

PREMA-EU

Newsletter #2

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PREMA-EU

Coordinators' Column

Malaria in pregnancy receives more attention

The problem of malaria in pregnancy is receiving more and more attention and it is now recognised as a major health problem in endemic countries. An indication of this increased attention are two 'events': the forthcoming document 'Strategic framework for malaria control during pregnancy in the WHO Africa Region' and the second meeting of the East and Southern Africa coalition for malaria prevention and control during pregnancy, held in Lusaka, Zambia, in February 24-28, 2003.

Strategic Framework for Malaria Control During Pregnancy in the WHO Africa REGION

The strategic framework is a collaborative effort of the Malaria Control Unit and the Making Pregnancy Safer Programme of the WHO regional Office for Africa and the Roll Back Malaria and Making Pregnancy Safer teams based at WHO headquarters in Geneva. The draft of this document has circulated

for some time among experts around the world and it is a summary of current knowledge on the best practices to control malaria in pregnant women. The contribution of experts from malaria endemic countries, technical institutions and programmes, bilateral and multilateral agencies, is acknowledged, and among the networks PREMA-EU is specifically mentioned. The strategic framework is an important document which aims to provide guidance for policy makers and national programmes for the prevention and case management of malaria in pregnant women in the WHO Africa Region. A section on 'learning from history' identifies some of the reasons why malaria control during pregnancy has previously been a high priority, despite the burden it brings to women and their babies. Firstly, in malaria endemic areas a preventive approach was not prioritised because malaria infection in pregnant women in high transmission areas is often asymptomatic. Secondly, weekly chloroquine chemoprophylaxis has not received full support because of the difficulties inherent with its

delivery, compliance issues, and increasing concerns about the development of drug resistance. A third factor has been the lack of effective linkages between malaria control and antenatal care programmes. Nowadays, the importance of asymptomatic infections is better recognised and weekly chemoprophylaxis with chloroquine is increasingly replaced by intermittent preventive treatment (IPT). Malaria prevention is not considered on its own but as an integral part of the antenatal package for making pregnancy safer. In the strategic framework the best practices for malaria control during pregnancy are summarised in 8 major points. Besides effective case management, the policy is based on a preventive package consisting of IPT and insecticide-treated bed nets (ITN) whose delivery may be linked to routinely scheduled antenatal visits. The drug of choice for IPT is sulfadoxine-pyrimethamine (SP). This single-dose antimalarial offers the best overall effectiveness for prevention of malaria in pregnancy in areas of Africa with stable transmission and where

resistance is low. SP is considered safe in the second and third trimester of pregnancy, and should be given at least twice with its delivery linked to routine scheduled antenatal visits. The problem of rising SP resistance is recognised and alternatives to SP should be urgently evaluated for their use in pregnancy as IPT. ITN are the second component of the prevention package. These should be provided as early in pregnancy as possible, and their sustained use during pregnancy and the postpartum period should be encouraged. Anaemia is one of the most important consequences of malaria infection during pregnancy and as part of routine antenatal care, every woman should also receive iron/folate supplementation.

The East and Southern Africa Coalition for Malaria Prevention and Control During Pregnancy (MIPESA)

The East and Southern Africa coalition for malaria prevention and control during pregnancy (MIPESA) is a sub-regional coalition formed in March 2002 and includes representatives of National Malaria Control and Reproductive Health Programmes and other relevant institutions of Kenya, Malawi, Uganda, Tanzania and Zambia together with partners such as WHO, UNICEF, MNH/JHPIEGO, CDC, Malaria Consortium, USAID and also

