

## Challenges and advances in international maternal and newborn health workshop



Wednesday 19<sup>th</sup> July 2006, Korea Garden Hotel, Lilongwe

### Attendees:

Attendees came from a variety of organisations including the Ministry of Health (Malawi), College of Medicine, Blantyre (Malawi), Kamuzu College of Nursing (Malawi), Mzuzu University (Malawi), UNFPA (Malawi), SNL (Malawi), UNICEF (Malawi), Maimwana (Malawi), IHI (USA), Women and Children First (UK) Institute of Child Health (UK), London School of Hygiene and Tropical Medicine (UK), Kings College London (UK), Diabetic Association Bangladesh (Bangladesh), ICDDR,B (Bangladesh), Kintampo Health Research Centre (Ghana) and MIRA (Nepal).

Address Malata	S Mzumara	Charles Mwansambo
Richard Luhanga	Useelli Cestas	Fanny Nkhwangwa
George Kafulafula	Mercedes Guzman	Kishwar Azad
Lucy Kachapila	Sheila Bandazi	Jo Borghi
Jane Namasasu	Richard Banda	Veronique Filippi
Ibrahim Idane	Bailah Leigh	Dharma Manandhar
Hellina Mwimba	Maureen Chirwa	Nicolas Meda
Hilda Chapola	Ann Phoya	Charlotte Tawiah
Miriam Soko	Miriam Chipiano	Mikey Rosato
Beata Kesuyenge	Joseph Jaffu	Sarah Ball
Dorothy Lazaro	Jones Kaudzu	Anthony Costello
Hannah Blencowe	Peter Kazembe	David Osrin
Karen Zeribi	Florence Lungu	Karen Edmond
Dorothy Namate	Jessie Mlotha-Namarika	Oona Campbell
Elizabeth Molyneux	Girall Mlowa	Matthias Borchert
Prise Masepuka	Stewart Mwalaby	Susan Murray
Evelyn Zimba	Ian Khwiya	Iqbal Anwar

Following a brief film on kangaroo mother care by Prof. Elizabeth Molyneux, the meeting was officially opened by Dr W.O.O. Sangala, Secretary for Health, Malawi.

### *Ethical analysis of North-South Partnership for collaborative research – Dr Nicolas Meda*

Following outlining the imperatives for research and partnerships, Nicolas Meda emphasized the main complaints of North-South partnerships and the key ethical issues surrounding these partnerships. In particular, the distribution of risks and benefits was explored. In conclusion he presented the generally agreed principles to follow in North-South Partnerships, developed by the Swiss Commission for Research Partnerships with Developing Countries, 1998. The importance of capacity strengthening for improving autonomy of southern research teams should include strengthening of education, logistics, research governance management, motivation of staff and professionalism. Finally, Dr Meda highlighted southern partner's hopes for mutual respect, equity of research risks and benefits and solidarity for the development of national health care system and South research capacity.

## **Session 1 – Neonatal health**

### *Early infant feeding and neonatal mortality in rural Ghana: quantitative and qualitative perspectives – Charlotte Tawiah and Dr Karen Edmond*

Charlotte Tawiah and Karen Edmond presented the results of a study assessing whether improvements in early infant feeding practices could reduce neonatal mortality in rural Ghana. The quantitative research concluded that:

- infection specific neonatal mortality increased markedly as delay in initiation of breastfeeding increased
- 2.5 times greater risk of neonatal mortality if initiate breastfeeding after day 1 of life
- The risk of neonatal death was increased 3 fold when milk based fluids or solids were given in addition to breastmilk
- Impact of prelacteal feeds was not significant after controlling for timing of initiation of breastfeeding
- Biologically plausible infection specific effect

Qualitative research allowed us to gain an understanding of the barriers and facilitators for early breastfeeding. The study concluded:

- having no, or the wrong kind of milk, is the main reason breastfeeding was not initiated within the first day of life.
- women are willing to change their initiation behaviour if given advice and some women have beliefs that facilitate early initiation.
- currently advice is mainly provided by midwives at the time of birth, but many women deliver at home and do not receive any advice. Most women attended antenatal clinics during pregnancy, which may offer a good educational channel.

Discussion following the presentation highlighted the need for research into the cultural beliefs and reasons behind discarding colostrum.

### *Micronutrients and birth outcomes – Dr David Osrin*

A double-blind randomized controlled trial of the effects of antenatal multiple micronutrient supplementation on birth weight and gestational duration in Nepal reported that birth weight increased by an average of 77g due to multiple micronutrient supplements. However there was also an increase in mortality rate linked to the supplementation.

