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THE GAMBIA
NATIONAL PROGRAM FOR THE
CONTROL OF DIARRHEAL DISEASE..

An Assessment of Current ORT Educational
Materials and KAP of Village Health Workers

A Report Prepared By PRITECH Consultant:
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TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| Acknowledgements | iii |
| List of Abbreviations | iv |
| Executive Summary | 1 |
| I. INTRODUCTION | 3 |
| II. VILLAGE HEALTH WORKER/TRADITIONAL BIRTH ATTENDANT STUDY | 3 |
| A. Objectives | 3 |
| B. Sampling | 4 |
| C. Methodology | 4 |
| D. Results | 4 |
| 1. Village Health Workers | 4 |
| 2. Traditional Birth Attendants | 6 |
| E. Conclusions and Recommendations | 7 |
| III. EDUCATIONAL MATERIALS/ORT STUDY | 8 |
| A. Objectives | 8 |
| B. Sampling | 8 |
| C. Methodology | 8 |
| D. Results | 9 |
| 1. Mixing Flyer | 9 |
| 2. Feeding Handbill | 10 |
| 3. Feeding a Sick Child | 10 |
| 4. Special Diet for Diarrhea | 11 |
| 5. Diarrhea Management | 12 |
| E. Conclusions and Recommendations | 13 |
| 1. Existing Materials | 13 |
| 2. Additional Educational Materials | 14 |
| 3. New Materials | 15 |
| 4. Additional Educational Support | 16 |
| 5. Special Note | 16 |
| LIST OF PERSONS CONTACTED | 17 |

APPENDICES:

- APPENDIX 1: PHC Villager and Health Facilities
Included in Study, By Region
- APPENDIX 2: Questionnaire
- APPENDIX 3a: Village Health Worker Survey Results & Summary
- APPENDIX 3b: TBA Survey Results & Summary
- APPENDIX 4: Understanding and Practice of ORS by Ethnic Group,
Region, and Years of Service
- APPENDIX 5: ORS Formula Errors
- APPENDIX 6: Educational Materials/ORT on Hand, By Facility
- APPENDIX 7: Materials Tested by Type of Personnel
- APPENDIX 8: Observations Not Directly Related to Study
- APPENDIX 9: Two-year Workplan, National CDD Program
- APPENDIX 10: Educational Materials Workplan
- APPENDIX 11: Radio Messages on ORT, Rainy Season

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The field/interview team included: Matthew Baldeh; Adama Jeng, Health Education Unit; Dado Gano, TBA Trainer; Trevor Towle, Graphic Artist.

Cathy Wolfheim
PRITECH Consultant

LIST OF ABBREVIATIONS

| | |
|-------|---|
| ORT | Oral Rehydration Therapy |
| ORS | Oral Rehydration Salts |
| SSS | Sugar-Salt-Solution |
| VHW | Village Health Worker |
| TBA | Traditional Birth Attendant |
| CDD | Control of Diarrheal Diseases |
| HEU | Health Education Unit |
| PHC | Primary Health Care |
| USAID | U.S. Agency for International Development |
| MMHP | Mass Media and Health Practices Project |

EXECUTIVE SUMMARY

The purpose of this consultancy was threefold: (1) to assess the level of knowledge and practice of the use of Sugar-Salt-Solution (SSS) by Village Health Workers (VHW) and Traditional Birth Attendants (TBA); (2) to evaluate the understanding and use of current educational materials on ORT; and (3) to begin developing new materials as needed. In addition, my activities (with the participation of PRITECH Regional Officer Suzanne Prysor-Jones) included developing a draft of a two-year workplan for the CDD program.

My counterpart for these tasks was the new coordinator of the Program for the Control of Diarrheal Diseases (CDD), Matthew Baldeh. Matthew is a State-Registered Nurse with excellent field experience, plus two years' time in the Division of Epidemiology.

PROJECT BACKGROUND

METHODOLOGY

RESULTS

CONCLUSIONS AND RECOMMENDATIONS

All of the above topics are discussed in the following report. In summary, we found that among VHWs the knowledge and professed use of SSS is high, but correct mixing and administration poses a problem. Few of the TBAs understand the why and how of SSS. Refresher training on ORT, and the correct practice of SSS, must become an immediate priority for the Primary Health Care Program.

The evaluation of the existing educational materials on ORT not only gave us specific information on these materials, but also clearly demonstrated a large gap needing to be filled. There is no material aimed at the VHW/TBA; furthermore, there is nothing which explains the link between diarrhea, dehydration, and the use of SSS. It is recommended that a type of flip-chart (booklet) be developed to be used both during VHW/TBA trainings, and by them in the field. However, due to time constraints and to some friction within the Health Education Unit, the booklet was not begun during this consultancy. A detailed workplan concerning educational materials was drawn up by Matthew and myself before my departure; it was proposed that I return to The Gambia in early November, 1986, to test and modify what will have been elaborated by that time.

Several visits were also effected to Radio Gambia, where we discussed with Amie Joof the problem of updating ORT messages. As a preliminary step in the process, she and Sekou Ceesay (of Health Education) are cataloguing all existing spots. Some are being deleted from the collection (if they refer to MMHP campaign, for instance); others are being modified to address problems uncovered by the attached study. The list of Rainy Season spots is attached; Amie promised to send the Dry Season list as soon as it was completed.

I. INTRODUCTION

In September 1985, at a meeting in Banjul, The Gambia, evaluation results were presented for the Mass Media and Health Practices (MMHP) Project, conducted in The Gambia from 1981 to 1984. A major component of this program had emphasized training mothers and health personnel in the proper mixing and administration of Sugar-Salt-Solution (SSS). The evaluation raised concerns over mothers' and health workers' knowledge, understanding, and use of SSS.