PREMA-EU. The Regional Centre for Quality Health Care (RCQCHC) hosts the secretariat in Kampala, Uganda. MIPESA aims at supporting member countries to accelerate the development and implementation of malaria control activities for pregnant women by sharing experiences and best practices on malaria prevention and control during pregnancy to overcome the enormous challenges faced by the programmes and to assist in addressing the program priorities identified. These include guideline development and dissemination, information, education and communication (IEC), and advocacy campaigns, training of health providers, monitoring and evaluation. The meeting was opened by the Zambian Minister of Health, Dr Brian Chituwo. This is an indication of the political commitment of the Zambian government to the problem of malaria in pregnancy. The meeting was held in Lusaka at the end of February 2003. This provided an opportunity to discuss the current status of malaria in pregnancy control programmes in member countries and monitoring and evaluation tools that are currently piloted in Uganda and Kenya. Several countries are piloting the distribution of vouchers during antenatal visits to enable purchase of a ITN at a subsidised price. Participants visited a health centre in the outskirts of Lusaka where the vouchers were distributed. The voucher has a value

of 10,000 Zambian Kwachas (2 US\$) which buys, in a registered shop close to the clinic, a ITN valued at 22,000 Kwachas. These costs are still substantial for the budget of this poor community. However, discussion inside MIPESA can help member countries decide on developing the most effective strategy and to take consistent decisions for the whole region.

The MIPESA activities are helping to develop co-ordinated approaches to malaria control in pregnancy throughout this whole region and have a large potential for supporting these activities. The group intends to secure additional resources for supporting networking among interested countries. A proposal is in preparation to be submitted to the Global Fund for AIDS, Tuberculosis and Malaria and will probably be finalised in the next few months.

Networking within the same region can be only positive and it is hoped that other regions will take similar initiatives to improve the delivery of both curative and preventive services to pregnant women.

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In each Newsletter 2 network's members will be presented more in detail. Below are the profile of the Malaria Consortium (UK) and the Malaria Control Unit (Uganda).

This Newsletter profiles:

The **Malaria Consortium** is a partnership of the London School of Hygiene & Tropical Medicine and the Liverpool School of Tropical Medicine. It was set up at the request of the UK Department for International Development (DFID), which also provides core financial support. The Malaria Consortium's purpose is to assist DFID to enhance capacity of ministries of health and other organisations to control malaria effectively and efficiently to reduce suffering, especially amongst the poorest. It achieves this by providing support to development of effective policies and strategies at international, regional, national, district and community level for malaria control, high quality advice and consultancy services and an active centre of expertise and development, providing an effective interface between malaria control operations and research, for sharing knowledge and experience within developing countries. The Malaria Consortium brings together expertise from many institutions and individuals from the developing and developed world in vector-borne disease control and complementary disciplines such as social development, institutional development, human resource development and communications.

The Malaria Consortium assists in a comprehensive range of activities including:

- Coordinating approaches to malaria control with donors, national programmes and NGOs
- Designing, reviewing and evaluating malaria control programmes
- Ensuring integration of malaria control programmes into health services
- Reviewing information systems, laboratory services, training, drug distribution systems, treatment policy and vector control strategies
- Improving efficiency and cost-effectiveness of programmes
- Assessing the impact of development projects on malaria transmission

The Malaria Consortium has provided advice and consultancy services to numerous international agencies and governments. These include the UK Department for International Development (DFID), the World Bank, the World Health Organisation (WHO), the United States Agency for International Development (USAID), UNICEF and the the Commission of the European Union.

Specifically in relation to malaria and pregnancy, the Malaria Consortium has raised the importance of implementing appropriate strategies for prevention as part of broader support to malaria control, and Caroline Shulman has carried out consultancies for the Malaria Consortium in Kenya to facilitate the implementation of the policy to provide all pregnant women with intermittent SP. The Malaria Consortium has also presented the issues of antimalarial drug policy in relation to pregnancy at a meeting organised by CDC with support the Multilateral Initiative for Malaria.

The **Malaria Control Unit** (MCU) in Kampala, Uganda, is a department of the Ministry of Health whose main objectives are:

1. the provision of technical analysis leading to the formulation of relevant policies;
2. development and maintenance of a data bank on malaria in the country and analysis of epidemiological information on malaria;
3. coordination of malaria research in liaison with the national council for science and technology;
4. development of plans of action for malaria control;

The unit was established in 1995 and has been involved in the conduct and supervision of drug efficacy studies and has carried out malaria prevalence surveys. In collaboration with GTZ, the unit participated in malaria endemicity stratification in 2 districts. The unit has very strong potential for coordinating and promoting research related to malaria and has strong links with the maternal child health/ family planning department (MCH/FP) that is involved in the provision of health care services to women and collection and analysis of data related to MCH/FP. Other activities include conduct of research and monitoring and evaluation. The department has conducted a study to estimate maternal mortality and on the effect of weekly iron supplementation on maternal anaemia.

