

**Malawi Newborn Health Design Workshop  
Capital Hotel, Lilongwe  
February 15-16, 2007**

***Draft Summary Proceedings***

*Prepared by Save the Children  
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Ministry of Health  
Reproductive Health Unit*

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## EXECUTIVE SUMMARY

The purpose of the workshop was to design a community-based newborn care package for Malawi that is scaleable, affordable and evidence-based, with the overall aim of improving newborn health and survival.

The workshop was hosted by the Ministry of Health in partnership with Save the Children and in close coordination and collaboration with UNICEF. It represents one of several initiatives being undertaken by the Ministry of Health to realize improvements in maternal, newborn, and child health necessary to achieve the Millennium Development Goals (MDG) for maternal and child health.

The workshop was attended by about 40 individuals, with representing a broad range of stakeholders, including the MOH, UNICEF, WHO, UNFPA, USAID, the visiting delegates of UN agencies funded through PMNCH, Save the Children, other NGOs, and other professional organizations. The agenda is in Appendix 1 and a list of participants in Appendix 2.

The objectives of the workshop were to:

1. Scan the existing situation, coverage of care and trends to identify opportunities and gaps for saving the 16,000 newborns who die in Malawi each year
2. Identify key building blocks for delivery of a package to promote healthy behaviors and to deliver an effective, sustainable postnatal care package (what, who, how, supervision)
3. Agree on next steps to detail the package, develop and test it in practice and maximize effective scale up

The workshop was officially opened by the Principal Secretary of Ministry of Health, Mr. Chris Kang'ombe, who noted the objectives of the workshop, the current situation with regard to newborn health and survival in Malawi, Ministry plans and structures to reduce maternal, neonatal, and child mortality, and the availability of low-cost interventions to reduce neonatal mortality, and the reductions that can be achieved through these efforts. Mr. Kang'ombe's remarks were echoed by representatives from WHO, UNICEF, and Save the Children, all of whom committed to working in partnership with the MOH in efforts to reduce newborn mortality in Malawi.

The first day of the workshop consisted of several presentations to review and summarize the policy environment and current initiatives in reducing maternal, newborn, and child mortality.

In the afternoon of the first day, three working groups were formed to review and provide feedback on the possible package design in terms of the following aspects: what, linkages with other programs, who, where, when and how. Each group's presentation is summarized in tabular form in Appendix 3. Several areas for further dialogue and consultation were identified, as follows:

- It was agreed that the HSA is the logical worker of choice for a community-based newborn care package. This is because creation of a new cadre of workers is unrealistic in light of

policy and structural implications and longer-term plans for deployment of community nurses and nurse midwives, and in the context of ACSD/c-IMCI. Questions remain with respect to supervision, roles and responsibilities (focused on newborn care or newborn care in addition to other responsibilities?), gender (most are male), and training (the current package of training is only eight weeks).

- HSAs need new job descriptions to include newborn care and need to be provided with special skills in maternal and newborn health. An HSA workload analysis is needed, including workload processes, supervision, and implications.
- It was proposed that HSAs be supervised by Community Health Nurses (CHNs) in the area of newborn health as many are now being supervised by Environmental Health Officers.
- The HSA would undertake home visits for ANC and PNC. Numbers will need to be determined based on formative research but provisionally some participants recommended 3 ANC and 4 to 6 PNC plus extra for low birth weight babies.
- HSAs are not currently trained to conduct deliveries nor allowed to do so according to policy, and most deliveries at community are conducted by TBAs, who are not trained in resuscitation and are not encouraged to deliver. Many felt that neonatal resuscitation at home would not be included in the first stage of a package of care for the newborn, and the focus for the intrapartum period would be on using TBAs to facilitate skilled attendance and on improving EmOC and resuscitation at facilities.
- In terms of increasing access to management of neonatal infections, HSAs are to be trained in the new IMCI algorithm for young infant care but would refer babies with infections. There may be an option of training HSAs in the “Where there is no referral module” but this would need piloting and process data and policy change.
- How and who provides effective PMTCT and what guidance to give to pregnant women that are HIV+ to avoid stigma and discrimination is a continuing issue. In PMTCT, TBAs refer promptly HIV+ women for hospital delivery. However, most of them do so as because of fear of infection.
- The role and definition of TBAs, including trained TBAs, remains unresolved and requires further dialogue and consultation. Referral of women for delivery in Dowa health facilities is working very well by TBAs because the TBA gets a fee of K200 per referral made which is equivalent to the amount she demands for conducting a delivery. A question is whether this can be feasible and sustainable at scale.
- The presence of a skilled caregiver at birth remains a gap for home deliveries and will remain so until long-term plans for community nurses and midwives are realized. In addition, who provides essential newborn care at birth remains a question.
- There was a suggestion to make use of community initiation counselors (*nankungwi*) who are senior women with decision making power regarding sexual reproductive health (SRH) issues, just as the *agogos* in Ekwendeni are used.
- Some felt there is need to include obstetricians to the next meetings because they are also crucial in this area of maternal and neonatal care

Following presentations, the second day of the meeting focused on the question: in order to guide and accelerate the scaling up of the package, what do we need to do and what do we need to know? The sub-questions discussed were: what policy and programmatic questions needed to be answered; what level of evidence is warranted; what is the duration of the evidence-generation

(pilot) project; in which districts should the project be undertaken; who are the potential partners; and who will do what?

Dr. Joy Lawn from Save the Children gave an overview of integrated newborn care package design and evaluation in other African countries including Ghana, South Africa, Tanzania, Uganda, Ethiopia and the Mai Mwana project in Mchinji District, Malawi. It was introduced by looking at whom the data is for, for what purpose, and at what level of evidence. In order to determine how much evaluation is needed, we need to ask “whom are we trying to influence and what is the change we expect?”

To inform *programmatic* design and action and make the package work (or know why it is not working) requires:

- formative research to design the package and content (for example, what are current home practices for care of the umbilical cord, why, and how could this be optimised)
- process assessment (e.g., number of HSAs trained, retention of HSAs, availability of drugs, percentage of newborns with infection treated)

To influence major *policy* change for a Government and donors to invest in scaling up a package nationwide may require data on neonatal deaths, cost per life saved, cost per visit, cost per capita of the package. Neonatal mortality is measured through pregnancy surveillance, which is complex and difficult to do well, and population-based surveys with large samples.