Following a comparison of 9 studies in developing countries, experts at a workshop in Geneva in June 2006 concluded multiple micronutrient supplementation in developing countries had a small, statistically significant, consistent and positive effect on mean birth weight of 22 gm. The risk of low birth weight was reduced in the multiple micronutrient supplementation group compared to the iron/folic acid group. There was no statistically significant effect on gestational age or rates of prematurity. Only one study was powered to assess perinatal survival, (Lombok, Indonesia) and it found a non-statistically significant reduction in the relative risk of perinatal mortality of 0.91. The relative risk of infant survival through 90 days was statistically significantly higher in the multiple micronutrient supplementation group at 0.81 compared to the iron/folic acid group. There are still concerns of non-statistically significant increases in perinatal mortality in some settings. Meta-analyses

are being conducted to assess the impact of multiple micronutrient supplementation on perinatal mortality from all the studies.

Discussion following the presentation raised the issue of conducting research to inform policy and conducting research to back-up policy. Suggested further work included looking at cause specific mortality to examine the mechanisms.

## **Session 2 – Maternal health and quality of care**

### *Quality of Care in emergency obstetric care facilities: evidence from 12 districts of Bangladesh – Dr Iqbal Anwar*

A study was conducted to examine the quality of care in emergency obstetric care facilities in 12 districts of Bangladesh. It found that quality is possible to monitor using a district team:

- Quality-wise the NGO sector is the best, the private-sector is the worst (dangerous) and the public-sector is in the middle. Regulation of the private sector is an issue to be considered urgently.
- Policy-planners should think seriously how to improve quality at sub district level facilities.
- On job training on AMTSL, use of MgSO<sub>4</sub> and partographs should be organized for all categories of EOC providers.

### *Beyond the numbers, and audits to improve the quality of obstetric care – Dr Matthias Borchert and Dr Veronique Filippi*

WHO Beyond The Numbers (BTN) audit methods can be used to help understand why women die and improve professional practice; by learning from verbal autopsies of maternal deaths in the community, case reviews of maternal deaths in facilities, confidential enquiries into maternal deaths, near miss case reviews and evidence based clinical audits. Audit of near-miss is important as it is more common than a maternal death, less threatening to providers than maternal deaths, and it is possible to include a woman's perception of care received.

Preliminary results of an audit feasibility study in Benin show that hospital teams consisting of different professions are willing to convene monthly to discuss management of near-miss cases. They are willing to take women's concerns into account and they are able to identify many quality of care problems. However analysis of the problems doesn't go beyond a preliminary level, organisational issues are discussed more often than medical decisions and there is little evidence that improvements have been put into place.

As the evidence from BTN methods isn't very strong, and is mainly from industrialised countries, the EU is funding a three-country cluster randomised controlled trial of the effectiveness of facility-based audits to improve the responsiveness of West African district hospitals to obstetric emergencies. The trial will start in January 2007, with partners from the United Kingdom, Belgium, Romania, Benin, Burkina Faso and Mali.

Following the presentation, worries about witch-hunting were raised. However Veronique Filippi was involved in implementing and scaling up audits in eastern Europe, where there is a very strong fear of punishment, therefore there is an insistence on confidentiality, emphasis on improvement and careful consideration on the involvement of bosses. This needs

complete commitment for this to work.

### ***Session 3 – Maternal and newborn health, with cross cutting issues***

#### *Improving perinatal health and achievable goals in Bangladesh – Prof Kishwar Azad*

Bangladesh has some of the highest neonatal and maternal mortality rates in the world. PCP (Perinatal Care Project) is a community-based project with the ultimate goal of reducing maternal and neonatal mortality in three rural areas of Bangladesh. It is a joint collaboration between DAB, Women and Children First and the Institute of Child Health, and the project covers a population of almost 500,000. There are three interventions: health service strengthening, women's groups and TBA training:

Health service strengthening aims to improve perinatal health service delivery in terms of availability, accessibility and quality of care at all levels within the project areas, and to strengthen referral linkage, using training on essential maternal and newborn care, orientation and refresher training on emergency care of the mother and newborn, and bag and mask distribution.

The Women's group intervention aims to assess the impact of a community-based participatory intervention of Women's groups on birth outcomes. The groups prioritise problems and identify and implement strategies to resolve their problems.

PCP is also evaluating the impact of training TBAs using a bag & mask for newborn resuscitation at community level using a randomised control trial design.

A baseline survey was carried out to assess maternal and neonatal health levels. Most women had no antenatal care, they consumed less food during pregnancy, and they delivered at home with a TBA or relative/friend.

Following the presentation discussions highlighted the unexplainable low maternal mortality rates in Bangladesh. Possible explanations put forward included easy access to antibiotics and the short distances to facilities meaning that people who have complications can access care in less than an hour.

