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**Recommendations for communications component
of Gambia Maternal Nutrition Education Project**

by

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Introduction

In 1985, INCS began a collaborative maternal nutrition education project with Save the Children Federation and the Medical Health Department in The Gambia. The project was intended to improve maternal nutrition during pregnancy among low-income Gambian mothers (thus reducing early termination of pregnancies), reduce the incidence of low birth weight babies, and produce a change in attitudes regarding the importance of dietary supplementation to pregnancy outcome. This was to be accomplished through development and promotion of inexpensive, locally based food supplements for pregnant women, the familiarization of TBAs in growth and weight monitoring techniques, and the implementation of a supportive communications strategy to promote behavioral change in mothers' nutrition-related practices. The pilot project is being carried out in the SCF's High Impact Program, a ten-village area in the Upper Baldi Administrative District.

This report documents the follow-up visit of Ron Israel, Director of INCS, to the Gambia program site. He summarizes the progress made so far in reaching the project objectives and makes several recommendations specific to a communications/education strategy. Priority in this effort should be given to improving a maternal nutrition monitoring card for TBAs, developing supplementary educational and training materials, identifying appropriate motivational and behavior-related messages to be addressed to the target groups, and training TBAs in monitoring techniques and food supplement preparation. All of these activities should be designed and coordinated as a systematic, well planned nutrition education intervention. This intervention is to be set up in a way that changes in the nutritional status of mothers and their newborns can be measured.

PROJECT BACKGROUND

In February, 1985, Save the Children Federation (SCF) and The International Nutrition Communication Service (INCS) agreed to a collaborative pilot maternal nutrition education project to take place in SCF's high impact project area in Gambia's North Bank. The purpose of the project was to use education, communications and social marketing techniques to improve the nutritional status of pregnant women in the high impact project area and decrease the prevalence of low birth-weight babies and early terminations of pregnancies in that area.* The Gambian Department of Medical Health expressed interest in the project, indicating that, if it were successful, the GOG would seriously consider adapting the methodology on a national level.

The rationale for the project was based on the findings of a 15-year research study in the Gambian village of Keneba, carried out by the British Medical Research Council (MRC). The Keneba study identified low birth weight prevalence as being highest among those infants born to women whose last trimester of pregnancy coincided with the June - August rainy season. A calorie dense supplemental biscuit given to these women during the rainy season period, produced a dramatic reduction in the incidence of low birth weight and, even more startling, a subsequent increase in the growth curves of the infants of supplemented mothers (in contrast to a baseline control group).

The problem with the MRC solution was that the biscuit was made from imported commodities (e.g. wheat flour and milk powder) and was given in a very controlled setting (the women were forced to consume the biscuit on the spot, thereby obviating the option of giving it to another family member).

* For a detailed description of the project proposal see INCS Consultant Report: Gambia, January 23 - February 3, 1985, Proposal for a collaborative maternal nutrition education project with Save the Children/Gambia, INCS, and the Gambia Medical Health Department, R. Israel, EDC.

The SCF/INCS project sought to develop and market a locally based dietary supplement for pregnant mothers, and to promote the concept that pregnant mothers needed to eat more food for their own health as well as for that of their babies. Under the project scenario SCF was to assume the role of implementing agency and INCS was to provide needed technical assistance.

In October of 1985, INCS sent Dr. Kusum Shah, a noted expert in maternal nutrition, to the Gambia to help SCF develop an approach to training illiterate traditional birth attendants and women's group leaders in techniques for monitoring maternal nutrition during pregnancy. Dr. Shah stimulated SCF to develop a pictorial screening card for identifying and monitoring at-risk pregnancies (see Appendix A). The card focuses on four at-risk signs:

- o Anemia (clinical signs)
- o Failure to gain weight
- o Malaria
- o Vaginal bleeding

SCF has produced several hundred copies of these cards for use by TBAs in the high impact area. The cards have a serious technical flaw; i.e. the visual signs for anemia are misrepresented. They also fall short of reaching their educational potential by failing to provide symbolic messages for appropriate corrective measures; e.g. the newly developed dietary supplement or iron folate tablets. However, their very existence is a step forward in the right direction, and they could be improved upon quite easily.*

A second INCS consultant, Florence Dahniya, a home economist from Sierra Leone, visited the Gambia in 1985 to help the SCF team develop a nutritionally sound, locally based dietary supplement for pregnant mothers in the high impact area. Dahniya and SCF nutrition advisor Fatou Faye developed a supplement ("futu kayei") based on roasted rice or coos (millet flour) groundnuts and honey. A nutrient analysis of the mixture, performed

* If SCF is interested, INCS is willing to underwrite the expense of an improved card (see recommendation #1, page 1.)

by Medical Health Department Staff Nutritionist Seedy Taal, revealed that a daily intake of 308g would meet 50% of the calorie and protein intake of pregnant women in the Gambia. The supplement is deficient, however, in terms of iron.

