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**Maternal Anaemia Programme In Malawi
Project HOPE/JSI-MotherCare
Subcontract 5024-39**

**PROCEEDINGS OF THE MATERNAL
ANAEMIA DISSEMINATION WORKSHOP**

Ryall's Hotel, Blantyre, Malawi

Thursday, 24 September, 1998

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SESSION I

Opening Ceremony

Chairperson Mrs L Kamwendo, Vice Principal, Kamuzu College of Nursing

Rapporteur Mrs M Bokosi, Regional Safe Motherhood Co-ordinator

1.1 Welcome Remarks

Dr D Namate, Country Director, Project HOPE

Participants were warmly welcomed to the dissemination conference on the Maternal Anaemia Programme, which Project HOPE has been implementing from March 1995 to June, 1998. The purpose of the meeting was to share, discuss and exchange information on issues and concerns pertaining to maternal anaemia and to provide an opportunity for networking by professionals involved in related work.

The Maternal Anaemia Programme was an operations research study implemented on two private agricultural estates in Thyolo District: Nchima Estate and Central African Company. The objective was to decrease the prevalence of anaemia in pregnant and recently delivered women. Technical expertise was provided by The London School of Hygiene and Tropical Medicine. Research studies, interventions and evaluation reports were completed during the implementation of the programme.

The funding was from USAID through JSI/MotherCare, USA, who identified Project Hope-Malawi for the co-ordination and implementation of the formative research and the intervention phases.

Sharing the outcomes of the programme, with discussions and lessons learnt, will facilitate co-operation in efforts to reduce anaemia and its prevalence in the population.

1.2 Official Opening

Dr B Mwale, Regional Health Officer South, MOHP

On behalf of the Ministry of Health and Population, the representatives from JSI/MotherCare, USA and from Project HOPE, USA, were welcomed. Their presence demonstrated their organisations' commitment to the development of Malawi, particularly within the health sector.

Maternal anaemia contributes directly and indirectly to existing maternal and perinatal mortality and morbidity. The effects are largely preventable but very few MCH programmes successfully implement comprehensive control strategies in developing countries like Malawi. The overall goal of the National Health Plan is to raise the level of health of all Malawians, by reducing the incidence of illness and death in the population. Particular stress is given to the provision of services to address the high level of morbidity and mortality of women and children. Various reproductive health programmes, including Safe Motherhood, aim to reduce the high maternal mortality rate, of which anaemia accounts for about 8% (48/100,000 live births).

Iron deficiency anaemia is the commonest in pregnancy, often aggravated by parasitic and helminthic infestations. 78% of antenatal women are clinically anaemic. Current government interventions, with support from various agencies, include iron supplementation distributed through various clinics and Traditional Birth Attendants (TBAs), nutrition classes and IEC messages on nutrition.

The results from this study will enable improved strategies for universal iron supplementation, especially in women of reproductive age, to be formulated and seriously considered by the MOHP.

Project HOPE has made a tremendous contribution to health services delivery, particularly working with the tea estates in Thyolo and Mulanje Districts. A significant change in attitude of the tea estate managers towards the health status of their workers and their families has resulted, with the provision of more comprehensive health services available to those communities.

Various organisations and partners were thanked for their collaboration in the programme: Project HOPE, JSI/MotherCare, USA, The London School of Hygiene and Tropical Medicine, Malawi College of Medicine, Christian Hospitals Association of Malawi (CHAM), other NGOs and USAID for the financial support.

The dissemination workshop on maternal anaemia was formally opened.

SESSION II

Chairperson: Dr E Miller, Estates Medical Advisor and Thandizani Moyo

Rapporteur: Dr I Benech, Project HOPE CHAPS Programme Manager

2.1 Overview of the Maternal Anaemia Programme

Mr Timothy Kachule, Programme Co-ordinator Project HOPE

The programme was a collaboration between the Malawi College of Medicine, The London School of Hygiene and Tropical Medicine and Project HOPE. The study area was in Thyolo District, Malawi, on 2 tea estates Nchimba and Makandi. The total population served was 102,000 persons, with 14,000 living within the estate compounds. The existing health services were well utilised. The health facilities include a variety of staff: clinical officers, medical assistants, nurses, dressers, health surveillance assistants (HSAs) and TBAs.

There were two phases: formative research and interventions based on that research.