#### *Equity of maternal health interventions in Malawi – Dr Charles Mwansambo*

Mai Mwana project is a research and development project aimed at improving maternal and newborn health amongst the communities in Mchinji district, involves a collaboration between Kamuzu Central Hospital, The Institute of Child Health, London, and Mchinji District Hospital.

The research component of this project is a cluster randomised controlled trial using a two-by-two factorial design to test the impact of two health promotion interventions on maternal and newborn health; women's groups and infant feeding. A baseline survey included a household census and collected basic socio-economic data. The study is also collecting prospective data on births and deaths, post-partum interviews at one month and 6 months and verbal autopsies.

The baseline survey highlighted that the study population is a rural population with mainly low socio-economic profile. ANC, TTV, SP coverage is good for all socio-economic groups But less than 50% of women in all socioeconomic groups have the recommended 4 ANC visits and 2 doses of SP. Skilled attendance at birth, PNC and use of mosquito nets show marked differences between richest and poorest groups of the study population. Co-coverage of all six key interventions is less than 5% in all socio-economic groups.

Discussions following the presentation highlighted the potential for looking into the relationship between antenatal attendance and later attendance at a facility to give birth, and whether the sites attended for ANC offer delivery facilities.

*Community preferences and willingness-to-pay for women's groups: lessons from Nepal – Dr Jo Borghi*  
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Conventional approaches to measure the benefits of an intervention such as women's groups would look at behaviour change, final health outcomes, quality adjusted life years (QALYs) or disability adjusted life years (DALYs), however all of these are single dimensional and only capture the benefits to those directly affected. Dr Borghi used willingness to pay to measure the benefits of the MIRA women's group intervention in Makwanpur, Nepal. This method allows an assessment of the benefits of the intervention using the notion of sacrifice or the amount one would 'give up' in order to keep the intervention. It gives a measure of intensity/strength of preference.

The overall benefits of the women's groups, as identified by the women, were learning/new knowledge, increased confidence, health improvements, health service use, for women and strategy. These benefits can be divided into health and non-health outcomes.

The survey used was understandable in 99% of cases. It highlighted that non-health benefits were very important to the women. Ignoring these benefits reduces the overall value of programme by between 27-50%. The Women's Groups intervention was valued more by: those with less access to formal care, lower levels of literacy, and those who had applied programme messages.

Following the presentation, Dharma Manandhar highlighted that in Nepal, women's groups continued to sustain themselves, even during Maoist insurgencies, when project facilitators had no access to them, suggesting that women value the groups.

An impediment to improving women and children's health is women having to ask their husbands for money or help. We haven't been able to measure actual increased confidence due to the women's groups, but we can measure perceived change.

*Strategies for maternal and newborn health – Dr Oona Campbell*

After outlining global statistics on maternal and newborn health, the link between maternal and newborn health was emphasised. If a mother dies, the fetus or baby usually dies. Conditions that complicate mother's pregnancies also kill babies. The timing of maternal and newborn deaths are clearly linked, with most deaths occurring during delivery.

The Bellagio Child Survival Series (*The Lancet*, 2003) identified newborn survival as a priority, but it was lacking information and action, so the Lancet neonatal series was published in March 2005. This series involved a number of RPC partners. A series on maternal health is planned with major input from members of the RPC.

There are many sources of effective single interventions that reduce maternal and neonatal mortality, but what we need are strategies with clear outcomes, targets, packages of single interventions, and a means of distribution. Interventions need to be efficacious, effective (in how well they are delivered and how much of the population they cover) and need to be sustained. Strategies will “work” where component single interventions are effective and where the means of distribution achieve high coverage of intended target.

Many interventions do not reach a high proportion of mothers and babies. Countries should be encouraged to aspire to facility births with a skilled attendant.

It is necessary to go beyond “what works” to asking “how to make it work” for all women, newborns & children, and in sustainable ways. This question and challenge should unite maternal, newborn and child health, especially for poor communities with weak health systems. We need equitable/universal and sustainable coverage of target groups. An evidence-based approach does not obviate the need to exercise judgement about appropriateness of comparisons between options.

Discussions that followed highlighted several issues;

Retaining trained staff is as issue as they are lost to urban areas or the developed world. We need to think more about these issues and experiment with ideas for retention.

Training midwives is expensive and time consuming. Considering the minimum amount of time for training different levels of staff is something being looked into.

Oona Campbell highlighted that emergency obstetric care is essential for a strategy for maternal and newborn health to work. She feels we also need to consider the most cost effective way of operating supply chains of drugs and staff supervision.

Jane Namasasu closed the workshop by thanking Peter Kazembe, Charles Mwansambo, Anthony Costello and all those present and participating. Information is power so lets continue networking.