According to Fatou Faye, "futu kayei" has long been known and considered as a holiday dish by villagers in the high impact area. What is innovative in the current formulation is the roasting of the flour (a preservative measure). Fatou has embarked on a series of demonstration education classes to promote the use of "futu kayei" as a maternal supplement. This is a useful start to an educational intervention. However, if the supplement is to be successfully promoted, a communications strategy is needed to address several important corollary attitudinal issues, such as:

- o that many women still deliberately try to limit their dietary intake during pregnancy in the belief that this practice will facilitate childbirth;
- o that women still get fed "last and least" in Gambia, as in other parts of Africa, regardless of whether they are pregnant or not.

These attitudinal constraints should not be underestimated, and deserve to be fully addressed in an intervention strategy. Fatou expressed an interest in the development of supportive promotional materials, e.g. posters, flipcharts, with specific messages addressing these issues.

TRIP FINDINGS

Much has changed in the fourteen months since I last was in the Gambia. Save the Children has made enormous progress with their project in the high impact area. SCF now has extensive health and nutrition related baseline data on the ten villages in the high impact area. Although the data has yet to be fully analyzed, preliminary analysis suggests that:

- o the infant mortality rate is 75/1000

- o there is a 25% incidence of low birth weight
- o there is a very high incidence of still births: 120/1000 live births
- o incidence of low birth weight, still births and early terminations of pregnancy are not associated exclusively with the rainy season, but tend to be fairly evenly distributed throughout the year. Prevalence seems to be highest among certain age groups; i.e. the very young or very old
- o existing health care facilities are almost non-existent. The regional clinic at Ferafeni has few services, and is inaccessible for many villagers. The regional traveling clinic seldom makes its scheduled monthly visit to each village. When it does come, the average visitation with each patient lasts fifty seconds. There is a woeful shortage of essential drugs. Even iron/folate tablets, essential for relieving the severe anemia endured by many mothers, is in short supply.

One can not help but be impressed by SCF's energetic, committed and competent staff. Gambians occupy many of the leadership positions in the SCF program. A wide variety of activities are being started including the development of a credit scheme for productive and income generating activities; the establishment of numeracy and literacy classes; the construction and rehabilitation of wells; the development of three village gardens; the construction of a feeder road for one of the large villages (Katchang); the construction of two rice field causeways; the building of a primary school and several "classroom blocks"; and the development of a youth center. In the health sector, in addition to the maternal nutrition education effort, SCF also is concerned with instituting an Expanding Program of Immunizations, monitoring the nutritional status of children under five years of age, and establishing a maternal care hut in each village.

CONCLUSION

This report was prepared for an SCF staff meeting in early July during which priorities for the coming year, particularly in the health sector, were to be discussed. The report is also an appeal to SCF to capitalize on the infrastructure that has been established to deal with the problems of maternal malnutrition and low birth weight in the high impact area. Although SCF faces an ambitious agenda of activities on the wide variety of activities which it has already started, it would be a waste of resources already invested if maternal nutrition did not receive priority in next year's program.

PRIORITY WOULD MEAN A SYSTEMATIC EDUCATIONAL INTERVENTION TO IMPROVE THE HEALTH AND NUTRITIONAL STATUS OF PREGNANT WOMEN IN THE HIGH IMPACT AREA. The intervention should be given the following tools to work with:

- o a better designed maternal nutrition monitoring card for TBAs (Although SCF has produced such a card, it has a number of technical flaws that would seem to merit revision. INCS is willing to send a communications consultant to help redesign the card, and support additional production costs.)
- o supportive educational materials that address attitudinal constraints that militate against supplementation during pregnancy. (The same INCS consultant who works on an improved screening card could also help SCF design appropriate messages and support materials for the educational effort.)
- o scales to monitor maternal weight gain (SCF plans to use scales that UNICEF is bringing into the country; but ordinary bathroom scales could be instituted immediately as a temporary measure.)

- o training sessions on maternal monitoring and supplemental food preparation for TBAs and women's group leaders
- o an adequate supply of iron folate tablets and/or chloroquin to cover a small cohort of women in the experimental population (or alternatively, the promotion of green leafy vegetables and other iron rich foods from the village gardens that SCF is developing).

A bona fide intervention should test the ability of the SCF/INCS strategy to effect changes in a cohort of pregnant women from the high impact area. Margueret Pettibone, SCF's Health Coordinator, suggests a manageable population of 200 pregnant mothers could be drawn from the villages of Ketchang and Illiyiasha (obviating the need to cover women in all ten villages). The Ketchang and Illiyiasha experimental group could be matched with a control group drawn from the high impact area. The intervention could be used to measure the impact of the promotion of dietary supplementation alone, or preferably dietary supplementation in conjunction with iron/folate and/or chloroquin (alternatively, it may be worth considering the promotion of iron rich foods from village gardens, particularly if such foods could be made available year round.)