Objectives Phase 1

- to determine the prevalence of anaemia and its causes in order to develop a package of appropriate services for pregnant women
- to determine the baseline prevalence of mild and severe anaemia in the impact area
- to determine the relative contribution of various possible causes of anaemia

Phase 2

- to reduce the prevalence of mild/moderate anaemia in pregnant and recently delivered women in the impact area by 50%
- to reduce the prevalence of severe anaemia, as above, by 30%

Strategies

- increase the coverage of iron/folic acid (IFA) tablet distribution
- promote iron-rich and vitamin A-rich foods to increase the bio-availability of iron
- increase anaemia-related knowledge within the community and health services
- improve the knowledge and practise of the health service providers in anaemia-related services

Studies completed

- baseline survey
- aetiology study
- productivity study
- evaluation reviews: mid-term and final
- final survey

Message development (IEC) included counselling charts, posters and pill bags.

2.2 Baseline Survey Results presented by: Mr Timothy Kachule, Programme Co-ordinator Project HOPE

These were obtained from the study entitled

Reducing Iron Deficiency and Anaemia in Women of Reproductive Age in Thyolo District, Malawi. Report of a Baseline Survey, March 1997

by

Linda Williams and Simon Cousens, LSHTM
Chakunja Sibale and Ciro Franco, Project HOPE

Objectives

- to provide initial estimates of the prevalence of anaemia in the study area
- to investigate which, if any, of the socio-economic, demographic, nutritional, anthropometric and healthcare use factors are associated with anaemia in pregnant and recently delivered women

Following the intervention, the survey will be repeated to estimate any changes. It was designed to detect a decrease in the prevalence of anaemia from 60% to 40% after the intervention. To control for any changes unrelated to the intervention over time, the prevalence of anaemia in men (assumed to be unaffected by the intervention) was also estimated.

Methods

- Study population was defined as villages and tea estate compounds supplying workers for the estates. 3 strata within this population were identified: pregnant women, women who delivered in the last 6 months and adult males from the same households.
- Cluster sampling was used to obtain a random sample of haemoglobin measurements in 210 women in each group, and 315 men.
- A questionnaire was used to collect demographic and socio-economic data, and data on nutritional and antenatal clinic knowledge and practice.
- Data collection lasted 30 days commencing in June 1996.

Results

a) Half the women from the Lomwe ethnic group 93% were Christians. Two thirds lived in houses made from unbaked bricks with thatched roofs. 77% of households were headed by the woman's husband and 8% by the woman herself. Main forms of income were estate work, petty trading and farming.

b) The majority of pregnant women were in the 2nd or 3rd trimester (93%). Women commonly started attending antenatal care (ANC) at around 5 or 6 months, although they thought they should start attending at 3 or 4 months. Only half those attending ANC received any iron folate (IFA) tablets at their last visit and were given 7 or fewer tablets.

c) 97% of the women who had delivered in the last 6 months had attended ANC at least once during the pregnancy. Place of delivery showed 34% delivered with TBAs and 22% at home. While women preferred delivery at a health centre, the distance to be walked and the attitude of the midwives were cited as constraints.

d) 86% of both pregnant and recently delivered women reported taking all the IFA tablets they were given, and 10% sought tablets from other sources than ANC. Compliance is not a major problem, more likely there is an unmet need.

e) Anaemia defined as a haemoglobin level of less than 11g/dl was found in 67% pregnant women. In recently delivered women, anaemia defined as a haemoglobin level of less than 12g/dl was found amongst 61%. In both these groups the majority of anaemia was mild, with severe anaemia having a prevalence of 4% or less. Only 36% of men were anaemic.

f) *Protective factors against anaemia in pregnant women* being Ngoni, owning a radio, 2 or more children over 5 years old in the household and having taken at least 35 IFA tablets during present pregnancy. Anaemia is less prevalent in the first trimester than in later trimesters.

g) *Protective factors in women who delivered in the last 6 months* eating milk or meat in the last week and receiving malaria treatment during pregnancy. Very young mothers (<20 years) were less at risk than older women.

Conclusions

- Results show two thirds of women in the study area are anaemic. Of these, approximately 4% are severely anaemic. (A prevalence of above 2% in a population is considered high by WHO.)
- In this district, anaemia is associated with both malaria and indicators of socio-economic status suggesting dietary causes.
- HIV prevalence is also likely to be a cause but could not be investigated in the present study.
- IFA supplementation during pregnancy was non-existent or very low at the time of the study because of supply problems with IFA.
- No indication of compliance being a major problem.

The results suggest the proposed intervention to promote a healthy diet, early attendance at ANC and increased coverage and compliance with taking IFA tablets and malaria prophylaxis is the correct approach.

Discussion of the presentation

- the use of WHO definition and values of anaemia was questioned and it was agreed that it may be too high for Malawi. There is a need to establish national values.
- at least 35 IFA tablets taken during pregnancy was the *average*, the study showed that there was less anaemia if more than 35 were taken.
- the use of the term "malaria prophylaxis" was questioned, as the current MOHP practice during pregnancy is a two-time treatment rather than prophylaxis.