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Please pass on this newsletter to friends and colleagues; the editors would be delighted to receive comments and new material. If you are interested in receiving the newsletter or collaborate/contribute with the PREMA-EU network you can register at the PREMA-EU website : www.prema-eu.org. Details on the last page of this newsletter.

Article

Antimalarial intermittent treatment during pregnancy: how do we ensure coverage and compliance in Africa? *by P. Magnussen, Danish*

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Malaria and anaemia in pregnancy are major public health problems and potentially preventable causes of maternal and perinatal morbidity and mortality (McGregor, 1984; Brabin, 1991; Shulman *et al.*, 1996). Protecting pregnant women from malaria infection is therefore a major public health priority in endemic countries. Different strategies using either chemoprophylaxis or intermittent preventive treatment (IPT) during pregnancy have been recommended by WHO. Several randomized controlled studies and meta-analyses of a number of randomized placebo controlled trials conclude that prevention has a beneficial effect on maternal anaemia, placental malaria and low birth weight babies, especially among primigravidae (Shulman *et al.*, 1999; Gülmezoglu & Garner 1997; Steketee *et al.*, 1996).

Many malaria endemic countries have guidelines for malaria preventive measures in pregnancy (chemoprophylaxis or IPT) and this is part of the antenatal care (ANC) package provided within the context of primary health care. Unfortunately, there are major problems of compliance and coverage. The success of any programme depends not only on the efficacy of the

intervention provided under ideal and controlled conditions, but also on achieving optimal use by the target population (Fosu, 1994). ANC services are traditionally delivered from health facilities along with other health promotive and preventive programmes such as vaccinations and under five clinics. However, often the services suffer from problems of accessibility, affordability and client satisfaction. In such a situation pregnant women, when seeking health care during pregnancy, often opt for alternative services provided at the community level where female relatives and traditional birth attendants can play a major role.

In sub-Saharan Africa, women often do not seek ANC until late in pregnancy and they attend irregularly. For example, only 42% of pregnant women in Uganda attend the required 4 ANC visits and < 40% deliver at health units (Uganda Bureau of Statistics, 2002; Ndyomugenyi, 1998). Low utilization of services has been attributed to their deficiencies, cost and distance to health units (Ammoti & Nuwaha, 2000; Ndyomugenyi, 1998). Nevertheless, women recognize malaria in pregnancy as a serious problem with deleterious consequences. When pregnant women get malaria, care seeking behavior include self-medication with antimalarial drugs from drug-shops or use of herbs whilst visiting a health unit may be a last resort if there is no improvement (Ndyomugenyi, 1998; Kengeya *et al.* 1994). Furthermore, the concept of using antimalarial drugs to prevent malaria is not widespread and this leads to low compliance with usual chemoprophylaxis regimens (weekly chloroquine). Most pregnant women in high transmission areas are asymptomatic and are more aware and worried about side-effects of antimalarial drugs than about the deleterious effects of malaria infection on their own and their babies' health. Even with the introduction of IPT with sulfadoxine-pyrimethamine (SP), a logistically simpler intervention than weekly chemoprophylaxis, low coverage and compliance remain a problem; in Malawi for example 75% of pregnant women get one dose of SP but only 30% get the recommended two doses (Rogerson *et al.*, 2001). As parasite resistance against SP rapidly spreads we will soon face a situation where more complex combinations of antimalarial drugs are needed, exacerbating the problem of coverage and compliance.