In response to these concerns, and in preparation for the strengthening of the National Diarrheal Disease Control Program, a study on "Gambian Mothers' Understanding of Diarrheal Disease and the Use of Oral Rehydration Solution" was conducted in November, 1985; this study revealed a sharp drop in the understanding and skills that had been obtained during the MMHP campaign. The present study, also supported by PRITECH (Washington, DC) addresses the level of knowledge and practice of ORT by Village Health Workers (VHW) and Traditional Birth Attendants (TBA). These workers form a vital link in health services delivery to rural populations at the village level; their commitment to and correct use of ORS is crucial to its success.

This study has, in addition, a second very important objective. The Health Education Unit in the Department of Medical and Health has, over the past several years, produced and distributed numerous print materials on ORT and diarrhea management for use at all levels. However the understanding and use of these materials by health workers, and the reprint, modification, or the production of new materials has not been assessed. This study, then, investigates the current level of availability and use of these materials, problems associated with their use, and how best to address these problems.

II. VILLAGE HEALTH WORKER/TRADITIONAL BIRTH ATTENDANT STUDY

A. OBJECTIVES

This portion of the study was designed as a qualitative in-depth exploration into VHW/TBA understanding and practice of ORT, specifically:

- 1) the method of preparation of sugar-salt-solution (SSS);
- 2) the method of administering the solution (quantity, frequency, and duration);
- 3) the expected result of using SSS;
- 4) the availability of materials for the preparation of SSS; and
- 5) the perceived reaction to SSS by the population.

B. SAMPLING

Thirteen PHC villages were originally selected according to the following criteria:

- 1) even distribution among the five major ethnic groups: Mandinka, Fula, Wollof, Serahule, Jola;
- 2) geographic distribution according to region size;
- 3) equal numbers of large and small villages; near and far from the main road; and
- 4) time constraints of the field trek.

Occasionally, if a VHW or TBA was unavailable (due to illness, funeral, travel, or distant farm work), the team was obliged to choose a nearby village of similar ethnic group and size. We also found that time permitted the addition of six VHW and two TBA interviews. We interviewed a total of 19 VHWs and 15 TBAs. The list of PHC villages contacted may be found in Appendix 1.

C. METHODOLOGY

This study used an open-ended interview and discussion approach. The interviews were designed to first determine whether or not each VHW/TBA sees and treats children suffering from diarrhea, and then, indirectly, if he/she advises SSS as the preferred treatment. ("What did you do for the most recent case of child diarrhea you treated?") The interview then proceeds to more specific questions concerning the methods of preparation and administration of SSS, and the expected result. We also discussed methods each worker uses to explain SSS to mothers, and problems they encounter. Interviews concluded with the discussion and correction of errors in the workers' understanding or practice.

Since CHWs have been more implicated than TBA's in the use of SSS, the VHW interviews were much more detailed than those for the TBA's. Sample questionnaires may be found in Appendix 2.

D. RESULTS

1. Village Health Worker

All 19 of the VHWs interviewed say they see and treat sick adults and children. Each VHW described a variety of symptoms and diseases for which the population seeks his/her help, ranging from malaria to surface wounds to conjunctivitis. Diarrhea was always mentioned among the reasons mothers bring their children for consultation. Only one VHW admitted that the villagers view him as a shop to buy medications: all others insist that even if a person

comes to buy drugs for a family member, they insist on seeing the affected person first. However, it is important to note that on three separate occasions, interviewers observed the sale of drugs to someone with a sick relative.

The number of cases of child diarrhea seen by the VHWS the month prior to the interviews seems surprisingly low: one had seen no cases at all; 7 had seen between 1-5 cases, 4 between 6-10 cases; 1 saw more than 11, and 6 could not specify ("many", "not many", "too many", "don't know"). It may be speculated that either there were actually very few cases of child diarrhea, or that mothers bypass the VHW by making SSS at home, or by going directly to a dispensary or health center.

Level of practice of ORS as preferred treatment: In response to the question "What did you do for the most recent case of child diarrhea you treated?" 18 of the 19 VHWS interviewed said they recommended SSS. One said he referred the child to the health center; then later upon probing said he forgot to tell us that he had advised the mother to make SSS. Eighteen VHWS also say they explain the recipe and administration to mothers; the one who does not claim they all have already been taught so he doesn't need to. Fourteen responded they they mix the solution for the mothers; of the five who do not, one says the lottery was in his village so the women know the correct mixing procedure.

Knowledge of Correct Recipe and Administration: Of the 19 VHWS interviewed, 14 could correctly recite the recipe for SSS. Four of the 5 errors concern the quantity of water, ranging from 1 Julpearl bottle to 4 (unspecified) cups. Two VHWS determine the quantity of water by the age of the child. It may be that the quantity used to mix is confused with the previously advised method of administration, which also determines the quantity to be given by the age and size of the child.

The understanding of the correct administration of the solution poses a greater problem. Answers to this question are divided into three sections: the quantity of the solution to be given, the frequency and duration of administration, and whether the solution must be remade in the morning. Only one VHW gave the correct answers on all three counts.

Quantity: Four VHWS say "give as much as the child can drink." Five would not specify any quantity, and 10 gave varied descriptions of quantity according to age (possibly another throwback from the previously advised method, as mentioned above).

Frequency/Duration: Nine of the 19 correctly stated give throughout the day, whenever the child is thirsty." Our would not specify, and six insisted that the solution be given only up to sunset.

Daily renewal of the solution: Nine VHWS tell mothers to make a new solution every morning. Six others do not specify the renewal, but tell mothers to discard the remaining solution at night or use the leftover to cook the child's porridge. Four mentioned nothing about the remaining solution.