SCF's commitment to this sort of intervention must include at least one full time person who can work exclusively on this task for a period of at least six months, but preferably one to two years. Perhaps an existing SCF staff person could be secured, or a new person could be brought on board. If appropriate, INCS is willing to provide SCF with a maternal nutrition education field manager for a limited period of time, contingent upon approval from our funding agency - A.I.D./Washington.

Few, if any, have adequately dealt with the widespread problem of maternal malnutrition in developing countries. If the Medical Research Council is correct, birth weight outcome is critical, not only for the first few days or life, but also for subsequent child development. The strategy and techniques for combatting maternal malnutrition that SCF is currently developing for the North Bank, if successfully implemented, could be used elsewhere in Gambia and throughout Africa.

SUMMARY OF RECOMMENDATIONS

o SCF/GAMBIA SHOULD CONSIDER HAVING A NUTRITION COMMUNICATIONS WORKSHOP FOR ITS HIGH IMPACT PROJECT

The workshop should focus on two activities:

- (a) The pre-testing and refinement of the pictorial at-risk screening card for Traditional Birth Attendants (the card is technically flawed and its effectiveness could be enhanced with the inclusion of relevant nutrition education messages); and
- (b) the design of messages and appropriate materials to support the efforts of SCF to promote improved maternal nutrition behaviors in the high impact area. INCS can provide a nutrition communications specialist to coordinate such a workshop. Participants could include SCF project staff, representatives from the Department of Medical Health, and North Bank residents.

o SCF/Gambia should consider implementing a systematic maternal nutrition education intervention

- (a) the intervention would support the hypothesis that changes in diet during pregnancy can affect all pregnancy and birth weight outcomes;
- (b) that illiterate traditional birth attendants (TBAs) and women's group leaders can be used effectively to screen and monitor at-risk pregnancies and provide relevant nutrition education and counseling; and
- (c) that education/communication techniques can be used effectively for training TBAs and promoting behavior change in the target population.

The proposed intervention would consist of the following activities: screening of a cohort of pregnant women in the high-impact area utilizing a pictorial maternal nutrition screening card developed by SCF/INCS;* promotion of a locally based dietary supplement (roasted rice/millet flour, groundnuts, sugar/honey) developed by SCF/INCS; promotion of other maternal nutrition/health supplements for pregnant women (e.g. iron tablets, local iron food supplements, chloroquine); promotion of complementary food practices/behaviors (e.g. that "women should eat more during pregnancy to insure a healthy baby;" "that limiting diet during pregnancy does not correlate with an easy delivery"); the monthly weighing of mothers in both an experimental and a control group; and the recording of birth weight and pregnancy outcomes for mothers in both experimental and control groups.

The intervention could be designed on several levels, depending on the availability of supportive infrastructure for measuring the impact of the following variables:

INTERVENTION DESIGN VARIABLES

1. maternal supplement plus feeding practice messages
2. maternal supplement plus feeding practice messages and iron/folate
3. maternal supplement plus feeding practice messages plus locally based iron rich foods (e.g. locust beans)
4. #2 above plus chloroquin
5. #3 above plus chloroquin

INCS and/or other technical agencies could provide appropriate backstopping for the intervention.

* See Appendix for sample card

Appendix A

1)

MOTHER'S HEALTH RECORD

Name Number

Address

Date of First Visit

Age:

18 - 35	below 18	above 35
150 cm or over	less than 150 cm	

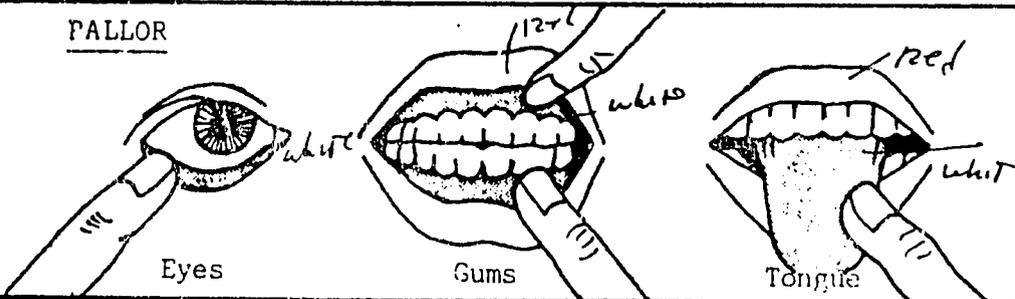
150 cm
Height:



Number of deliveries:

1 	2 	3 	4 		5 or more
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PALLOR



MONTHS						
3	4	5	6	7	8	9

OEDEMA



VAGINAL BLEEDING



MALARIA