Improved ANC services would be one way of improving compliance and coverage. However, this demands allocation of more resources to the health services in terms of manpower, training, stable drug supply and quantitative as well as qualitative improvements of health facilities. The required and substantial input of resources to existing services is not obvious in many African countries. Health systems and services research is needed to improve effectiveness and efficiency of existing services and for a better prioritization of resource allocations to ANC services so that more women will be motivated to use them. However, in order to maximize the IPT benefits, it would also be of importance that women attend ANC at an earlier stage of pregnancy than what is usually done nowadays. Since the majority of pregnant women do not have access to malaria preventive measures and other services delivered through health units, ways of administering antimalarial drugs to this high-risk group at community level, through accessible, acceptable and safe means need to be explored.

Home treatment of uncomplicated malaria in children is now being widely promoted in parallel with bed net use. Similarly, the delivery of IPT (and bed nets) to pregnant women at community level, outside though in collaboration with the formal health services, should be explored. In Uganda a study with the aim of testing four approaches to community-based delivery of SP-based IPT to pregnant women has recently started in collaboration with the Danish Bilharziasis Laboratory. These approaches will include drug shop owners, Traditional Birth Attenders (TBAs), Community Reproductive Health workers (CRHWs) and Adolescent Peer Mobilisers (APM) and will be compared with the existing health services. The objectives of the study are: (1) to assess individual and community perceptions, beliefs and practices associated with malaria treatment and prevention in pregnancy. (2) To assess whether TBAs, CRHWs, APMs and drug shop owners can administer IPT to pregnant women at community level. (3) To assess whether these approaches can reach pregnant women at most risk of malaria infection. Furthermore, the cost-effectiveness, sustainability and acceptability of these approaches will be assessed.

In a similar manner, researchers from Burkina Faso and Malawi in collaboration with colleagues from the Institute of Tropical Medicine in Antwerp, Belgium, and the Liverpool School of Tropical Medicine, UK, have started an European-funded project investigating new approaches to improve coverage and compliance of antimalarial treatment for pregnant women in rural Africa. The objectives of this study are: (1) to develop an information, education and communication campaign promoting the use of IPT during pregnancy through the health services (Burkina Faso). (2) To evaluate the impact of IPT when supported by a campaign promoting its use (Burkina Faso). (3) To evaluate the impact of village-based distribution system of IPT for pregnant women based on peer educators from an adolescent girls literacy programme (Malawi).

We have now ample evidence that preventive measures against malaria in pregnancy are efficacious in reducing the adverse effects of malaria on mother and child. However, it is now urgent to move from the artificial situation of the controlled trials to the real-life situation and propose solutions that can make the interventions effective at health services as well as at community level. The research projects mentioned above are a good attempt to address this problem. Nevertheless, more studies of this kind are needed.

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Article

Prevention and Control of Malaria in Pregnancy:

The Uganda experience *by Patrobas Mufubenga, Malaria in Pregnancy Focal Person at the Ministry of Health, Kampala, Uganda*

Malaria is highly endemic in most parts of Uganda (The Malaria Control Policy) and the percentage of pregnant women with a malaria infection can be as high as 62%. The strategy for the control of malaria in pregnancy (MIP) started with policy formulation, approved by the Ministry of Health Top Management Committee in 1998. The strategy was later adapted in the Minimum Health Care Package (HSSP) to be implemented in 2000.

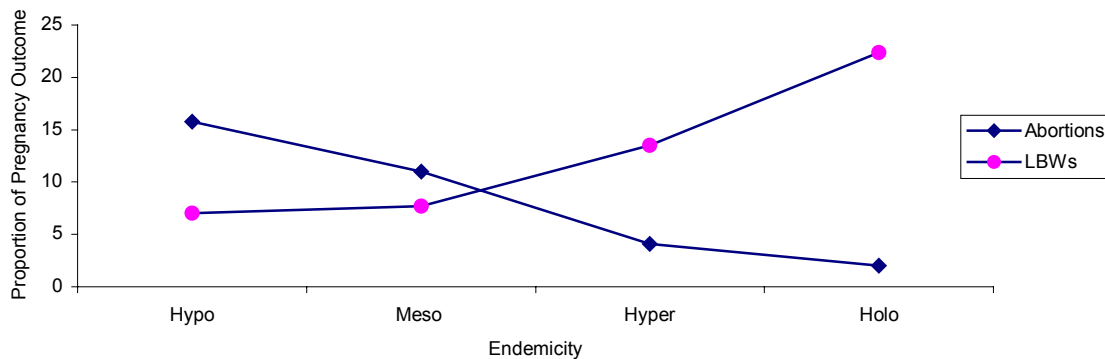
The MIP control policy guidelines recommend that all pregnant women in the country should receive 2 doses (one in the second and one in the third trimester) of sulfadoxine-pyrimethamine (SP) as an intermittent preventive treatment (IPT) while mothers with clinical malaria should be promptly treated according to the new drug policy, the association chloroquine and SP. The IPT is supposed to be provided as part of the antenatal care package with other products like *haematinics* and *antihelminths* to control maternal anaemia, highly prevalent among Ugandan pregnant women. SP should be swallowed under supervision of a health worker as a Directly Observed treatment (DOT). Furthermore, every mother