Expected Results of SSS: Seventeen of the 19 VHWS interviewed understand that SSS is to replace body fluids lost during diarrhea. Only 2 say its purpose is to stop the diarrhea; however 4 of the 17 who answered correctly say it also prevents disease and eventually stops the diarrhea. One says it also gives the child power.

Mother's Acceptance and Use of SSS: All 19 VHWS insist that mothers in their villages "accept" and use SSS. They say the mothers accept what they teach ("What I say is fact") and that very few complain about it. ("The mothers say it benefits them." "They all do it.") Six workers do home visits to check on mothers' practices and insist the mothers administer it according to their instructions. Three admit there is variability among the mothers. Six say that mothers claim the SSS has stopped the diarrhea. On probing, it is clear that, despite the apparent understanding of body fluid loss, in all villages the mothers' desire and expectation is that SSS will "cure" the child.

Availability of Materials: Sugar and salt are evidently available in all villages visited, although sugar is sometimes expensive. However, in 13 of 19 cases, Julpearl bottles and caps are difficult to find. Eight VHWS keep bottles and caps on hand for mothers to borrow, but five use and recommend the 1-liter cup measure, which they claim is much more widespread than the Julpearl bottle.

2. Traditional Birth Attendants

The TBA interviews produced less positive information than the VHWS. Of the 15 TBAs consulted, 12 claim they see and treat sick children; 3 others deal solely with deliveries. Of these 12, 9 say they recommend SSS when a child has diarrhea; three talk only about hygiene.

Three of the 15 TBAs were able to recite the correct recipe for SSS; two knew nothing about it. Eight of the remaining 10 incorrect recipes concern the amount of water to use, 6 also concern the quantities of sugar and salt.

As found for the VHWS only 1 TBA understands correctly all three aspects of administration: quantity, frequency/duration, and making SSS anew each morning. Two others stated "Give the child as much as possible"; three had no idea, and nine gave various answers, ranging from "3 tablespoons 3 times per day" (7 gave variations on this theme), to "give none in the night".

Alarmingly, only one TBA understands that SSS is to replace lost body fluids. Of the 14 others, 3 have no idea, 1 thinks it prevents worms, and 10 say it stops the child's diarrhea. On the other hand, 11 of the 13 claim that mothers in their village "accept" and use SSS; 4 TBAs say they make it for the mothers, and the mothers say it is effective.

E. CONCLUSIONS AND RECOMMENDATIONS

This level of awareness and stated use of SSS by VHWS and TBAs is evidently quite high: 9 out of 15 TBAs and 18 out of 19 VHWS interviewed. The claimed acceptance and use of SSS by mothers is also elevated. However, difficulties noted concerning the understanding of the recipe, administration, and purpose of SSS, as well as the questionable near-100% "mothers' acceptance" based on community health workers observations, lead to the following recommendations.

Most urgent is a retraining or refresher course on ORT for TBAs. This refresher course should concern the proper recipe and mixing of SSS (with practical demonstrations); the proper administration of the solution; and a thorough understanding of what it is used for. When at all possible, TBAs should be given the opportunity to observe the correction of a case of mild dehydration by the use of SSS.

A similar refresher course should be held for VHWS, although there seems to be less urgency. This course must insist on the proper administration of the solution. Both courses, and any future publicity/education, should consider modifying the SSS recipe to include an equivalency between the 3 Julpearl bottles and the 1-liter plastic cup.

These refresher courses should be held on a regular, periodic basis to emphasize the importance of SSS and to insure retention of the material learned.

Although it is not urgent, it would be informative to carry out a follow-up or confirmation survey in some of the villages where the VHW claims that "all mothers" practice the use of SSS. This perhaps could be included as part of a midpoint evaluation of the National Diarrheal Disease Control Program.

III. EDUCATIONAL MATERIALS/ORT STUDY

A. OBJECTIVES

This portion of the study was designed to evaluate educational materials on ORT currently circulated by the Health Education Department. Specifically, the study aimed to:

- 1) determine the availability and use of ORT print materials in health facilities and health posts;
- 2) identify problems associated with the use of the print materials; and
- 3) identify the need for reprint or modification of existing materials, or the production of new ones.

B. SAMPLING

Using a random selection method, 10 health facilities were identified. Personnel to be interviewed at each site were then chosen according to appropriateness (those involved most closely with public education) and availability at the time of the interview. A total of 22 staff were interviewed, according to the following distribution: 6 Dresser-Dispensers, 2 Nurse-Midwives, 1 Health Inspector, 6 Community Health Nurses, 3 Rural Community Attendants, 2 Auxiliary Nurses, 1 lab technician, and 1 leprosy/TB attendant. All 19 VHWs and 15 TBAs included in the first portion of this report were also interviewed concerning educational materials. The list of facilities contacted may be found in Appendix 1.

C. METHODOLOGY

Five print materials produced by the Health Education Unit are considered in this study:

- o 1 Flyer ("Mixing Flyer") recipe for SSS
- o 1 Handbill ("Feeding Handbill"), previous and recently revised versions
- o 3 Posters: Feeding a Sick Child
Special Diet for Diarrhea
Diarrhea Management.

Those materials visible or on hand in each facility were tested first; if none were available the interviewer provided appropriate material to be tested. The testing method involved the health worker's general understanding of the material and its message; identification of pictures; target population; and how each material is used. Observation was also made concerning materials on hand, where they are kept, and who has access to them. The final portion of the interview concerned the health workers' opinions about existing materials and perceived needs for modification or new materials.

b. RESULTS

Results of the testing and discussions are presented by material tested, separated into VHW/TBA level and clinical personnel.