- haemoglobin was estimated using Haemocue equipment from USA, which was calibrated every morning Tests were refused by only a few individuals Educational exercises and demonstrations preceded sampling, compliance was usually better amongst women than men or new comers who had missed the sensitisation
- a random selection of households in the same clusters were used for both the baseline and the final surveys, but not necessarily the same women, as currently pregnant women were tested The population on the estates is very mobile
- less than 20 years of age was observed to be a low risk factor for anaemia but more research is needed to draw conclusions as the numbers of women in that age group in this study were low (87 women only) Research in Chikwawa (800 women) show the relevant factors to be age (adolescence) and literacy most at risk, illiterate adolescents
- places of antenatal attendance were 36% district hospital, 28% tea estate clinics, 18% MOHP clinics and 9% TBAs The remaining 9% did not attend at all

2.3 Qualitative Survey Results presented by: Mr Timothy Kathule, Programme Co-ordinator Project HOPE

These were obtained from the study entitled

A Qualitative Study of Constraints to Reducing Iron Deficiency Anaemia in Women of Reproductive Age in Thyolo District, Malawi (1996)

by

Linda Williams and Dominique Behage, LSHTM

Chakunja Sibale and Ciro Franco, Project HOPE

Linda Semu, UOM

Ultimate Objective

To identify and describe constraints to reducing anaemia in women of reproductive age in Thyolo District, Malawi, and to make recommendations on how these constraints can be overcome

Methodology

- Semi-structured interviews and group discussions over a three week period
- 3 communities were chosen to represent different degrees of difficulty in access to healthcare and involvement with the tea estates
 - Village 1* outside main tea estate area, 6 km from nearest Government health facility
 - Community 1* large tea estate compound, relatively close to tea estate clinic and district hospital
 - Village 2* in the middle of the tea estate, served by a clinic a adjacent tea estate and the district hospital, both nearby
- Iron trials took place in one village and one estate compound

Conclusions

a) Knowledge of Anaemia

In the poorer village with less access to health care and read, “lack of blood” was seen as primarily a wasting disease. In the other communities, symptoms and treatment of “lack of blood” corresponded more closely with those associated with anaemia. There were concerns in these latter communities about iron tablets causing “too much blood” and because health messages warn against taking medicine without a medical examination

b) Compliance

There is a demand from all sections of the community for iron tablets to help against wasting (however caused). The benefits of iron tablets were recognised by most members of the communities for treating slight lack of blood due to pregnancy and mitigating blood lost at delivery. High levels of compliance were apparent in the iron trials with more women refusing to comply because of the above concerns (3/1) than because of side effects

c) Supply

Supply of iron tablets at antenatal classes, rather than difficulties with compliance, was given unanimously by women in *all communities* as the main reason why they did not take more tablets. They reported being given few, if any, each visit. Providers confirmed this and that the tablets are popular. Traditional Birth Attendants (TBAs) are already established in giving tablets to pregnant women. There is evidence of leakage of tablets onto the market. Increased coverage by introducing additional outlets was popular provided they are sold at a low price (5T). If health providers increased the number of tablets given at ANC, then demand for bought tablets may be less

d) Healthcare

Decisions about healthcare are made by the family rather than individuals, involving relatives, husbands and sometimes neighbours. Men control the finances to purchase treatment and food. Women are sometimes treated unsympathetically by nurse/midwives. Access to radio and contact with health providers gives higher exposure to healthcare messages and is associated with greater knowledge and concerns about anaemia and iron tablets

e) Nutrition

Women in the village had poorer knowledge of nutritional advice than those on the estate but all cited poverty as the major constraint to a varied diet. Gender is also a constraint for women. No nutritional advice on methods of increasing iron intake from the staple food (maize) was found. Information on coca cola (thought to increase blood) should be discouraged and the role of lemons (thought to reduce blood, but actually increase absorption of iron) in the diet is unclear

f) Iron cooking pots

Aluminium or clay cooking pots are used in the study area. The introduction of iron cooking pots may be a sustainable way of increasing iron intake, but their acceptability and availability are not known

g) Compliance with malaria prophylaxis

Especially in the tea estate compound and village 2, malaria was known to cause “lack of blood” and be dangerous to unborn babies. Malaria prophylaxis during pregnancy is not presently routine. There is some evidence that if taking Fansidar as a prophylaxis during pregnancy is recommended as part of the intervention, compliance is likely to be a problem.