should sleep under an insecticide treated mosquito net (ITN) throughout her pregnancy and after delivery with her baby.

According to HSSP, the Ministry of Health has the following targets for the year 2005:

- Increase the percentage of pregnant women protected by IPT with SP from 0% to 60%;
- Increase the percentage of pregnant women sleeping under ITN from 3% to 60%;
- Increase the percentage of pregnant women presenting at the health facilities with clinical malaria and getting appropriate treatment from 30% to 60%.

Figure: Low birth weight (LBW) and abortions according to malaria endemicity in Uganda.



Programming Process

The highlight on MIP in the National malaria control policy marked a turning point in the implementation of IPT and ITNs interventions during pregnancy through the reproductive health services, with the technical support from the malaria control program.

By the end of the year 2000, MIP implementation guidelines had been drafted. For cost-effectiveness purposes, the IPT focus was on the most vulnerable target groups such as primigravidae, secundigravidae, HIV+ women, adolescent pregnant girls, and women with sickle cell disease.

Subsequently, antenatal cards were modified to capture MIP data, namely IPT and ITN use, and case management. Antenatal treatment books and monthly return forms were modified to also capture MIP data.

At the beginning of the year 2001, a national survey was carried out to collect baseline data for subsequent monitoring of the strategy. The results of the survey highlighted the burden of clinical malaria during pregnancy, the prevalence of infection ranged between 15 and 55.4% among antenatal clinic attendees, 12.4% of new-borns had a low birth weight (<2500 gr) and severe anaemia during pregnancy (Hb <8 gdl⁻¹) was 18%. Abortion and low birth weight were clearly related to the malaria endemicity (Figure). Furthermore, the prevalence of low birth-weight also differed in relation to maternal age and parity. It was higher among the young and low parity mothers.

During the initiation of the strategy, district leaders are sensitised, and health service providers given guidelines, antenatal cards, supplementary drugs like SP, haematinics and quinine to start the program. A

brief orientation on guidelines is given to health workers and is followed by integrated training of maternal service providers. Follow-up visits, supervision and monitoring are carried out every quarter in the implementing districts.

Achievements

By Dec 2002 substantial achievements could be seen for the outputs and outcomes of the implementation (Table). At least 35% of public and private health workers in Uganda had been oriented on the implementation of the MIP control strategy. Furthermore, such training was integrated into the Reproductive Health training modules, and a total 28 district trainers/supervisors had been coached in training of frontline health workers.

On the Africa Malaria Day 2001, more than 200 ITN had been distributed by the Minister of Health to pregnant mothers in Bushenyi district as a gesture for promoting their use among them. This spurred ITN distribution by different stakeholders, including social marketing groups and development partners, focusing on pregnant women and children. In one year alone, UNICEF had distributed about 20,000 nets to 5 districts.

A communication strategy on MIP had been drafted, and promotional campaigns (for both support and participation) had taken off vigorously through health education talks, radios and television spots.

Links between the malaria control program and the development partners and private practitioners had been established for concerted actions. About 148 private midwives and 32 private medical practitioners had been trained in Kampala city alone for implementation. Coalitions had also been forged with other players such as the East and Southern African countries for coordinated action.