1. Mixing Flyer

a) VHW/TBA

This flyer was tested with 15 VHWs and 12 TBAs. All 15 VHWs were able to correctly interpret the recipe for SSS from the flyer. However, of the 12 TBAs, only 4 were able to interpret it correctly; 4 more knew it was the recipe for SSS but interpreted it incorrectly; 3 said it concerned hygiene and good health, and one had no idea.

All the VHWs and one TBA use the flyer to remind them of the recipe, and to explain it to mothers. Only 3 have enough copies to give to mothers. All VHWs and 9 TBAs have a copy of their own to use; one TBA claims she had never even seen it.

The VHWs had no problems identifying the objects on the flyer; however 4 TBAs had difficulty, especially identifying the sugar bag and salt basket. Two TBAs counted 4 bottles (3 plus a small one); another interpreted the proportions of sugar and salt as 6 caps sugar and 2 caps salt, because the 8 caps are grouped into 6 and 2.

Five workers suggested that the 1-liter cup be included on a new version of the flyer. Since 13 of the 19 VHWs said bottles were difficult to come by in their villages, this seems like a valid suggestion. Others would like a larger version of the flyer to use while teaching large groups. In general, the VHWs and TBAs need and want refresher training on the correct mixing and administration of SSS, and on the use of the flyer.

b) Clinical Personnel

The mixing flyer was found in all health facilities visited, and was posted in over half the facilities. We tasted it with 13 people, all of whom interpreted the recipe correctly. However two people also said it concerns the cure and prevention of diarrhea, and that it includes other foods. Three maintain it also explains about dehydration.

The flyers are used to explain SSS to mothers; 9 people give copies to mothers, and one to the TBA.

No one had difficulty interpreting the pictures, although one person said the caps are difficult to count. Two people would prefer to show a person mixing the solution. Mothers ask often about why and how to use ORS.

2. Feeding Handbill

a) VHW/TBA

Of the 19 CHWs (15 VHW, 4 TBA) interviewed, all perceived that a mother was feeding a child; 17 said "with foods that make him healthy". Only one made the link with recovery from diarrhea, although all were able to correctly identify the picture of a child having diarrhea.

Only one VHW (no TBAs) said he uses the handbill to explain nutrition to mothers.

The line-drawings of foods on the revised version of the handbill are extremely difficult to interpret, even when colored. The following shows which pictures were incorrectly (or not at all) identified: Eggs (14), oil bottle (9), cup (11), bag of rice (17), coos (19), groundnut (13), plant (6), cow (6), bowl of milk (12), fish (2), cut fish (14). When asked to identify the various food pictures, interviewees almost invariably started with the whole fish (easiest to identify) and worked their way upwards on the page. Clearly the photographs on the previous version of the handbill are easier to identify than the drawings, although the revised version has the advantage of being printed on one side only.

b) Clinical Personnel

Of 9 personnel interviewed, 6 interpret that the handbill recommends foods for a child with diarrhea. One dresser-dispenser claims it tells the recipe for SSS. Because medical personnel are literate, everyone was able to identify the drawings on the revised version, although several commented that the photographs on the old version are much clearer and are more easily identified by the population. Of particular difficulty are the drawings of milk and rice. One person commented that some women interpret the photographs as recommending "European" eggs over local eggs.

Five of the nine people explain the handbill to mothers; three of these five use it to explain weaning practices and general nutrition.

3. Feeding a Sick Child

a) VHW/TBA

Because this poster was not destined for use at this level, it was tested only in three posts where it was found. The interpretations are: there is a sick child on top; a cared-for child below; give good foods, wash hands before breastfeeding, cover foods. Two of the three VHWS mentioned SSS and breastmilk for strength.

The sugar and the suns were not identifiable. Two of the VHWS use the poster to explain general nutrition to mothers, and one says he explains whatever he can remember.

b) Clinical Personnel

This poster was tested at 10 health facilities, with a total of 12 staff people. The three primary messages understood are: breastfeeding, solid foods, and the recipe for SSS. Five people use it as a weaning foods poster, or simply to say that breastfeeding and solid foods are good for children.

Apart from the three above-mentioned messages, the poster appears congested and confusing. All interviewees point out first the women in the red dress (breastfeeding; solid foods.) The small items (6 bowls, 4 bowls, the sun) were never interpreted without a direct probe, and even then were poorly understood. Several people entirely missed the two lower quadrants in each half of the poster.

Health workers say they use this poster to encourage mothers to breastfeed and give solid foods; they complain it is too big to take on trek. Three said it is easy to use; six think it is too crowded, or too confusing for mothers.

4. SPECIAL DIET FOR DIARRHEA

a) VHW/TBA

At this level, this was tested where found, thus at only two health posts. It appears easy for the VHWS to interpret the three main messages: SSS, breastfeeding, and solid foods. One VHW uses it on home visits, and says mothers are fascinated by it.

The VHWS suggest that it include pictures of the foods that are good to give to a child, that it compares a child "well taken care of" with a child poorly cared for; and that the child with diarrhea be on the left side nearer the SSS.

b) Clinical Personnel

Of the 11 persons interviewed concerning this poster, nine said the message was SSS, breastfeeding, and solid foods for a child suffering from diarrhea. One mentioned only SSS and hygiene, one added hygiene as a fourth message.

This poster seems to be very clear and easy to interpret. The health workers use it to point out the three messages to mothers. Comments and recommendations include: make it larger (for large group discussions); include pictures of what the child is to eat; and write it in the local languages (sometimes translation, or faithful translation, is difficult to come by).