To influence the *wider scientific community* requires an evaluation design, e.g., randomisation which minimises the possibility that a result could be due to chance

The following points were introduced as basis for discussion:

- Context: NMR for the country is now at 27 (32 in MICS), and 53% of births take place in facilities
- Intervention: Using the existing HSA and other linked cadres with supervision by CHNs to provide home visits and link to health system, increasing access to management of neonatal sepsis
- Evaluation design: before and after? Also cost data? Other?
- Data collection: surveys and surveillance? Formative research before?

Outcomes of the discussion/next steps are summarized as follows:

**Package design.** To be finalized by a technical working group and presented for agreement/consensus, preferably prior to the mid-term review of the SWAp.

**Sites.** The districts of Thyolo, Dowa, and Chitipa, representing Northern, Central, and Southern regions of the country, should be selected as the evidence-generating districts for the newborn health intervention package. These are among the 10 districts where ACSD/c-IMCI program is being implemented. Thus, the three will be the “study” districts where close monitoring and evaluation activities will be undertaken. It was also suggested that interventions should be district wide, but need to have criteria for health facility catchment area eligibility in terms of staff and resources.

**Linkages to health system and scaling up.** Given the focus on sustainable impact at scale, it was agreed that the initiative would need to be implemented within the larger health delivery system with the cadre of providers that have been formally approved. This means that the project should try to mobilize, and test the effectiveness of, HSAs and community nurse-midwives, among others.

**Remit.** The initiative should be designed to answer specific operational questions and should represent the whole district, collaborating closely with the DHO in each district. The main policy questions to be addressed should include the use of antibiotics by community health workers (HSAs and midwives), feasibility, content, net cost and sustainability of resuscitation at the community level, and the frequency and timing of postnatal visits at home.

**When to start.** Everyone agreed that preparations should begin as soon as possible. To the extent possible, priority should be given to posting the new cohort of graduating nurses to the selected sites. In addition, preparation should be synchronized with the financial year to the extent possible. Both components of research and programmatic interventions can start at the same time in the three pilot districts.

**Measurement.** Specific indicators or design issues were not discussed at length, but it was felt that the Working Group should: (a) produce recommendations for review and vetting by the stakeholders; (b) address the question of duration for the “study” which would largely depend on “what” is being measured (e.g., proximate behavior-change communication indicators or neonatal mortality); and (c) identify specific roles and responsibilities for the key partners, with specific timelines of activities.

## **NEXT STEPS**

The following were discussed and agreed to be the next steps for the pilot component:

1. Formation of a working group, led by the MOH RHU. The RHU will call the first meeting of the working group. The first task will be to develop a Terms of Reference for the Working Group and respective roles and responsibilities.
2. Capture proceedings of the design workshop and circulate them to all stakeholders and regulatory bodies for their comments by end of February 2007.
3. Resolve outstanding issues and develop a protocol with the design and parameters for the pilots, including minimum resource requirements in terms of health facility staff and supervisors, HSAs, and supplies and equipment.
4. Determine costs and prepare and initiate resource mobilization plans.
5. Conduct formative research and baseline surveys in the selected districts, with the DHO/MOH working with communities as part of site preparation and an inventory of what exists/is available in the districts.
6. Secure approval for the deployment of new graduating nurses and new locally based female HSAs to the three districts

It was proposed that the Working Group (WG) should be composed of representatives from:

- RHU/MOH, with the Desk Officer for Safe Motherhood as Coordinator of the Working Group
- DHOs from Dowa, Thyolo and Chitipa
- UNICEF
- UNFPA
- WHO
- Save the Children
- CHAM

Apart from organizational members in the Working Group, key stakeholders in the process need to be identified, and at a minimum will include Zonal Health Support Officers, the Nurses and Midwife Council, and the National Health Sciences Research Committee.

## **INTRODUCTION AND OBJECTIVES**

The purpose of the workshop was to design a community-based newborn care package for Malawi that is scaleable, affordable and evidence-based, with the overall aim of improving newborn health and survival.

The workshop was hosted by the Ministry of Health in partnership with Save the Children and in close coordination and collaboration with UNICEF. It represents one of several initiatives being undertaken by the Ministry of Health to realize improvements in maternal, newborn, and child health necessary to achieving the Millennium Development Goals (MDG) for maternal and child health. Save the Children provided financial support for the workshop through the Bill and Melinda Gates Foundation.

The workshop was attended by about 40 individuals, with the representation of a broad range of stakeholders, including the MOH, UNICEF, WHO, UNFPA, USAID, the visiting delegates of UN agencies funded through PMNCH, Save the Children, other NGOs, and other professional organizations. The agenda for the workshop is in Appendix 1 and the list of participants in Appendix 2.

The objectives of the workshop were to:

1. Scan the existing situation, coverage of care and trends to identify opportunities and gaps for saving the 16,000 newborns who die in Malawi each year
2. Identify key building blocks for delivery of a package to promote healthy behaviors and to deliver an effective, sustainable postnatal care package (what, who, how, supervision)
3. Agree on next steps to detail the package, develop and test it in practice and maximize effective scale up

## **OFFICIAL OPENING**

The workshop was officially opened by the Principal Secretary of Ministry of Health Mr. Chris Kang'ombe. Mr. Kang'ombe highlighted the objective of the workshop, which is to develop a

community-based maternal and newborn postnatal care package for Malawi that is scaleable, affordable and evidence-based, with the overall aim of improving newborn health and survival.

Mr. Kang'ombe highlighted the progress that the Government of Malawi has made over the years with support from various development partners improving maternal and newborn health in all the districts of the country. Yet maternal deaths still claim 5,400 lives/year, 14,900 neonates die each year, and there are 22,200 stillbirths annually.

Mr. Kang'ombe stated that evidence demonstrates that 2/3 of newborn deaths could be prevented through essential maternal, newborn, and child health packages already in policy, through high coverage and improved newborn care, and through a continuum linking maternal, newborn and child health care through the life cycle and between homes and health facilities.

Mr. Kang'ombe emphasized that the Malawi government through the Ministry of Health Reproductive Health Unit (RHU) developed the Road Map for Reducing Maternal and Neonatal Morbidity and Mortality in an effort to redress the situation and define various strategies to guide policy makers, development partners, training institutions and service providers in supporting Government efforts towards the attainment of MDGs related to maternal and neonatal health.

This workshop is therefore one of the initiatives taken by MOH in partnership with UNICEF and Save the Children in an effort to achieve the Millennium Development Goals (MDG) of reducing child and maternal mortality.