Recommendations

- Investigation into the reasons for inadequate supplies of iron tablets in the study area
- Target groups for the receipt of iron tablets to be identified on the basis of adequacy of supplies
- Advertisement and sale of iron tablets at low price at local grocers' shops
- Behavioural and knowledge change within the communities to include dispelling concerns about iron tablets and increasing knowledge of maternal anaemia.
- Encourage a more sympathetic approach to teaching and counselling clients by health care providers
- Nutritional advice on optimal and feasible methods of increasing iron absorption from the diet
- Further research conducted into acceptability and supply constraints to the use of iron cooking pots
- If malaria is found to be associated with anaemia in this community, compliance with iron tablets and Fansidar must be improved

Discussion of the presentation

- “too much blood” is not associated with any other disease but is perceived as “not healthy”. It is felt in the community that iron should only be given in the case of blood loss or presence of anaemia. There is no association with hypertension
- the use of different types of cooking pots was observed but there is no evidence of better iron absorption when an iron pot is used
- the demand for iron was already high at baseline, before the intervention, due to MOHP health education. IEC intervention reinforced existing education activities. MOHP has also targeted TBAs to supply IFA tablets
- the understanding of a varied diet in the community was good as regards type of food and availability, the problems are more with the preparation i.e. over-cooking (This destroys vitamin C which enhances absorption of iron). A small market survey looking at prices showed that people could not afford to buy vegetables and did not have enough land for cultivation, which would enable them to vary their diet
- whether iron deficiency was associated with difficult deliveries was not investigated in this study, but there is a preference for smaller babies and, therefore an easier delivery. IFA tablets may contribute to higher birth weight and be associated with a more difficult delivery. Prevention of this by the woman may lead to poor food and/or iron intake

2.4 Productivity Survey Results presented by: Mr Timothy Kathule, Programme Co-ordinator Project HOPE

These were obtained from the study entitled

The Impact of Mild Anaemia on the Productivity and Economic Welfare of Women Pickers on a Coffee Estate in Thyolo District, Malawi (1997)

by

M Levene, L A Williams and A Mills, LSHTM
M Kaonga and C Franco, Project HOPE

Objectives

- To quantify loss of productivity due to anaemia in a population with predominately mild anaemia
- Estimate the loss of wage income attributable to anaemia over 18 days (3 weeks of 6 working days)
- Investigate the impact of estate wages on the economic welfare of woman and their households

Methods

- Study sample composed of all non-pregnant women in one division enrolled for coffee picking on the first 3 days of the 18 day study period (final sample size 217)
- Information was obtained on the woman's home location, key demographic variables, socio-economic status, and other factors deemed to influence yield
- Anthropometric measurements, haemoglobin levels and malarial parasite status were determined
- Data on absences from work and yield picked were taken

Results

a) Association between anaemia and productivity

- Mean haemoglobin level 12.5g/dl
- 37% of women had haemoglobin levels below the WHO definition of anaemia of <12g/dl. Amongst these, 85% were mildly anaemic
- Absenteeism was common, mean number of days worked in study period was 12.9
- Average yield per woman per day 80.6 kg although this varied considerably

Anaemia may be associated, but not significantly, with a decrease in the number of days worked and the overall amount of coffee picked over the 18 days period, but not on average kilograms picked on days present.

Productivity was significantly associated with having received treatment during study period, malaria parasites, reading ability, other sources of income, and having a child over 5 years old, but not by anthropometric measurements, number of pregnancies, recent food intake and socio-economic status.

b) Impact of estate wages on the economic welfare of women and their households

Estate women are disproportionately separated and widowed, and in Thyolo the poorest 8% of women gain their main income from estate employment, despite the fact that the wages are low, there is considerable social stigma and it is physically very demanding. Other women engage in estate work as they disproportionately lack access to other sources of income and have fewer alternatives open to them. The income is mostly used to purchase food and household items such as soap and matches. Many women are in a perpetual cycle of debt.

Conclusions

- An association between anaemia and lower total yields over the 18 day study period was found to be not significant
- The decrease in productivity was due to fewer days at work rather than lower productivity on days worked
- Over the 18 day study period, the estimated change in earnings with each 1g/dl increase in haemoglobin was MK7 70, amounting to a 3% wage increase for mildly anaemic women
- Qualitative data indicated that estate women and their families are one of the poorest groups in rural Malawi. The extra earnings would have a positive impact on their welfare, enabling them to incorporate essential food items (fish, green vegetables) into their diets and purchase other household goods

Recommendations

Mild anaemia may affect the productivity of Malawian women, although more research is needed to substantiate this finding. The implication is that population-based programmes against anaemia may be justifiable even for population with predominantly mild anaemia.