5. DIARRHEA MANAGEMENT

a) (This was not tested at the VHW/TBA level)

b) Clinical Personnel

Of the seven people interviewed, four correctly explained the differences between Treatment Plans 1, 2, and 3. Two people talked about the necessity to weigh malnourished children (one said "dehydrated" but then said to weigh to see if the child was gaining or losing weight);

one talked of the administration of ORS according to the age and weight of the child. No one followed the arrows to show a progression of treatment from one plan to another.

The only picture that was incorrectly interpreted was the clock: give 20 ml of the solution every 4 hours". That particular dresser-dispenser claims he shows mothers a 20-ml measure to give them the idea.

Most health staff understand clearly that the poster is meant for them. Two use it to help explain Plan 1 to mothers. Another says it is too confusing for mothers so he doesn't use it any longer.

The revised version is preferred largely to the old; it simplifies Plan 1 with its previously confusing dosages. However, it was recommended to include alternate recipes for SSS, and to add a picture of a child drinking (Plan 1 in the revised version has no picture).

E. CONCLUSIONS AND RECOMMENDATIONS

1. Existing Materials

Mixing flyer: This needs to be modified to include some version of an alternate recipe for SSS: the 1-liter cup, and perhaps an equivalent to the bottle cap measure. Although several people preferred the step-by-step approach, showing a woman mixing the solution, most people feel that the flyer is well-known and familiar, and a new presentation would confuse the public.

Feeding handbill: It is evident that the food pictures are not easily understood; photographs are clearly the best way to represent foods. Also, some link needs to be made between the child having diarrhea and the child eating healthy foods.

Feeding a sick child: The number of messages understood on this poster does not justify the great number of pictures, many of which only serve to confuse the observer. The three messages: SSS, breastfeeding, and solid foods are already well presented on the poster "Special Diet for Diarrhea".

Special Diet for Diarrhea: This is by far the best poster concerning diarrhea: the messages are simple, clear, and easily understood. Perhaps it could be modified to add a sick and a well child, and some recommended foods. It could also be enlarged. These changes would then preclude the need to reproduce "Feeding a Sick Child".

Diarrhea Management: The treatment plans themselves are clear enough to health personnel, but the arrows between them are rarely mentioned; thus no concept of "flow". It is used more as a treatment reminder, and as such can remain as is. Perhaps a picture of a child drinking could be added at Treatment Plan 1 to help those who explain it to mothers.

The correct interpretation and use of all materials requires explanation at least, and comprehensive practical training at best. It is recommended that one-day workshops on the appropriate use of the educational materials be held for all health facility staff, and for all CHN supervisors. These workshops should address each specific visual aide, its message, whom it targets, and how to use it. CHN supervisors must also be taught how to convey this information to the VHWS and TBAs for materials appropriate to their use.

2. Additional Educational Materials

As previously mentioned, the "materials testing" interviews concluded with an open discussion about each worker's needs for additional materials. Although some people were satisfied with what exists, and others seemed reluctant to express their needs, certain patterns were evident on the two levels of workers interviewed.

a) VHW/TBA

The emphasis at this level is on the need for some teaching tool to describe the linkages among diarrhea, dehydration, and drinking SSS. Fourteen people requested something of this nature. Seven others expressed the need for something to link hygiene and diarrhea prevention. In general, VHW/TBAs want something to "make ORT trusted"; they want a comparison of a dehydrated and a healthy child, and they are evenly divided between suggesting posters, handbills, or booklet form.

b) Clinical Personnel

For clinical personnel as well the emphasis is on a description of the dehydrating effects of diarrhea and the rehydrating effects of ORT. Eighteen people requested a comparison of two children, plus an adequate representation of what ORT does.

Four people suggested something on feeding and food preparation; 2 people need a representation of the correct administration of SSS, and 2 others would like some alternate (adapted) SSS recipes.

3. New Materials

a) VHW/TBA

The only materials designated (and appropriate) for use by the VHW/TBAs are the mixing flyer and the feeding handbill. Neither of these materials addresses topics which are clearly problems for this level of health personnel: The administration and purpose of SSS. The VHW/TBAs want and need something to explain the link between information on hygiene and diarrhea prevention, and would prefer a comprehensive, all-in-one visual aid.

Although several workers suggested posters as the desired form, a "comprehensive" poster would be much too crowded to be an effective teaching tool. A series of ideas linked together in booklet form, but large enough to use when addressing a group of listeners, is the most practical and useable material.

It is recommended then, to begin production of a booklet/flipchart aimed at use by VHW/TBAs. It should include no more than one idea per page, and must contain the following messages:

- Diarrhea causes dehydration
- Comparison of a healthy child and a dehydrated child
- Why dehydration is dangerous (perhaps a comparison with a plant)
- Preparation of SSS
- Administration of SSS (a child drinking)
- Recovery of the child
- Recommended foods for a recovering child
- Personal and environmental hygiene for diarrhea prevention.

This booklet will be aimed at use by VHWs and TBAs, with the primary goal of facilitating their dialogue with villagers. In addition, it will be an effective teaching tool for all levels of health personnel in contact with the population. Third, and perhaps most immediately important the booklet should be used during VHW/TBA refresher trainings.

The success of this booklet will depend partly on sufficient pretesting. However, the need for adequate staff training at all levels cannot be overemphasized.

b) Clinical Staff

Health facility staff prefer posters, and also need something to show the link between a dehydrated child, SSS, and a healthy child. Because both clinical staff and VHW/TBAs also find handbills extremely useful, it may be worthwhile to print identical posters and handbills describing this linkage.