Other speakers at the opening included UNICEF Country Representative Aida Girma, WHO Representative Dr. Matshidiso Moetie, and Save the Children Country Director Paul Mecartney. Together, they echoed the sentiments of Mr. Kang'ombe, outlining the magnitude of newborn deaths in sub-Saharan Africa and Malawi, the availability of cost-effective solutions to preventing newborn deaths, and the collective commitment of their organizations and others in working in partnership with the Ministry of Health to facilitate the development of scaleable and nationally owned strategies to close gaps in maternal, newborn, and child health coverage, including postnatal and community based care.

## **WORKSHOP PRESENTATIONS AND DISCUSSIONS**

### **DAY 1 PROCEEDINGS**

**Objective 1:** To scan the existing situation, coverage of care and trends to identify opportunities and gaps for saving the 16,000 newborns that die in Malawi each year, linking to the SWAp and existing health system

#### ***Presentation: An Overview of Newborn Health in Malawi***

*Dr. Joy Lawn, Senior Research and Policy Advisor, Newborn Health, Save the Children*

#### ***Presentation highlights:***

- In Malawi each year, 5,400 women die of pregnancy-related causes; approximately 22,000 babies are stillborn, and at least 16,000 babies die in the first month of life. Nearly 200,000

babies with low birth weight may live but not reach their full potential, and an unknown number of babies are infected with HIV through MTCT.

- Under-five deaths are being reduced, but progress is slower in reducing neonatal mortality, which represents 26% of under-five deaths
- Most babies die at home within the first week and especially the first day. Undercounting may be by as much as 10-30%. Infections and diarrhea account for 32% of deaths, and asphyxia 22%. The majority of newborn deaths are in low birth weight babies, the majority of these preterm.
- Delays in recognition and decision making, care seeking, financial limitations, delays in transportation, and delays in receiving appropriate care once in the facility all contribute to newborn mortality.
- There are high inequities in neonatal death rates and services coverage between urban and rural populations. Along the continuum of care, antenatal care and immunization rates are relatively high, but skilled care at delivery, postnatal care, and exclusive breastfeeding rates are low.
- Malawi is making strides in newborn health. In *Opportunities for Africa's Newborns*, the report highlighted that Malawi is achieving elimination of maternal and neonatal tetanus, has a strong health sector planning process, and has witnessed increased investments in maternal, newborn, and child health.
- While integrated packages at family/community, outreach/outpatient, and clinical levels are all necessary in the long-run, approximately one-third of neonatal deaths could be averted with outreach and family or community-based interventions now: Routine postnatal care, promoting healthy behaviours including increased use of skilled intrapartum care, extra care of small babies in the community, linking to facilities, and treating neonatal infections especially where referral is not possible.
- Postnatal care and systematic scaling up of community health promotion and care with strong links to the health system represents a major opportunity in Malawi. ACSD/IMCI, the Road Map, and vertical programs with large funding bases all provide opportunities to improve coverage.
- The fact that Malawi is above the regional average for coverage of some key packages such as antenatal care, skilled attendance and IMCI, also provide key opportunities to add or strengthen newborn care interventions.

***Presentation: Neonatal mortality in Malawi and Policy Options***

*Dr. Girmay Haile, Head of Section, Social Policy, Advocacy & Communication, UNICEF*

*Presentation highlights:*

- The presentation also highlighted that as under-5 and Infant Mortality Rates (IMR) are being reduced, neonatal mortality is becoming an important proportion of these deaths, reflecting low coverage of interventions to prevent them.
- Most of these deaths occur at home regardless of whether delivery was at home or at a health facility.
- The presentation highlighted challenges to the health system which includes inadequate human resource, inadequate infrastructure, poorly equipped facilities and distance to health facilities. Mothers are usually discharged 24 hours after delivery and only 21% come for

early postnatal care. Following delivery the first health facility visit is usually at 6 weeks for immunizations.

- There has been less emphasis on postnatal care and support for mothers in the community and the role of the TBA is still unclear. The debate on “Who is the newborn caregiver?” among health professional is still unresolved.
- Policy and program actions need to provide early, integrated postnatal care to strengthen the linkages between maternal health and child health programs.
- This can be achieved if postnatal care is provided through community providers that make routine home visits. The challenges are human resource and efficiency of the system.
- However, if Community Health Nurses (CHN) and Health Surveillance Assistants (HSAs) are given training this seems to be a feasible option.

### ***Discussion***

- Participants stressed that culture is a very important factor and challenge. Communities often don't see the newborn baby as a human being, e.g., if a newborn dies it is considered a women's issue and men are not involved. There is thus the need to develop strong BCC interventions to address harmful cultural practices and help improve the social enabling environment.
- Participants noted that in many instances, different programs are working separately even though they are addressing the same issue in the same geographic area. Implementing agencies should thus work in partnership and the MOH and partners should strive to integrate services to avoid duplication and maximize impacts.
- Participants agreed it is important to involve influential figures in the community and family to promote healthy practices and care seeking. Ekwendeni Mission Hospital gave an example of working with the agogos (grandparents), who are very influential in decision making at family or community level. Similarly, men are central decision makers and need to be involved and engaged in newborn health.
- TBAs are still popular and perform about 11% deliveries. While there are concerns around their capacities and practices, most people in rural areas have confidence in them. As the role of TBAs continues to be assessed, there are good examples of working with them to facilitate skilled delivery in facilities in some of the districts, such as Dowa.

### ***Presentation: Sector Wide Approach (SWAp)***

*Dr. Ann Phoya, Director, SWAp*

#### ***Presentation highlights***

- The health sector SWAP is an overarching policy adopted to improve delivery of health service to the nation especially the rural poor
- Its overall aim is to improve the health status of the people by: defining health priorities and a package of health interventions that addresses major causes of morbidity & mortality as well as levels of service delivery; systems that would support delivery of health interventions; mobilizing necessary financial resources & agreeing on modalities of funding
- The SWAp became operational in 2004 with the signing of an MOU between Government and development partners. A six pillar Program of Work outlining key activities to be implemented was finalized in March 2005.