Table: The Implementation status of the MIP control strategy in Uganda by June 2002

Activity	No. of districts	Percentage coverage
Baseline survey	17	30.1%
Distribution of policy guidelines	56	100%
Drug quantification	56	100%
Orientation of at least 35% frontline health workers on MIP	44	78%
Training of trainers	14	25%
Distribution of 'Starter-packs'	27	48%
Follow-up on implementation	25	45%

The implementation of the MIP control strategy had been rolled out in 40 districts. Over 25 districts implementing the MIP control strategy had been followed up at least once. In all these districts, the MIP control policy had been adopted in their annual work-plans. Drug needs quantification had been carried out and the strategy had been successfully integrated into the Reproductive Health Services.

In general, IPT had taken off in those districts. Reports showed that demand for IPT services had increased in both public and private institutions. Health workers, especially the lower cadres, were excited about the program and IPT coverage had risen moderately. For example, by the end of 2002, IPT₁ (first dose) and IPT₂ (second dose) coverage had risen from 0.0 to 36.4% and 5% respectively¹ (Quarterly Monitoring Report-Jan 2002). Antenatal care attendance had increased in some parts of the country since the introduction of IPT as part of antenatal care package.

Case management had taken off correctly. Trained midwives and their assistants could recognise simple malaria and manage it with the 1stline antimalarial treatment without first consulting doctors or their seniors. They were also able to identify severe malaria, to which they gave pre-referral treatment and referred appropriately.

As for mosquito net usage among pregnant mothers, the figure stood at 5- 14.2%, but very few of these nets had a recent insecticide-treatment (Quarterly Monitoring Report -Jan 2002).

Challenges and counteractions

Generally, there was limited use of IPT guidelines among health workers in the country. For those who used them it was difficult to identify and target the most vulnerable expectant mothers namely primi and secundi-gravidae among the other ANC attendees. To tackle this problem, a simplified version of treatment guidelines on MIP was later produced where every expectant mother of 16-36 weeks of gestation should receive IPT.

Many ANC clinics suffered from high client to staff ratios (overburdened staff), under-equipment, and inadequate supervision, which created gaps in services. For example, IPT would sometimes not be given as required by the standard guidelines (through the directly observed treatment (DOT) method). In order to minimise this problem non-formal health care providers, such as nursing aides, were trained.

Training coverage on MIP control was low at the beginning because of the rather lengthy and slow integrated approach of the Reproductive health curriculum. Training coverage was later improved using other opportunities such as support supervision, orientation on the new anti malarial drug policy (AMD), introduction of the Home Based Management of Fevers (HBMF) in districts, introduction of the Prevention of Mother to Child Transmission of HIV (PMTCT) strategy, orientation on anaemia policy, etc.

Although availability of safe water was not a problem in most units, many of them did not have enough cups for SP administration through the DOT method. Some units had only 1-2 cups and DOT became unpopular because many mothers objected to the practice of using the same cup for several of them, despite the washing done after each use. To this, improvisation was made through harvesting empty plastic drug containers from drug stores/pharmacies to be used as cups for DOT. These 'cups' became popular as mothers thought that they were 'medicated', hence safer than ordinary cups. One ANC clinic would have as many as 80 'cups' at one go that would be used during the day and cleaned in the evening before the next day's session. This improved acceptability of IPT through DOTs.

Owing to heavy workload, inadequate guidelines and minimal support supervision, recording of IPT, ITN usage and case management has been sometimes incomplete or inconsistent. For example, the diagnosis of 'malaria-in-pregnancy case' or 'low birth weight' could differ from one health worker to another and from one health unit to another.

¹ These figures are based on 2/4 regions: Central and Western

In general, supervision of antenatal services was inadequate in many districts owing to inadequate manpower and other resources like vehicles, fuel and allowances and compromised. However, with the creation of health sub-districts and the anticipated recruitment of more staff, improved supervision and monitoring is expected.

Antenatal services in the public sector often suffered from under-funding, late utilisation, inaccessibility, maternal default and often drug stock-outs that hampered IPT coverage. Integrated procurement of drugs in the Public sector is a lengthy exercise due to the heavy bureaucratic systems in place. Furthermore, where IPT should be paid separately, such as in private units, the coverage tends to be low.