4. Additional Educational Support

New and revised print materials must be reinforced. Consistent and regular training, as previously mentioned, is one essential element. Another important vehicle is radio. Since the MMHP campaign, short messages, or "spots" on ORT have been integrated into the regular series of health messages broadcast by Radio Gambia. These messages are currently being reexamined by the Health Education Unit, and should be modified to address the problems uncovered or clarified by the present study. It is recommended that the new or modified spots include information about an equivalency between three Julpearl bottles and the 1-liter plastic cup, and that they stress the proper administration and expected result of SSS.

5. Special Note

At the time of the writing of this report, a draft of the recommended booklet has been proposed and developed by the Diarrhea Disease Control Program Coordinator and the Health Education Unit. A workplan has also been developed for the elaboration and testing of the booklet, as well as for the modification and revision of the radio spots.

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RADIO GAMBIA:

Amie Joof, Adult Education

Appendix I

PHC VILLAGES AND HEALTH FACILITIES INCLUDED IN STUDY, BY REGION

| REGION | PHCV | H/C | DISPENSARY |
|---------|---|----------------------------|-------------------------------------|
| WESTERN | NDUNGU KEBBEH MUNAGEN KAFUTA FARABA SUTU BULOCK SOHM | BWIAM SIGANOR | |
| CENTRAL | PALLEN WOLLOF MANDUAR JATABA | KIANG KARANTABA KEREWAN | NJAYEN SANJAL |
| EASTERN | SAMBANG JESSADI BATTI SARE BOJO KANUBE SUDUWOL GARAWOL SOTUMA SERE FULA BANTANG TAIBATOU | FATOTO YOROBAWOL | DANKUNKU BRIKAMABA GAMBISSARA |

VILLAGE HEALTH WORKER INTERVIEW

Village- Region _____

Ethnic group _____

Name of VHW _____

Length of time as VHW _____

I.1. For what do villagers come to see you most frequently?

I.3. Who comes most often to see you - (sick adult, relative of sick person, mother bringing sick child)

II.1. How many cases of child diarrhea did you treat last month. (Is there a record-keeping system.)

II.2. (Choose the 2 most recent cases. For each one, ask) -

a) How many days had the child had diarrhea before the mother came to see you

c) What did you do for the child - Why

d) What did you tell the mother to do

e) Do you think she did what you suggested. How do you know.

f) (If it was not mentioned in No. 2) Why did you decide not to advise

II.3. (If ORT is not mentioned above)

a) Have you heard about ORT. Where.

(If ORT is mentioned above)

a) I would like to know how you explain to the mothers about ORT

(In both cases)

b) How do you prepare ORS.

c) How is it administered to the child

d) What does it do

e) How do mothers react to it

II.4. In your village, is there ever a lack of sugar (granulated)

salt

Julpearl bottles

Bottlecaps

II.5. Do you often have cause to refer children with diarrhea to the Health Center. (If yes, what are the conditions—why do you refer them)

TBA INTERVIEW

Village _____

Ethnic group _____

Name of TBA _____

Length of time as TBA _____

1) Do mothers often come to see you when their child is sick.

What do you advise for a child who has diarrhea

(If ORS is not mentioned: Do you know about ORS.)

2) a) How do you prepare ORS

b) How is it administered.

c) What does it do

d) How do the mothers react to it

EDUCATIONAL MATERIALS - ORT

Village-Region _____

Station _____

Title, Name _____

Length of stay at
this station _____

(Note to interviewer - As you introduce yourself, notice which visual aides are on display. Note where they are and who has access to them. List them here)

I. (If there are materials posted)

I.1. I notice you have several posters on display. How long have you had the

I.2. Have you received others: Where do you keep them.

Who uses the materials.

(If none are visible)

I.1. Have you received any visual aides concerning ORT. Do you have any now.
Where do you keep them.

II. For each visual aide posted or shown: (specify which poster)

II.1. Can you explain this poster to me (what is its message)

II.2. (If the poster is aimed at mothers) Do you often find yourself
explaining it to mothers

II.3. What comments or questions to the mothers ^{have} ~~ask~~ about it

II.4. Is there something that could be improved to make the message more
clear (drawings, more writing, less writing, photographs...)

II.5. Have you received handbills

Which ones

What do you do with them

II.6. (Note which handbills are being discussed)

Can you explain this handbill to me

What do you tell the mother when you give it to her

III.1. What other messages or ideas need to be communicated to mothers
about ORT

III.2 What kind(s) of educational materials would best help you
communicate/teach these ideas

Posters

Radio messages

Handbills

Booklets

Other (specify)

Appendix 3a
VILLAGE HEALTH WORKER SURVEY RESULTS: SUMMARY

Sample size: 19

1. All 19 VHW say they see and treat sick adults and children. Only one admitted that he was often seen as a shop to buy drugs; however at 3 other posts we observed family members coming to buy drugs for a sick relative.

2. No. cases child diarrhea seen previous month

| | 0 | 1-5 | 6-10 | >11 | Not Spec. |
|--|---|-----|------|-----|-----------|
| | 1 | 7 | 4 | 1 | 6 |

3. a) Say they recommend SSS for most recent case seen:

| | yes | no | |
|--|-----|----|---------------------|
| | 18 | 1 | he "forgot" to tell |
- b) Say they explain SSS to

| | | | |
|--|----|---|--|
| | 18 | 1 | the mothers in this village already know |
|--|----|---|--|
- c) Say they mix SSS for mothers

| | | | |
|--|----|---|---|
| | 14 | 5 | one says all the mothers know how to mix it |
|--|----|---|---|

4. Able to recite recipe correctly:

| | | | |
|--|----|---|---|
| | 14 | 5 | 4 of the 5 errors concern the quantity of water |
|--|----|---|---|

5. Able to describe correct administration:

| | | | |
|--------------------|---|----|---|
| Quantity | 4 | 15 | 10 of these give varying quantities according to child's age |
| Frequency | 9 | 10 | 6 of these say "up to sunset" |
| Daily new solution | 9 | 10 | 6 of these say "throw out at night" but do not specify to make anew |

6. Understand SSS replaces lost body fluid

| | yes | no | |
|--|-----|----|--|
| | 17 | 2 | 2 say it stops diarrhea 4 who know dehydration also say it stops diarrhea |

7. All 19 say mothers accept and make/use SSS. Three admit there is variability among mothers. Six say they do home visits to check; six others say the mothers expect the SSS to stop the diarrhea.