- Principles include: Strong leadership by Government in defining its agenda and letting partners know; partnership based on trust between government and its partners or donors in the sector; commitment by all partners; transparency & accountability; and involvement of all stakeholders in the sector, including communities
- Memoranda of Understanding ( MOU) spell out undertakings or commitment of each partner; funding modalities, planning cycles, and targets and mechanisms for monitoring & evaluation
- Governance Structures include Committees that ensure transparency and accountability in the implementation of the MOU and provide technical input in the implementation of the Program of Work (POW). They include the Health Sector Review Group; Senior Management Committee; and various Technical Working Groups (Financial management & procurement, HR, Pharmaceuticals & medical Supplies, Infrastructure, M&E&R, TB, HIV/AIDS, SRH, Malaria etc.)
- The POW is the National health Plan for 2004-2009. It spells out six major areas of focus: HRH supply of drugs & medical supplies; Supply of equipment; Infrastructure Development; District operation (delivery of health interventions); and Policy development, standards setting, and monitoring & evaluation. The POW also spells out financial resources to implement proposed activities for each major area
- Implementation Modalities. The POW is annualized each year to guide implementation of by Central level, districts and partners. Partners participate in implementation at either central or district level by integrating their activities in the MOH/CH/Dist Implementation Plans. Financing of Implementation Plans is either through pooling of funds or discrete mechanisms.
- Monitoring and Evaluation. A SWAP M & E Framework has been designed and approved by the Health Sector Review Group. Targets in the M&E Framework have incorporated the Health related MDGs, MGDS indicators; other health related impact and process or indicators. Different approaches have been agreed upon to collect data on performance e.g. DHS, annual special surveys, and HMIS from service delivery points.
- Progress is monitored through Joint Midyear and Annual reviews. 2007 marks the third year of implementation; the POW is therefore due for Mid-term evaluation.
- To date, necessary fiduciary systems are in place, and have resulted in increased donor confidence to the sector. More partners have signed up the SWAP MOU, and there are now seven. Four Joint Reviews have been conducted successfully, and zonal support offices are in place to support implementation of DIPs. There is steady increase in resource mobilisation, and Governance structures are functioning and providing necessary policy & technical inputs.
- Challenges include: Setting sustainable mechanisms for implementing the EHP at community level; some partners developing stand alone work-plans along side the District implementation plan (DIP) or the Annual Implementation Plan (AIP); inadequate financing; access to the EHP still problematic as not all areas of the essential health package are included in services agreements; the SWAP is viewed by some people as a project; and a lengthy training period is needed to produce the necessary numbers of health workers to implement the EHP at all levels of service delivery

***Presentation: Road Map for Reducing Maternal and Neonatal Morbidity and Mortality***  
*Fannie Kachale, Acting Deputy Director, Clinical Services – RHU, MOH*

### *Presentation Highlights:*

- The presentation provided a background of the problem and previous approaches in addressing maternal and neonatal care with the conclusion that most obstetric complications are neither predictable nor avoidable but can be effectively managed. The focus should therefore be on emergency obstetric care and skilled delivery that is available, accessible, and on time.
- With the African Union call for all Member States to develop and implement strategies to accelerate the reduction of maternal mortality, WHO developed a generic Road Map for adoption and adaptation by all countries.
- Malawi developed its Road Map in 2005 with a vision that “*all women in Malawi go through pregnancy, childbirth and the postpartum period safely and their newborns are born alive and healthy through the implementation of effective maternal and newborn health interventions*”. The goal is to accelerate the reduction of maternal and newborn morbidity and mortality towards the achievements of the Millennium Development Goals (MDGs).
- The objectives include: To increase the availability, accessibility, utilization and quality of skilled obstetric care during pregnancy, childbirth and postnatal period at all levels of the health care delivery system; and to strengthen the capacity of individuals, families, communities, civil society, organisations and government to improve Maternal and Neonatal Health.
- The Road Map has 9 strategies: 1) Improving the availability of, access to and utilisation of quality Maternal and Neonatal Health (MNH) care including family planning and PMTCT services; 2) Strengthening human resources to provide quality skilled care; 3) Strengthening the referral system; 4) Strengthening national and district health planning and management of MNH care; 5) Advocating for increased commitment and resources for MNH care; 6) Fostering partnerships; 7) Empowering communities to ensure continuum of care between household and health facility; 8) Strengthening services that address adolescents’ sexual and reproductive health issues; and 9) Strengthening monitoring and evaluation mechanisms for better decision-making and service delivery of MNH care.
- Each strategy includes several interventions that have several activities. The implementers at district level will use the Road Map as a guiding document to ensure that all priorities are included in their District Implementation Plans.
- Implementation will be done in two phases with phase 1 from 2005 to 2009 and phase 2 from 2010 to 2014, with evaluations at the end of each phase and a final one in 2015. The key indicators being addressed relates to management and coordination issues, availability and accessibility of services, utilization and quality of services, community initiatives and impact of interventions.

### ***Presentation: Accelerated Child Survival and Development (ACSD) in Malawi***

*Kelvin Nindi, IMCI secretariat, MOH*

### *Presentation Highlights*

- ACSD is a set of interventions specifically packaged to reduce childhood morbidity and mortality and in Malawi is attained through IMCI approach, which addresses the major causes of under-five mortality.

- ACSD is designed to attain MDG4 of reducing childhood mortality by 2/3 by the year 2015 in Malawi. It covers effective case management, pre-service training, health systems support, promotion of family and community key child care practices and addresses cross cutting issues, e.g., management, financing and human resources
- Delivery settings include home-based delivery of high impact interventions by parents, guardians, etc.; community based delivery by HSAs and other extension workers; health facility based delivery of high impact interventions; and mass campaigns delivery of high impact interventions such as child health days, malaria SADC week.
- Progress to date includes: Development of the ACSD Policy in collaboration with several ministries; Launch of the IMCI Policy by Minister of Health with 7 ministries participating in November 2006; 5 Year Strategic Plan drafted; Eight districts to kick start the process, with district and village plans developed and costed, orientation of DEC members on the concept and principles of IMCI strategy, training of DTWG in all districts, training of 500 H/W in IMCI case mgt training, training of about 100 facilitators, training of 5,000 HSA to commence shortly (1/1000 people), and strengthening NGO partnerships to support ACSD.

