cinq annee d'experience?

A) Prise en charge des cas dans les formations medicales.

La prise en charge correcte est conditionnee par:
- .. la formation pratique a la prise en charge,
- . la dotation des formes en petit materiel,
- . le suivi sur le terrain des formes,
- . l'integration des strategies LMD dans les curricula des ecoles medicales.

B) Prise en charge des cas au niiveau domiciliaire.

La recette de la solution slee-sucree est mal connue (18% des meres) et la diponibilite de tout le necessaire (ustencils, ingredients) n'est pas elevee (29%).

Le Programme preconise:
- . l'identification des solutions domiciliaires, sans faire de propagande pour ou contre la SSS.
- . l'insistance sur les poins suivants:
  - . donner le plus de liquide possible,
  - . continuer l'allaitement et l'alimentation,
  - . reconnaitre les signes de gravite.
- . .la sensibilisation des pharmaciens au Programme.

C) Activites IEC.

Le personnel de base devra etre forme aux techniques de communication interppersonnelles.
Le materiel et les messages educatifs concu au niveau central devra etre adapte aux conditions locales.

D) Production locale des sachets SRO.

Le choix du conditionnement (mesure) doit etre judicieux.
Les exigences d'ordre technique doivent etre respectees quant au choix de la machine a utiliser. Ces exigences sont liees aux coditions locales d'hygrometrie et de regime tensionnel.

D'autres preoccupations restent pour le Programme, a savoir:

- les diarrhees persistantes,
- les dissenteries bacillaires,
- les diarrhees associiees a l'infection HIV.

COMMUNICATION DU Dr MUTOMBO wa MUTOMBO.

L'intitule de ma communication est: ‹‹LECONS APPRISES DES 5 ANNEES D'EXPERIENCE DU PROGRAMME LMD/ZAIRE.››

1er Trans.

Avant de commencer, j'aimerais remercier les personnes ci-dessous qui ont joue et continuent a jouer un role important dans notre programme. J'ai cite:

- Mr J.Roy quii a ete le 1er conseiller technique au projet CCCD/Zaire.
- Les Dr M.Moore et A.Vernon qui ont ete epiidemiiologistes au Projet.
- Mme K.Wilkins, en poste actuellement comme conseillere technique.

Trans 2.

Le Programme LMD/Zaire a commence en Aout 84 avec l'installation du centre TRO de l'hopital M-Y.

Ses grands domaines d'action sont:

- La prise en charge des cas au niveau des F.M.
- La prise en charge des cas au niveau domiciliaire.
- Les activites d'IEC.
- La produuction locale des sachets de SRO.

Quels sont les realisations du Programme dans ces 4 axes d'action?

Trans 3.

Dans le domaine de la prise en charge des cas au niveau des F.M. le Programme est d'avis que la prise en charge correcte passe par la formation pratique.

A cet effet, 4 centres de formation(en rouge sur la carte du Zaire) sont operationnels. 5 autres centres fonctionnent comme centre de prise en charge des cas, mais n,a pas encore procede a une session de formation.

Trans 4.

Ce transparent montre le nombre de personnes formees depuis Nov. 86 jusqu'en 89.

Dans le domaine de la prise en charge des cas au niveau domiciliaire, le Programme avait mis au point et recommande une recette nationale SSS

Quel est le constat en la matiere?

Trans 5.

L'evaluation de Sept 87 a montre que:

. 98% des meres etaient au courant de solution

. 29% disposaient d'indredient et de materiel de mesure adequat

. 18% pouvaient donner la recette correcte.

Panzi par le MCZ (Dr Kabeya Duda) a demontre qu'on peut augmenter de facon significative la connaissance des meres sur la TRO en:

- concevant des messages educatifs qui tiennent compte des conditions locales.
- formant le personnel sur les techniques de communication
- l'utilisation de la langue locale
- la supervision reguliere et methodique des seances educatives.

Trans 6.

Dans le domaine de l'IEC, le Programme a produit et diffuse le materiel didactique et educatif destine aux professionnele de la sante et a la population generale.

Tans 7.

Production locale dessachets de SRO. Ce transparent montre l'evolution de la production depuis 83 jusqu'en Septemre 89.

QUELLES SONT LES LECONS APPRISES DANS CES 4 DOMAINES D'ACTION?

Trans 8.

Domaine de la prise en charge dans les F.M. La prise en charge correcte de cas passe;

. la formation pratique a la prise en charge des cas
. la dotation du personnel forme en petit materiel
. le suivi sur le terrain du personnel forme
. l'integration des strategies aux curricula des ecoles medicales.

Trans 9.

Quant a la prise en charge des cas au niveau domiciliaire, compte tenu du constat sur la solution SSS, et aussi le faqit que , comme l'a demontre la recherche operationnelle sus mentionne, l'augmentation du capital cognitif des meres demande un investissement qui depasse les capacites du Programme, celui-ci pense a:

. l'identification des solutions maison sans faire de propagande pour ou contre la SSS.
. la sensibilisation des pharmaciens, qui sont un type de prestataire non negligeable auquel reccourent en premiere essort les meres dans beaucoup de cas.
. insister sur:
  . plus de liquide possible.
  . allaitement
  . alimentation.
  . signes de gravite.

Trans 10.

Dans le domaine de l'IEC, le Programme a appris:

- que le personnel de base (CS)_ devra etre forme aux techniques de communication interpersonnelle
- que le materiel et lesmessages educatifs concus au niveau central devront etre testes et adaptes aux conditions locales.

Trans 11.

Dans le domaine de la production locale des sachets, le Programme a appris que:

- le choix du conditionnement doit etre judicieux pour ne pas creer un problemme supplementare.

- en outre les exigences d'ordre technique doivent etre respectees dans le choix du type de machine autiliser.
Ces exigences sont liees aux conditions climatiques et ala stabilite du regime electrique.

Trans 12.

D'autres preoccupations demeurent, a savoir la prise en charge des: - diarrhees persistantes.
- dysenteries bacillaires
- diarrhees assocees a l'infection HIV.

C'etait la Mme la Presidente les quelques lecons que j'ai voulu partager avec nos collegues pendant les quelques minutes qui me sont imparties. Je vous remercie.