8. Sugar and salt are available in all villages, but 13 VHW's say getting Julpearl bottles is a problem. 8 of these keep bottles and caps on hand. 5 use the 1-liter cup measure.

Appendix 3b
TBA SURVEY RESULTS: SUMMARY

Sample size: 15

| | | | | |
|----|---|-----|----|---------------------------------|
| 1. | 12 of the 15 say they see and treat sick children. The other 3 deal solely with deliveries. | | | |
| | | Yes | No | N/A |
| 2. | Say they recommend SSS for children with diarrhea | 9 | 3 | 3 |
| 3. | Able to recite correct recipe | 3 | 10 | errors concern all ingredients |
| 4. | Able to describe correct administration | 3 | 9 | 3 |
| 5. | Understand SSS replaces lost body fluids | 1 | 14 | 10 say it stops the diarrhea |
| 6. | Say the mothers "accept" and make/use SSS | 11 | 3 | 1 dont use it 1 doesn't know |

Appendix 5

ORS Formula Errors

ZHW

Sugar

8 caps
 8 caps
 8 caps
 8 caps
 8 caps

Salt

1 cap
 1 cap
 1 cap
 1 cap
 8 caps

Water

2 bottles
 4 cups
 determined by
 age of child
 1-6 mo: 1 bottle
 2 yrs: 3 bottles
 3 bottles

TBA

Sugar

8 tsp.
 6 caps
 2 caps
 5 caps
 8 caps
 8 caps
 5 ment 1/2
 caps
 8 caps

Salt

3 tsp.
 1 cap
 1 cap
 6 caps
 1 cap
 1 cap
 1/2 menthola-
 tum cap
 1 cap

Water

1 bottle
 3 bottles
 doesn't know
 2 bottles
 5-6 bottles
 1 bottle
 1 bottle
 1 yr: 1 bottle
 2 yrs: 2 bottle
 3 yrs: 3 bottle
 adult: 1 bottle
 child: 1 small
 bottle
 (seen on flyer)

2 tsp.

Appendix 6

Educational Materials/ORT On Hand, By Facility

| FACILITY | Mixing Flyer | Feeding Handbill | Feeding a Sick Child | Diarrhea Management | Special D For Diarr |
|-----------------|-----------------|---------------------|-------------------------|------------------------|------------------------|
| BWIAM (H/C) | X | X | X | X | X |
| SIBANOR (H/C) | | | | | X |
| KARANTABA (H/C) | X | X | X | | |
| KEREWAN (H/C) | | X | | X | X |
| FATOTO (H/C) | X | X | X | X | X |
| GAMBISARA (D) | | | | X | X |
| DANKUNKU (D) | X | X | X | X | X |
| BRIKAMABA (D) | X | X | | | |
| NJAYEN SANJ (D) | | X | | X | |
| Y/BAWOL (H/C) | X | X | X | X | X |

H/C = Health Center

D = Dispensary

Appendix 7

MATERIALS TESTED BY TYPE OF PERSONNEL

| PERSONNEL | MIXING FLYER | FEEDING HANDBILL | FEEDING A SICK CHILD | DIARRHEA MANAGEMENT | SPECIAL D FOR DIARR |
|------------------------|-----------------|---------------------|-------------------------|------------------------|------------------------|
| DRESSER DIS- FENSER | 6 | 2 | | 4 | 5 |
| SRN | 1 | | 4 | 1 | 1 |
| CHN | 4 | 4 | 2 | | 3 |
| H/I | | | 1 | 1 | |
| RCA | | | 2 | | |
| AUXILLARY NURS | 1 | 1 | 1 | 1 | 1 |
| SEN-MIDWIFE | | 1 | 2 | | |
| LEP/TB ATTENDANT | 1 | | | | |
| LAB. TECH. | | 1 | | | 1 |
| | 13 | 9 | 12 | 7 | 11 |

Appendix B

OBSERVATIONS NOT DIRECTLY RELATED TO STUDY

- 1) Several TBA's mentioned that they feel isolated, ignored. The CHN's spend most or all of their supervising visits with the VHW and often only ask about or briefly greet the TBA.

- 2) Five health facilities visited volunteered that their stock of ORS packets was insufficient. One dresser-dispenser is even using the I.V. solution (orally administered) in place of ORS.