***Presentation: Mai Mwana Research Project Infant Feeding Intervention***

*Hilda Chapota, Mai Mwana Project*

*Presentation Highlights*

- Mai Mwana is a cluster-randomised controlled trial implemented by the Institute for Child Health in London and funded by Save the Children (Saving Newborn Lives). It aims at assessing the effectiveness of two community based interventions to reduce maternal and neonatal morbidity and mortality.
- In total there are 24 zones for Infant Feeding intervention with 72 Volunteer Mai Mwana Counselors (VMCs) and 24 government HSAs whose role is supervision. There are 2 - 4 VMCs per zone and they make a total of 5 visits to the mother/woman. The 1st visit is done during the third trimester of pregnancy, 2nd visit within the first week after delivery, 3rd at one month after delivery, 4th at 3 months after delivery and the 5th is done after 5 months of delivery.
- The infant feeding trial outcomes of interest include: Infant morbidity and mortality rates, exclusive breastfeeding rates, early cessation of breast feeding in HIV+, growth between 1 and 6 months, MTCT, changes in safe sex behaviour and traditional beliefs associated with breastfeeding.
- While results (outcomes) are not yet available, coverage and acceptability of the volunteer breastfeeding intervention is quite high and may provide learning for the use of volunteers in other programs.
- The program has also collected a wealth of formative and process evaluation information and learning that can be consulted by other working in maternal and newborn health.

***Presentation: Policymakers Visit to India & Pakistan***

*Dr. Dorothy Namate, Director of Health and Technical Services, MOH*

*Presentation Highlights*

- The objectives of the policymakers' trip to India and Pakistan were to:

- Orient participants to the rationale, basic principles, methods, effects and limitations of the home based newborn care at SEARCH, the IMNCI programme in India and the Lady Health Visitor in Pakistan.
  - Have the participants study the process and outcome of various programmes and based on this understanding
  - Identify appropriate approaches of newborn care at home and communities, that can be applied as part of the continuum of care for maternal, newborn and child health in Malawi.
- Dr. Abhay Bang's SEARCH model was presented, as well as the applicability and implications of the program to Malawi. The following recommendations were made from the tour:
  - Determination of choice – chances of success against the tripod causes of sepsis, asphyxia and pre-term births. The proposed choice is the SEARCH Model with provision of injectable antibiotics for sepsis in the home; keeping pre-term babies warm using special bags; and use of ambu bags to stimulate normal breathing among asphyxiated babies
  - Adapt the SEARCH Gadchiroli Model and include it in the management of common childhood illnesses using HSAs as the community health worker.
  - Mount an advocacy campaign to ensure that relevant UN bodies, bilateral partners, regulatory bodies, pediatricians and district health management teams include newborn health as one of their priorities.
  - Initiate management of common childhood illnesses using the village clinic setting.
  - Communicate to all about the institutionalization of the SEARCH Model in Malawi on an incremental basis

***Presentation: Home Based Newborn Care Proposal for Thyolo District***  
*Dr. Noor Alide, Thyolo DHO*

***Presentation Highlights***

- This presentation looked at the possible package design based on SEARCH model, and outlined health indicators, problem statement and assumptions specific for Thyolo district.
- Objectives, key activities, process and interventions to be addressed were described:
  - Health education and behavioural change communication
  - Attending delivery and immediate care of newborn including asphyxia.
  - Early detection and treatment of neonatal sepsis at community level
  - Detection and home management of LBW and preterm
  - Breast feeding, promotion and problem solving
  - Thermal care
  - Management of HIV positive women
  - Malaria

- Vitamin A supplementation
- De-worming
- Management of diarrhea with ORS
- Early referral
- The district personnel for the community-based newborn care package and selection criteria and training for the Village Health Workers (VHW) were outlined as well. VHWs should be able to read and write, be a permanent resident of the village, have education level standard 5 to 8, be a married female with children, have support of the family to take up the role of VHW, willingness to attend deliveries, and willingness of the community to accept her as a VHW.
- TBAs were identified as access points to mothers and neonates. Consideration was given to deliveries that are not attended by TBAs or health facility through notifications to the CHW.
- Unresolved issues identified in the presentation included:
  - What will the remuneration package for the CHW be like?
  - SEARCH allowed CHWs to provide treatment using injections, is Malawi ready for this approach?

### ***Discussion***

Questions and comments included:

- How would the SEARCH model be adapted and applied in Malawi, where the NMR baseline is at 27-31/1,000 compared to the SEARCH site at 60-65/1,000. Given the high level of mortality at the India site, as well as cultural and health system differences (SEARCH did not work with the formal health system), some participants stressed that careful adaptation of the SEARCH package is required for the Malawi context.
- The issue of TBAs as providers of care in cases where delivery is inevitable was discussed. Many are already trained and respected in the community. Replacing them requires time and sensitivity.
- It was noted that the revised c-IMCI manual in Malawi has already added most of the essential newborn care interventions in the HSAs training manuals. However, a challenge that will require further consultation is gentamycin injection by the HSAs for infection.
- It was pointed out that there was need to consider sustainability of the community volunteer and the criteria for selection. This was later raised as a policy constraint (establishing a new cadre of worker would take time) and one that should also be reviewed against long term plans for other cadres of staff at community level (discussed further later in this document).

### ***Presentation: Evidence and experiences from South Asia***

*Dr. Steve Wall, Senior Newborn Health Research Advisor, Save the Children*

#### ***Presentation highlights***

The presentation reviewed the status of various community based models for neonatal care and results and learning to date:

- SEARCH model of home-based neonatal care (India)
- Community management of newborn infection (Nepal)
- Home-based newborn care package (Bangladesh)
- Clinic-based newborn care package (Bangladesh)
- Integrated newborn health package in existing system (Pakistan)
- Participatory women's groups to improve newborn health (Nepal)
- Community mobilization and behaviour change to improve newborn health (India)

Key model components and contextual issues were presented and a handout, *Tested Models of Community-Based Newborn Health Care: Evidence and Experience from South Asia*. The handout was also used in group work where issues to be considered in designing newborn care for Malawi were discussed.

Key lessons learned from these studies:

- A large impact on neonatal mortality is achievable through community-based intervention packages.
  - Content and delivery strategies can vary substantially from 'supply' to 'demand' – especially according to setting – and still have large impact.
  - Community-based newborn health care can be delivered through *existing health systems*, achieving high coverage and impact.
  - Questions remain about how to deliver newborn health intervention packages through MCH programs and existing systems.
  - Package should address gaps in newborn care and be seen as feasible to be delivered through existing programs/health systems at scale.
  - Challenge is to take lessons from settings in Asia and develop similar evidence base in Africa.