Acceptability of IPT was not a problem for pregnant women. Occult fever in pregnancy is a well-known and traditional concept in Uganda. It is known by the local populace to be responsible for spontaneous abortion and intrauterine foetal death. It has local terms such as *nabbuguma*, *ekiiro* and *egirikoc*. Therefore, introduction of malaria prevention in the antenatal care package is relevant and attractive to them.

However, mothers tend to come late in antenatal clinics irrespective of their education or economic status. In Uganda, on average pregnant women attend antenatal care twice but usually they do not start before the 28th week of gestation. It is therefore difficult to deliver the recommended 2 doses of SP. Furthermore, only 38% of child deliveries occur in health facilities, the other women deliver at home. Therefore, the monitoring of pregnancy outcomes is difficult.

While case management of uncomplicated malaria had improved at lower levels, the system did not have well equipped laboratories for supportive services even at higher levels of care. Where laboratories existed, manpower, structures, equipment and reagents were inadequate for good quality services. Therefore, indicators like maternal anaemia that are supposed to be used for patient care and monitoring could not be measured routinely.

ITN usage among pregnant women was still very low for varied reasons. Firstly, antenatal care services in the country are basically free according to government policy; therefore there was no flexibility for ITN sale at the ANC clinics. Secondly, without subsidy, many expectant mothers could not afford nets from private shops despite tax waiver. Thirdly, private groups were concentrated in urban areas and rarely operated in rural areas where business is not as lucrative. Therefore, inaccessibility and non-affordability played a major role in the low use of ITN among pregnant mothers.

Conclusion

Implementation of the WHO recommended MIP control strategy through the existing country health system is feasible and has benefits, but also local hurdles (challenges), which have to be surmounted through careful innovations if it is going to be sustained.

Wayforward

Given the late attendance of ANC among pregnant women, the investigation of community-based approaches that would increase earlier antenatal care services utilisation would be extremely interesting.

Other channels to deliver IPT and ITNs to pregnant women such as the home based management of fevers (HBM) are also being considered. Establishment of linkages with other programs like Prevention of Mother to Child Transmission of HIV (PMTCT), immunisation (EPI) and others seems to be another viable option. For an accelerated implementation, Uganda plans to involve many actors like nursing aides, TBAs and local councils in the control of MIP. There is, therefore, a plan to print and disseminate simplified guidelines to all health workers including community resource persons.

Due to weak district health systems, there is a plan to mobilise resources to strengthen them. Plans are also underway to build more partnerships for concerted action. Through this, constant supply of drugs would be assured and subsidies for products like ITNs will be considered. Furthermore, there is also a drive for intensive lobbying for faster releases of available funds and simplification of the procurement process so that health workers can continuously have drugs and other supplies during their routine work.

Scaling up of implementation of the MIP control strategy is also being considered through further training of district trainers/supervisors and frontline health workers on the new integrated antenatal care package.

Plans are underway to build operational research capacity on MIP in the country. Priority will be given to operational researches such as:

- Effectiveness of community-based approaches in improving ANC utilisation and IPT/ITN coverage.
- Analytical studies on cost-effectiveness of combined and individual MIP interventions.
- Cost-effectiveness of delivering MIP control strategy through the reproductive health system versus other channels

There is an urgent need to standardise the monitoring of the MIP control strategy in the country. A case definition of malaria in pregnancy is imperative for surveillance purposes. Furthermore, Uganda is already in the process of piloting and adapting the regional monitoring indicators for East and Southern Africa countries.

In collaboration with partners, plans are underway to introduce voucher systems for ITN distribution in the country. There are also plans to strengthen advocacy, at national and international levels, for support and participation in implementation of the MIP control strategy.