Discussion of presentation

- the minimum amount of tea that one worker picks varies with the season. If more than the minimum is picked, the worker receives a bonus. In the study period of 18 days observed, the amount of tea picked each day was not diminished, the number of days worked were less
- when mothers failed to report for duty during the study period, the cause was investigated (e.g. malaria, funerals) to ascertain whether their absence was related to anaemia or to other factors
- local alternative sources of iron, if a woman had insufficient IFA tablets, were not investigated, although traditionally the eating of avocados, mlombwa or guava leaves is advocated

2.5 Programme Interventions presented by: Mr Timothy Kathule, Programme Co-ordinator Project HOPE

The data for this presentation was obtained from the report entitled

Evaluation of the Maternal Anaemia Programme, February, 1998
by
Sitingawawo Kachingwe and Ellen Mbweza, Kamuzu College of Nursing

Maternal Anaemia Programme started mid-1995, operational until June-July 1998
Aimed at developing effective and acceptable means of controlling anaemia in women of reproductive age, living on the compounds of two tea estates and in the surrounding villages in Thyolo District, Malawi

First phase operational research to determine the prevalence, causes and risk factors of anaemia in women of reproductive age living in the impact area

Second phase implementation of interventions which were based on study findings

Overall objectives of the interventions

- to reduce the prevalence of mild to moderate anaemia in those women by 50%
- to reduce the prevalence of severe anaemia in those women by 30%

The interventions included

- training of healthcare providers (hospital/health centre and community levels)
- development and dissemination of information, education and communication (IEC) materials
- commencement of iron trials

Objectives of the Evaluation

- to assess the knowledge of anaemia, correct treatment, prevention messages and correct use of IEC materials by the healthcare providers
- to assess the community's knowledge of anaemia, its correct treatment and prevention
- to assess distribution of iron tablets and accuracy of record keeping by healthcare providers

Methodology

- interviews with trainers, healthcare providers, supervisors and district health officers
- focus group discussions with villagers, village leaders and drama group members
- observation and assessment of healthcare providers' counselling skills
- examination of record books
- data collected February 1998, analysed using quantitative and qualitative statistics

Conclusions

a) Knowledge of anaemia, correct treatment, prevention messages and correct use of IEC materials by healthcare providers

Healthcare providers received 1 weeks training to equip them with knowledge, skills etc for effective implementation of the programme. They indicated it was well designed and the practical and theory sessions facilitated learning. Problems encountered were audio-visual aids not functional, inadequate time allowed for course content and discontentment over per diem allowances (did not match government rates)

- Maternal anaemia activities implemented through antenatal and post natal care services. All providers have knowledge of, and implement major *antenatal* activities. However, *postnatal* care follow-up was not reinforced and generally the community members were not aware of the necessity
- IEC materials designed for the programme were adequate and appropriate. However, healthcare providers did not use them consistently during individual counselling sessions as it was too time consuming. IEC messages focused on taking iron tablets to prevent anaemia with little emphasis on eating the required nutrients

b) Community's knowledge of anaemia, its treatment and prevention

Community members were sensitised to the dangers of maternal anaemia and the interventions well received. Most women started antenatal care after 24 weeks gestation despite intensified IEC on early attendance. Problems in accessibility to healthcare facilities and cultural beliefs were contributing factors. Apart from taking iron tablets, traditional methods of treating anaemia are leaves from guava, mlombwa and avocado

c) Distribution of iron tablets and record keeping

The consistent supply of iron tablets motivated mothers to attend antenatal care. Compliance with taking iron tablets was generally good despite the side effects experienced and some misconceptions to their effectiveness. Distribution was good but the record keeping system design made it difficult to account for the amount of iron tablets actually taken. Supervision by healthcare providers was inadequate due to transport problems

d) The sustainability of the programme is hampered by its dependence on donor funding. Most of the interventions, especially the supply of iron tablets and supervision, would be inadequately implemented by the Ministry of Health due to financial constraints experienced by the government at this time. The programme is relevant to the needs of Malawian women and should be sustained through every possible means

Major Recommendations

- Trainers should be involved in planning the courses. Their input enhances commitment and support towards programme activities
- Iron tablets should be given up to 6 weeks post delivery because mothers are at risk of developing anaemia during this time and to encourage their attendance at postnatal care
- Postnatal follow-up care should be reinforced as this is a means of screening for anaemia post delivery

- IEC messages should aim at empowering women to participate in decisions concerning their own health and well-being
- Transport should be available for the supervision of the project activities
- Collaboration between Project Hope, MOHP and estate clinics should be intensified for sustainability of the programme