**Objective 2:** To identify key building blocks for delivery of a package to promote healthy home behaviors and to deliver an effective, sustainable postnatal care package (what, who, how, supervision)

### Working Group Discussions

In the afternoon of the first day, three working groups were formed to review and provide feedback on the possible package design in terms of the following aspects: what, linkages with other programs, who, where, when and how. Each group's presentation is summarized in tabular form in Annex 2. Several areas for further dialogue and consultation were identified, as follows:

- It was agreed that the HSA is the logical worker of choice for a community-based newborn care package. This is because creation of a new cadre of workers is unrealistic in light of policy and structural implications and longer-term plans for deployment of community nurses and nurse midwives, and in the context of ACSD/c-IMCI. Questions remain with respect to supervision, roles and responsibilities (focused on newborn care or newborn care in addition to other responsibilities?), gender (most are male), and training (the current package of training is only eight weeks).

- HSAs need new job descriptions to include newborn care and need to be provided with special skills in maternal and newborn health. An HSA workload analysis is needed, including workload processes, supervision, and implications.
- It was proposed that HSAs need supervised by Community Health Nurses (CHNs) in the area of newborn health as many are now being supervised by Environmental Health Officers.
- The HSA would undertake home visits for ANC and PNC. Numbers will need to be determined based on formative research but provisionally some participants recommended 3 ANC and 4 to 6 PNC plus extra for low birth weight babies.
- HSAs are not trained to conduct deliveries or allowed to do so according to policy and most deliveries at community are conducted by TBAs, who are not trained in resuscitation and are not encouraged to deliver. Many felt that neonatal resuscitation at home would not be included in the first stage of a package of care for the newborn, and the focus for the intrapartum period would be on using TBAs to facilitate skilled attendance and on improving EmOC and resuscitation at facilities.
- In terms of increasing access to management of neonatal infections, HSAs are to be trained in the new IMCI algorithm for young infant care but would refer babies with infections. There may be an option of training HSAs in the “Where there is no referral module” but this would need piloting and process data and policy change.
- How and who provides effective PMTCT and what guidance to give to pregnant women that are HIV+ to avoid stigma and discrimination is a continuing issue. In PMTCT, TBAs refer promptly HIV+ women for hospital delivery. However, most of them do so as because of fear of infection.
- The role and definition of TBAs, including trained TBAs, remains unresolved and requires further dialogue and consultation. Referral of women for delivery in Dowa health facilities is working very well by TBAs because the TBA gets a fee of K200 per referral made which is equivalent to the amount she demands for conducting a delivery. A question is whether this can be feasible and sustainable at scale.
- The presence of a skilled caregiver at birth remains a gap for home deliveries and will remain so until long-term plans for community nurses and midwives are realized. In addition, who cares for the newborn at birth remains a question.
- There is need to make use of community initiation counselors (*nankungwi*) who have decision making powers regarding sexual reproductive health (SRH) issues, just as the *agogos* in Ekwendeni are used.
- Some felt there is need to invite obstetricians in the next meetings because they are also crucial in this area of maternal and neonatal care

## DAY 2 PROCEEDINGS

### Objective 3: Maximizing and accelerating effective scale up

Following presentations, the second day of the meeting focused on the question: in order to guide and accelerate the scaling up of the package, what do we need to do and what do we need to know? The sub-questions discussed were: what policy and programmatic questions needed to be answered; what level of evidence is warranted; what is the duration of the evidence-generation (pilot) project; in which districts should the project be undertaken; who are the potential partners; and who will do what?

***Presentation: Integrated newborn care packages under consideration in various African countries: what to evaluate? Dr. Joy Lawn***

- The presentation gave an overview of integrated newborn care package design and evaluation in other African countries including Ghana, South Africa, Tanzania, Uganda, Ethiopia and the Mai Mwana project in Mchinji District, Malawi. It was introduced by looking at who the data is for, for what purpose, and at what level of evidence.
- The well-documented experiences so far are from *Asia*. Only 2 out of 7 presented yesterday are in the public sector and several have no links to *health system*. These are studies, none are at *scale*. Therefore:
  - Need adaptation and assessment in *Africa*
  - In African contexts with stronger health systems need to operationalise links with the *health system*
  - Important to consider the issue of getting to *scale* while designing
- A key question: Is it better to reach the whole nation with a simpler package with 15% reduction of neonatal deaths than reach one corner with 50% reduction
- How much evaluation is needed? Evaluation measures need to be determined based on the following:
  - Who to influence and what is the expected change
  - To inform *programmatic* design and action and make the package work (or know why it is not working) requires:
    - formative research to design the package and content (for example, what are current home practices for care of the umbilical cord, why, and how could this be optimised)
    - process assessment (e.g., number of HSAs trained, retention of HSAs, availability of drugs, percentage of newborns with infection treated)
  - To influence major *policy* change for a Government and donors to invest in scaling up a package nationwide may require data on neonatal deaths, cost per life saved, cost per visit, cost per capita of the package. Neonatal mortality is measured through pregnancy surveillance, which is complex and difficult to do well, and population-based large sample surveys.
  - To influence the *wider scientific community* requires an evaluation design, e.g., randomisation, which minimises the possibility that a result could be due to chance

The following points and questions were introduced for discussion:

- Context: NMR for the country is now at 26 (32 in MICS), and skilled attendance during birth is at 56%
- Intervention: Using the existing HSA and other linked cadres with supervision by CHNs to provide home visits and link to health system, increasing access to management of neonatal sepsis
- Evaluation design: before and after? Also cost data? Other?
- Data collection: surveys and surveillance? Formative research before?

## *Discussion*

Outcomes of the discussion and next steps are summarized as follows:

***Package design.*** To be finalized by a technical working group and presented for agreement/consensus, preferably prior to the mid-term review of the SWAp.

***Sites.*** Thyolo, Dowa, and Chitipa districts, representing three regions of the country, should be selected as the evidence-base districts for the newborn health intervention package. These are among the 10 districts where ACSD/c-IMCI program is being implemented. Thus, the three will be the “study” districts where close monitoring and evaluation activities will be undertaken. It was also suggested that interventions should be district wide, but need to have criteria for health facility catchment area eligibility in terms of staff and resources.

***Linkages to health system and scaling up.*** Given the focus on sustainable impact at scale, it was agreed that the initiative would need to be implemented within the larger health delivery system with the cadre of providers that have been formally approved. This means that the project should try to mobilize, and test the effectiveness of, HSAs and community nurse-midwives, among others.

***Remit.*** The initiative should be designed to answer specific operational questions and should represent the whole district, collaborating closely with the DHO in each district. The main policy questions to be addressed should include the use of antibiotics by community health workers (HSAs and midwives), feasibility, content, net cost and sustainability of resuscitation at the community level, and the frequency and timing of postnatal visits at home.