APPENDIX 10

ANNUAL CDD PROGRAM:

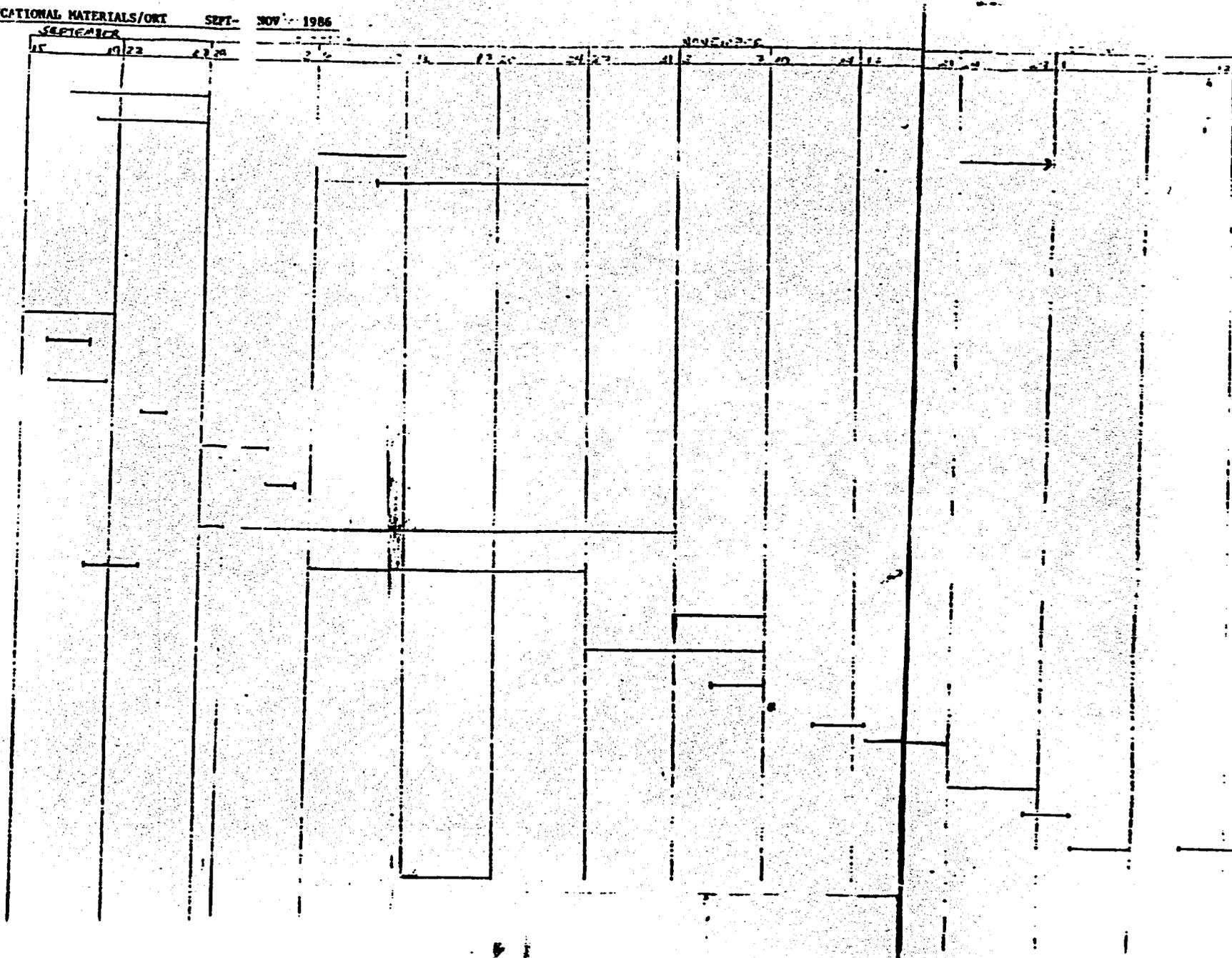
WORKPLAN: EDUCATIONAL MATERIALS/ORT SEPT- NOV 1986

RADIO

1. Define new messages and modifications
2. Catalogue existing spots (with Radio Gambia)
3. Record new spots/modify existing spots
4. Define and record spots in Fula, Jola, and Serahule

BOOKLET/FLIPCHART

1. Define messages to be included
2. Determine format and draft design
3. Define illustrations needed
4. Contact Book Production Unit to begin illustrations
5. Determine number of copies needed (approximate)
6. Get cost estimate from Book Production Unit
7. Oversee illustration production (Matthew and Trevor)
8. Define text to accompany illustrations (with HEU)
9. Make draft (up to size) for testing
10. Translate text into local languages
11. Plan trek for testing booklet (4 days)?
12. Trek
13. Modify illustrations and text
14. Retest (day treks)
15. Present to concerned authorities
16. Final modifications and printing
17. Determine distribution plan for booklet
18. Design training method on use of booklet (country-wide train?)



| NO | MESSAGE/SPOT | MODIFICATION | REMARKS | LANGUAGE |
|-----|--|--|--|----------|
| 1. | Rainy Season Childcare | - | O.K. | W & M |
| 2. | Taking Child for help/ Early signs of dehyd- ration | Dryness to be associated with loss of water | Add: dryness results from fluid lost during diarrhoea <i>SSS replaces fluid lost</i> | W & M |
| 3. | Helping Mothers with Childcare during rain- season | - | O. K. | W & M |
| 4. | Feeding Solid foods when Child is recover- ing from diarrhoea | - | O. K. | W & M |
| 5. | Feeding (Experts advice) | - | O. K. | W & M |
| 6. | Feeding (Commercial) | - | O. K. | W & M |
| 7. | Diet for dryness- S/S & Solid foods | Don't mention Red Flag volunteer | Omit Red Flag | W & M |
| 8. | Administration-Mix- ture & administration | - | Removed ORS Quantity by Body weight / <i>age</i> | W & M |
| 9. | Diet for dryness ques- tion and answer | - | Removed ORS quantity by body weight / <i>age</i> | W & M |
| 10. | Faeces - prompt clean- ing, proper disposal and washing hands with soap and water | Omit Poster | Removed portion referring to poster distributed during the Mini campaign | W & M |
| 11. | Faeces- (Dialogue) | O. K. | O K | W & M |
| 12. | Faeces- Imam's advice | O. K. | O K | W & M |

Added: Give as much as possible.