(The detailed recommendations are available in the Evaluation Report document)

No issues were raised for discussion after the presentation

2.6 Final Survey Results presented by: Mrs M Simbota, STAFH Programme Manager-Project HOPE

These results were obtained from the study entitled

***Reducing Iron Deficiency and Anaemia in Women of Reproductive Age,
Thyolo District, Malawi. Report of Final Survey, August 1998***

by

Linda Williams, LSHTM

Dorothy Namate Timothy Kachule and Felix Chirombo, Project HOPE

Objectives

- to provide comparative findings to the baseline survey to see if there are any changes in anaemia levels of women of reproductive age within the study area following the interventions undertaken
- to provide comparative findings of socio-economic, demographic, nutritional, anthropometric and healthcare use factors associated with anaemia in pregnant and recently delivered women

Methodology

- Exactly the same clusters that had been randomly selected for the baseline survey were visited
- Random blood samples for haemoglobin measurement were obtained from pregnant women, women who had delivered in the last 6 months and men
- A questionnaire was used to collect demographic and socio-economic data on knowledge and practice of nutrition and antenatal care
- Data collection lasted 17 days and commenced 5 June 1998

Results

a) Pregnant women

- Anaemia, defined as haemoglobin of <11g/dl, was found in 60% of women (baseline 67%)
- Severe anaemia, defined as haemoglobin of <7g/dl, was found in 19% of women (baseline 33%)

b) Women who have delivered in the last 6 months

- Anaemia, defined as haemoglobin of <12g/dl, was found in 51% of women (baseline 61%)
- Severe anaemia, defined as haemoglobin of <7g/dl, was found in 24% of women (baseline 43%)

c) Men

- Anaemia, defined as haemoglobin of <13g/dl, was found in 30% of men (baseline 36%)
- Severe anaemia, defined as haemoglobin of <7g/dl, was found in 13% of men (baseline 03%)

d) Diet

Types of food taken the day preceding the survey

- nsima 25% (baseline 28%)
- cooked green leaves 20% (baseline 22%)
- beans or peas 13% (baseline 12%)

Conclusions

- The intervention appears to be successful in raising haemoglobin levels and decreasing the prevalence of anaemia, and is statistically significant in women who have recently delivered
- The lack of significance in prevalence of anaemia for pregnant women could be because they had not been exposed to the intervention for as long as the recently delivered women (who had been exposed to it through their pregnancy and after delivery)
- There is little difference in antenatal care attendance
- The number of IFA tablets received significantly increased over the study period, both during pregnancy and after delivery
- The proportion of women reporting receiving malaria prophylaxis at ANC increased for both pregnant and recently delivered women, but was only significant for pregnant women
- Mean Mid Upper Arm Circumference (MUAC) was significantly *less* in the final survey than the baseline for pregnant women, but not recently delivered women
- The slight improvements in anaemia prevalence and haemoglobin levels for men could be due to the nutritional aspects of the intervention, or to other factors which have changed over time

Discussion of the presentation

- Mild anaemia showed only a slight reduction between the baseline and final surveys, the shift was mostly in the severity of anaemia. There was a possibility that some mild anaemia cases at baseline were misdiagnosed and actually were moderate. The differences in haemoglobin values, between the two surveys, was more important for the recently delivered women than the pregnant women, with an increase in anaemia for the men
- the proportion of women who had received malaria prophylaxis/treatment was taken from the ANC records at the respective health units
- there is a lack of change in the dietary habits. This requires recommendations and nutritional education within the community and from health providers

2.7 Final Evaluation Results presented by: Mrs M Simbota, STAFH Programme Manager-Project HOPE

These results were obtained from the study entitled

*Final Evaluation, Anaemia Reduction Project, Project HOPE - Thyolo, Malawi,
September 1998*

by

Marcia Rubardt, International Health Consultant

Anaemia Reduction Project (Maternal Anaemia Programme)

First Phase involved extensive research to determine baseline anaemia prevalence and attitudes, cultural factors, aetiology and operational constraints around anaemia reduction and pregnancy in the Thyolo area

Second phase used that information as a basis for developing and implementing a package of anaemia reduction interventions with the objective of reducing maternal anaemia prevalence in the project area

Objectives of the Evaluation

- as a complement to both the monitoring exercise carried out in February, 1998, and a final knowledge, attitude and practise (KAP) survey carried out in June, 1998

These found that significant impact on anaemia and significant changes in knowledge and behaviour among community members and healthcare providers had been achieved. However, it was felt that more information was needed on lessons learnt and the potential for sustaining and replicating in the project