***When to start.*** Everyone agreed that preparations should begin as soon as possible. To the extent possible, priority should be given to posting the new cohort of graduating nurses to the selected sites. In addition, preparation should be synchronized with the financial year to the extent possible. Both components of research and programmatic interventions can start at the same time in the three pilot districts.

***Measurement.*** Specific indicators or design issues were not discussed at length, but it was felt that the Working Group should: (a) produce recommendations for review and vetting by the stakeholders; (b) address the question of duration for the “study” which would largely depend on “what” is being measured (e.g., proximate behavior-change communication indicators or neonatal mortality); and (c) identify specific roles and responsibilities for the key partners, with specific timelines of activities.

## **NEXT STEPS**

The following were discussed and agreed to be the next steps for the pilot component:

1. Formation of a working group, led by the MOH RHU. The RHU will call the first meeting of the working group. The first task will be to develop a Terms of Reference for the Working Group and respective roles and responsibilities.

2. Capture proceedings of the design workshop and circulate them to all stakeholders and regulatory bodies for their comments by end of February 2007.
3. Resolve outstanding issues and develop a protocol with the design and parameters for the pilots, including minimum resource requirements in terms of health facility staff and supervisors, HSAs, and supplies and equipment.
4. Determine costs and prepare and initiate resource mobilization plans.
5. Conduct formative research and baseline surveys in the selected districts, with the DHO/MOH working with communities as part of site preparation and an inventory of what exists/is available in the districts.
6. Secure approval for the deployment of new graduating nurses and new locally based female HSAs to the three districts

It was proposed that the Working Group (WG) should be composed of:

- RHU/MOH, with the Desk Officer for Safe Motherhood as Coordinator of the Working Group
- DHOs from Dowa, Thyolo and Chitipa
- UNICEF
- UNFPA
- WHO
- Save the Children
- CHAM

Apart from organizational members in the Working Group, key stakeholders in the process need to be identified, and at a minimum will include Zonal Health Support Officers, the Nurses and Midwife Council, and the National Health Sciences Research Committee.

### **Appendixes:**

Appendix 1: Agenda

Appendix 2: List of participants

Appendix 3: Summary of Group Work on Newborn Package of Care

Appendix 4: Summary of Evidence from Asia

## Appendix 1: Agenda

DAY 1 - Thursday, 15 February 2007		
<b>08h00</b>	Coffee and tea	
<b>08h30</b>	Welcome <i>(Official opening postponed until 2pm )</i>	Chair Dr. D. Namate (Director of Health and Technical Services – MOH) <ul style="list-style-type: none"> <li>▪ Fannie Kachale (Acting Deputy Director, Clinical Services – RHU MOH)</li> </ul>
<b>08h45</b>	Group introductions and announcements	<ul style="list-style-type: none"> <li>▪ Evelyn Zimba (Programme manager for Newborn health, Save the Children)</li> </ul>
<b>09h00</b>	Goals and objectives of Design Workshop	<ul style="list-style-type: none"> <li>▪ Dr. Fannie Kachale</li> </ul>
<b>09h10</b>	<p><b>Objective 1: Scanning the situation for Malawi’s newborns, current coverage, trends and gaps</b></p> <p>An overview of newborn health in Malawi Q&amp;A</p> <p>Presentation on Neonatal Mortality in Malawi and Policy Options (10 min) Q&amp;A</p>	<p>Chair Dr. D. Namate</p> <ul style="list-style-type: none"> <li>▪ Dr. Joy Lawn, (Senior Research and Policy Advisor, Newborn health, Save the Children)</li> <li>▪ Girmay Haile (Head of Section Social Policy, Advocacy &amp; Communication)</li> </ul>
<b>10h00</b>	TEA BREAK	
<b>10h15</b>	<p><b>Objective 1: Scanning Malawi’s policy and program environment for opportunities to scale up newborn care linked to the SWAp</b></p> <ul style="list-style-type: none"> <li>▪ The SWAp – opportunities for newborn care scale up (10 min)</li> <li>▪ The Road Map (10 min)</li> <li>▪ IMCI and ACSD/c-IMCI (10 min)</li> <li>▪ Volunteer Counselor/home visitor Model-Mai Mwana (10 min)</li> </ul>	<p>Co-chair Dr. D. Namate and Dr Juan Ortiz (Deputy Country Representative, UNICEF)</p> <p><i>(after each talk pause for clarifications but hold major discussion for end of this session)</i></p> <ul style="list-style-type: none"> <li>▪ Dr. Ann Phoya, Director SWAp</li> <li>▪ Fannie Kachale</li> <li>▪ Kelvin Nindi, IMCI Secretariat, MOH</li> <li>▪ Siphon Jale / Dr. Charles Mwansambo</li> </ul>
<b>11h00</b>	Plenary discussion of key opportunities and remaining gaps	Facilitated by Fannie Kachale and Jeanne Russell (Deputy Country Director, Save the Children)
<b>11:30</b>	<p>Learning and adaptation from newborn care packages</p> <p>MOH reports of visits to SEARCH</p> <ul style="list-style-type: none"> <li>▪ Policymakers visit to India &amp; Pakistan (10 mins)</li> <li>▪ Possible package design based on SEARCH visit proposal (20 mins)</li> </ul> <p>Evidence and experiences from India, Bangladesh, Pakistan and Nepal (30 mins)</p> <p>Plenary discussion regarding adaptation to the Malawian context</p>	<p>Chair: Dr. Some, UNICEF</p> <ul style="list-style-type: none"> <li>▪ Dr Namate, / Dr. M. Joshua Zonal Health Officer Central East</li> <li>▪ Dr. Noor Alide – District Health Officer, Thyolo</li> <li>▪ Dr Steve Wall (Senior Newborn Health Research Advisor, Save the Children)</li> <li>▪ Facilitated by Dr Some and Mr Nindi</li> </ul>