For Further information e-mail: pmufubenga@hotmail.com

New update on malaria-preventing drugs in pregnant women: Cochrane review

Drugs for preventing malaria-related illness in pregnant women and death in the newborn (Cochrane Review).
by Garner, P. & Gulmezoglu, A., M.; Cochrane Database Syst. Rev. 2003; (1): CD000169

Abstract:

BACKGROUND: Malaria contributes to maternal illness and anaemia in pregnancy, especially in first-time mothers, and could harm the mother and the baby. Interventions to prevent or mitigate the effects of malaria during pregnancy are often recommended. **OBJECTIVES:** To assess drugs given to prevent malaria infection and its consequences in pregnant women living in malarial areas. **SEARCH STRATEGY:** We searched the Cochrane Infectious Diseases Group trials register (July 2002); the Cochrane Controlled Trials Register (Issue 3, 2002); MEDLINE (1966-July 2002); EMBASE (1974-July 2002); and LILACS (accessed July 2002). We contacted researchers in the field. **SELECTION CRITERIA:** Randomised and quasi-randomised trials in pregnant women of drugs given regularly that aim to mitigate the effects of malaria in pregnancy. **DATA**

COLLECTION AND ANALYSIS: Trial quality was assessed. Data extraction was done by two reviewers using standard criteria. MAIN RESULTS: 14 trials included (n=3454); only 2 were adequately concealed. For women of all parity groups, the meta-analysis (n=2890) showed lower parasitaemia and placental malaria in the intervention arm. For women having the first or second baby, there were 9 studies (n=3454). Severe antenatal anaemia was less common (RR 0.62, 95%CI 0.50 to 0.78, 4 studies), perinatal mortality appeared lower (RR 0.73, 95% CI 0.73 to 0.99, 3 studies). Maternal parasitaemia was lower with the intervention (RR 0.24, 95%CI 0.14 to 0.42, random effects model, 6 studies), and mean birthweight higher (WMD 122 g, 95%I 81 to 164 g, 8 studies), and low birthweight was less common (RR 0.49, 95%CI 0.36 to 0.65, 6 studies). REVIEWER'S CONCLUSIONS: Drugs given routinely for malaria during pregnancy reduce severe antenatal anaemia in the mother, and are associated with higher birthweight and probably reduced perinatal mortality. This effect appears to be limited to low parity women.

PREMA-EU website

The PREMA-EU website (www.prema-eu.org) was opened in 2002 and was last revised in January 2003. The objectives of the network's action are on the homepage. From there the visitor has access to a more detailed description of the background, the work packages and the list of partners with their addresses. Under publications, the first issue of the newsletter in pdf format as well as its individuals articles in html format are available. In addition, 2 more publications can be downloaded from the website:

1. The contribution of malaria by Bernard J. Brabin and Francine Verhoeff, chapter 6 in *Maternal Morbidity and Mortality*, by A. B. MacLean and J. P. Neilson. RCOG Press, 2002.
2. Do disturbances within the folate pathway contribute to low birth weight in malaria by Bernard J. Brabin, Alexander Fletcher and Nicholas Brown *Trends in Parasitology*, 19(1), January 2003, pp 39-43.

PREMA-EU strongly encourages people willing to receive the newsletter and/or interested in the network's activities or willing to collaborate to register. This can be easily done by filling the electronic form available on the website.

PREMA-EU seminar

A PREMA-EU seminar will be held on April 10, 2003 at the Koninklijk Instituut voor de Tropen (Royal Tropical Institute) in Amsterdam following the third partners' meeting. The programme will be as follows:

1. Anaemia and malaria in pregnant women, its causes and its consequences by Dr C. Menendez (Hospital Clinic, Barcelona)
2. Dapsone: aspects of its safety in pregnancy by Dr T. A. Eggelte (Academic Medical Centre, Amsterdam)
3. The immunology of placental malaria by Dr S. Abdelgalil (Liverpool School of Tropical Medicine)
4. HIV and malaria in pregnancy by Dr J. Chipeta (University Teaching Hospital, Lusaka)
5. Malaria risk in adolescents by Dr T. Leenstra (Academic Medical Centre, Amsterdam)

The seminar will be chaired by Prof B. Brabin and will start at 1.30 pm. The seminar is open to everybody. A report of the presentations and of the discussion will probably be published in the next PREMA-EU newsletter.