Methodology

a) A full evaluation was not deemed necessary as the previous studies clearly showed the project accomplishments. However, a review of lessons learned with respect to sustainability and replicability had not been done. A focused effort talk with key personnel to identify these issues was considered important.

b) Gaps identified as not adequately covered by the previous evaluations

- direct identification of project strengths, weaknesses and lessons learned
- a closer look at drug procurement efforts, supervision and training systems as they pertain to sustainability
- consideration of ways to encourage earlier antenatal and more postnatal care attendance
- review of community strategies and activities as they pertain to sustainability
- a very rough assessment of IFA compliance since that was not covered during the final survey
- the evaluation and data collection took place over 5 days in September 1998

Conclusions

Most of the findings corroborated those found during the other evaluations

- Familiarity with the project was found throughout. Community members, healthcare providers and estate staff all knew what the project was addressing
- Healthcare providers indicated their practice had changed as a result. They were more aware of anaemia and the specific interventions, and gave more priority to iron/folic acid (IFA) distribution and education during health education sessions
- The research phase was thoroughly done and provided a solid basis for the intervention package and the development of IEC materials
- The collaboration with the tea estates and the MOHP provide alternative models for assuring health services in areas where the private sector can be significant health service provider
- Aside from the advisory group and the dissemination workshop, there is little planning for the sustainability of the project or for the integration of components and lessons learned into routine service delivery. The potential of village primary health care (PHC) structures to support community anaemia activities was not maximised

Key Recommendations

- Future activities should focus on strengthening the community PHC structure (village health committees, TBAs, HSAs, women's groups etc.) to promote community awareness of the need to reduce anaemia
- Further maternal anaemia reduction efforts should be integrated into routine services under the District and Regional Health Offices. Specific components might include iron tablet distribution, IEC on anaemia reduction, management of iron side effects, iron-rich foods and healthcare provider training on anaemia reduction.
- When undertaking new initiatives, nationally gathered data should be validated during the initial assessment process, so adjustments can be made in interventions where appropriate. The formative research done by Project Hope should be reviewed for its relevance and validation of the aetiology study would be particularly significant in determining interventions

- The tea estates, with the help of Tandızanı Moyo, are in a good position to support anaemia reduction activities Tandızanı Moyo should encourage the estates to continue their expanded health role, particularly in preventive health
- Before completely phasing out, Project Hope should disseminate project results and activities at community and District levels The dissemination workshop is an important step in the project completion process
- Given the shortfalls identified as part of the recommendations, the National Anaemia Task Force should play a part in
 - a) monitoring national iron tablet supplies
 - b) advocating for anaemia-friendly policies
 - c) reviewing and disseminating information
 - d) co-ordinating key stakeholders in anaemia reduction

(The detailed recommendations are available in the Final Evaluation document)

This project has identified significant operational and technical aspects associated with the implementation of the package, which can apply on a larger scale While much of the experience gained will assist in future anaemia reduction interventions, the project has not adequately considered the handover and integration of its specific activities into the routine Thyolo District services Because of this, the momentum gained from the project, in the study area, risks being lost

No issues were raised for discussion after the presentation

SESSION III

Chairperson Dr R Pendame, Controller of Clinical Services, MOHP

Rapporteur Mrs M Sumbota, STAFH Programme Manager-Project HOPE

3.1 Lessons Learned and Recommendations

Dr D Namate, Country Director, Project HOPE

Lessons Learned Strategies

- formative research does determine a package of effective interventions, but requires extensive funding
- involvement of TBAs in IFA tablet distribution is an effective strategy for improving access to iron at community level
- multiple IEC methodologies improve programme effectiveness and the profile of anaemia within the community
- use of existing community dissemination structures (e.g. drama groups) contributes to the success of the programme
- inclusion of men as a target for IEC (e.g. to encourage their wives to take IFA tablets and attend ANC clinic) could have a positive impact on the programme
- separating maternal anaemia from other anaemia allows effective addressing of the problem
- a comprehensive approach to maternal anaemia reduction helps to increase impact
- collaboration between Project HOPE and the tea estates has led to significant changes in available health services on the estates and serves as a model for public/private sector involvement

Lessons Learned Management and Implementation

- lack of planning for sustainability, or incorporation of lessons learned, jeopardises the expected improvement in quality of services
- even though the programme worked within existing policies, some health care providers were not aware of some of them, and therefore did not implement them
- IFA tablet procurement needed a contingency plan due to the dependence of project results on consistent supply
- staffing for the programme depended entirely on the co-ordinator, such that activities ceased when he was absent

Recommendations Strategies

- future activities should focus on strengthening the community primary health care (PHC) infrastructure, TBAs HSAs, etc. to promote community awareness of the need to reduce anaemia
- further maternal anaemia reduction efforts should be integrated into the routine health services under the Regional and District Health Offices
- IEC materials and community interventions should target all people involved with all aspects of safe motherhood
- MOHP Education Unit should utilise the IEC materials designed and produced by Project HOPE for further use in health education in the community
- Thandizani Moyo, an NGO working with the estate communities in Thyolo, is well placed to support maternal anaemia reduction activities, which complement its Child Survival programmes

Recommendations Implementation

- supervision of, and supplies for, community-based services should be health centre based
- feedback on patient referrals to the hospital, made at community level, should be improved
- for paying health facilities, IFA tablets should be included in their ante- and postnatal packages
- HIS for essential information should be integrated into the routine MOPH system to enable data to still be collected after phase-out
- Project HOPE should disseminate the results and hand over programme activities at community and district hospital levels
- Project HOPE should make copies of all reports available to relevant libraries and have original papers available for copying and reference
- future sub-contracts should allow for some flexibility in procurement, hiring of personnel etc

Recommendations Further Research

- to ascertain compliance in taking IFA tablets among the target groups
- to investigate the interaction, if any, between IFA and sulphadoxide-pyrimethamine (SP or Fansidar) in pregnant women
- to study the impact of IFA supplementation on women, continuously taking IFA between pregnancies

A further recommendation was that the National Anaemia Task Force should assist in the following areas

- advocating for “anaemia friendly” policies
- reviewing and disseminating information
- co-ordinating key stakeholders in anaemia reduction
- monitoring the national supply of IFA tablets

Discussion of the presentation

a) Was the District Health Office involved in the project design and planning?

The Regional and District Health Offices were not involved in the planning, although they were briefed on the project. They were involved in implementation, supervision and training. The project was designed to find particular problems and to implement appropriate interventions, but the sustainability was not addressed. The MOHP has constraints in finance and staffing, but do have the mandate for health of the district, including the private tea estates. However, IFA distribution was not effected through the DHO, but supplied through Project HOPE, so the TBAs identified with Project HOPE, rather than with the DHO.

b) What additional activities should be continued by the DHO for the programme?

Using the PHC infrastructure, TBAs and HSAs should continue to be trained and supervised on Maternal anaemia activities and the continuous supply and distribution of IFA tablets ensured through the DHO.

- c) How can the lessons learned be applied to other districts within the Region?
The experience gained and lessons learned from this project can certainly be expanded to other estates and districts in the Region, where maternal anaemia is evident
- d) How can the MOHP assist after the project has ended?
The DHO will investigate ways of continuing the activities that Project HOPE initiated. Iron supplementation is not a new development for the MOHP at central level, UNICEF donates IFA tablets, but there are problems with adequate supplies being continually available for the antenatal clinics and TBAs. Transport problems and bad roads add to the difficulty of distribution. With the Project HOPE supervision ending, the DHO will endeavour to supervise effectively, but this may be hampered by the lack of supervisors amongst the existing health staff.
- e) Can the estate clinics be involved in the supply of IFA tablets?
The tea estates also have difficulty in procuring the IFA tablets. Usually they are obtained from Central Medical Stores, privately or imported. It is now the estates' policy to give IFA tablets to all pregnant women.
- f) Could IFA tablets be given priority by the MOHP when ordering essential drugs?
MOHP drug procurement have identified essential drugs, IFA is one. However, when its procurement and distribution was decentralised to the districts to source their own supplies, the system was abused, so it was centralised again to Central Medical Stores.

Comments where invited from

- a) Tea estates much has been learnt from Project HOPE on training, the need for pregnant and recently delivered women to attend the health clinics and to take their IFA tablets. The health education was very good and beneficial, not only for the community, but also for the clinic staff.
- b) Schools of Nursing emphasis should be placed on the teaching of compliance to treatment, collaboration and familiarity with PHC policies and projects.
- c) Safe Motherhood Project it is necessary to strengthen the policies for both ante- and postnatal iron supplementation. Many health providers are not familiar with the policies, particularly on postnatal supplementation.
- d) Regional Health Office iron supplementation is an essential treatment for women of reproductive age, in the absence of adequate nutrition. At the moment the policy is restricted to pregnant and recently delivered women, perhaps it should be expanded to all women, so they enter pregnancy in better health.
- e) Malawi College of Medicine infant mortality and low birth weight babies reflect maternal health. To improve maternal health poses very real problems for the government, especially in the rural areas. This study shows that the strategy can work giving iron treatment does improve the health of mothers and babies, even though other factors cannot be improved. The high phytate content in maize is a particular factor that needs consideration in nutrition education.