<b>13h00</b>	LUNCH	
<b>14h00</b>	Official Opening	Facilitated by Dr. D. Namate <ul style="list-style-type: none"> <li>▪ Aida Girma, UNICEF Country Representative</li> <li>▪ Dr Matshidiso Moeti, WHO Country Representative</li> <li>▪ Paul Mecartney, Save the Children Country Office Director</li> <li>▪ Mr. Kang'ombe – Principal Secretary for Health</li> </ul>
<b>14h30</b>	<p><b>Objective 2: Defining the building blocks of the package: Group work to review and provide feedback on the possible package design in terms of:</b></p> <ul style="list-style-type: none"> <li>▪ <i>What</i> (package content)</li> <li>▪ <i>Linkages with other programmes, e.g.,</i> maternal health programs, ACSD/c-IMCI, PMTCT and paediatric HIV/AIDS (how to operationalise a continuum of care with linkages between key packages and between home and facility)</li> <li>▪ <i>Who</i> (delivery of the package)</li> <li>▪ <i>Where?</i></li> <li>▪ <i>When?</i></li> <li>▪ <i>How</i> (Training, supervision, logistics management, etc.)</li> </ul> <p>(see group work sheet for details)</p>	Facilitated by Dr Lawn and Dr Phoya  Group 1- Dr Namate and Dr Susan Kambale  Group 2 – Dr Noor Alide and Dr. Juan Ortiz  Group 3 - Fannie Kachale and Evelyn Zimba
<b>1600</b>	Break	
<b>1615</b>	Group work continues	
<b>17h00</b>	End of day	
<b>DAY 2 – Friday, February 16</b>		
<b>08h00</b>	Tea and coffee	
<b>08h30</b>	Group feedback 10 mins per group 10 mins discussion after each group Plenary discussion 30 mins	<ul style="list-style-type: none"> <li>▪ Facilitated by Dr Some and Jeanne Russell</li> </ul>
<b>10h00</b>	BREAK	
<b>10h15</b>	<p><b>Objective 3: Maximizing effective scale up:</b> To be able to scale up this package what do we need to do and what do we need to know to guide and accelerate effective scale up?</p> <ul style="list-style-type: none"> <li>▪ Context and some examples from other African countries testing similar packages.</li> </ul> <p>Small group work</p> <ul style="list-style-type: none"> <li>▪ Questions to be answered by testing in the pilot area (e.g. package design, process, effects on behaviours and care seeking, impact, cost?)</li> <li>▪ Level of evidence required and possible evaluation designs</li> <li>▪ When? (When does the pilot begin and end?)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Facilitated by Dr Some and Jeanne Russell</li> <li>▪ Joy Lawn</li> </ul> <p>Group 1 - Dr. Noor Alide and Dr Susan Kambale</p> <p>Group 2 – Dr Joshua and Dr Juan Ortiz</p> <p>Group 3 - Fannie Kachale and Evelyn Zimba</p>

	<ul style="list-style-type: none"> <li>▪ Where?</li> <li>▪ Who are the partners? Who will do what?</li> </ul>	
<b>13h00</b>	LUNCH	
<b>14h00</b>	Feedback from small groups Group feedback 10 mins per group 10 mins discussion after each group Plenary discussion 30 mins	Facilitated by Dr Some and Shyam Thapa
<b>15h30</b>	BREAK	
<b>15h30</b>	What are the next steps?	Facilitated by Fannie Kachale
<b>16h00</b>	Closing remarks	Dr M. Joshua/Fannie Kachale MOH UNICEF - TBD Paul Mecartney
<b>16h15</b>	End of workshop	

## Appendix 2: List of Participants

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### Appendix 3: Summary of Group Work on Newborn Package of Care

#### Group 1 Work

What	Who	When	Where	How
<i>ANC</i>	Female HSAs	ANC	Health post	Using check list
<ul style="list-style-type: none"> <li>Map of all women of child bearing age</li> <li>Listing all pregnant women</li> <li>Visit each pregnant women, one for each trimester (first trimester visit may not always be possible)</li> <li>Involving men</li> <li>Community support mechanisms (chiefs, monthly women group meetings, birth preparedness, clean delivery, emergency referral, promotion of skilled birth)</li> </ul>	(ANC, PNC) 1: 1,000 population	Child birth	Home	Female HSAs from the same location
<i>child birth</i>	TBAs (inevitable home birth)	PNC		Community nurse and nurse midwife are supervisors of HSAs
<ul style="list-style-type: none"> <li>Reorient roles of TBAs - TBAs to accompany mothers delivering in health facilities with incentives (200 MK)</li> <li>Awareness of obstetric danger signs and timely referral to a skilled care provider by TBAs and HSAs</li> <li>Inevitable home births (clean delivery and simple immediate newborn care) – link to birth preparedness</li> <li>Timely recognition and referral of obstetric complications – link up with upgrading health facilities</li> </ul>	Community mobilizers – try to use the existing ones			Upgrade health facilities for EmONC, IMNCI, BFHI, PMTCT
<i>postpartum</i>	Chiefs			
<ul style="list-style-type: none"> <li>Linkages between facility and HSAs in order to get information of ‘mother/baby coming home’</li> <li>Support good care practices at home – breastfeeding, hygiene, warm (skin to skin), cord and eye care, birth spacing)</li> <li>Reinforce the practice of routine PNC and pre-discharge check up for mother/baby</li> <li>Recognizing maternal and newborn danger signs through home visit using a checklist <ul style="list-style-type: none"> <li>Home birth (day 0, 1, 3, 7, 14, 28) – formative research to find out most</li> </ul> </li> </ul>	Women groups			
	Other community workers			

What	Who	When	Where	How
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- feasible timing and frequency of visit
  - Facility birth (first visit within 24 hours after discharge, 1, 3, 7, 14, 28)
  - High risk baby needs more visits
- Identification and treatment of infection at home or refer to HSAs (Oral and Injectable), supervised by the health center team (HSAs are giving EPI so have the skills), HSAs are trained in and have been delegated to handle all ESP package) - WHO IMCI algorithm?

## Group 2 Work

What	Who	Where	How
<ul style="list-style-type: none"> <li>• Health education [ANC; HIV (PMTCT); Nutrition; Danger signs; Birth preparation; male involvement; Breastfeeding; Hygiene]</li> <li>• Clean delivery</li> <li>• Resuscitation</li> <li>• Thermal care (dry immediately; delay bathing)</li> <li>• Recognition and detection of danger signs and referral</li> <li>• Exclusive Breastfeeding;</li> <li>• Cord management;</li> <li>• Infection prevention;</li> <li>• Prompt treatment of infection</li> </ul>	<p><b><u>Criteria for mother-newborn care giver:</u></b></p> <ul style="list-style-type: none"> <li>• Lives within the community</li> <li>• Can care for the mother and newborn individually or part of a team</li> <li>• Should be [paid or] given incentives to motivate and ensure retention and continuation of services</li> <li>• Select in consultation with the community members to ensure acceptability and respect</li> <li>• Be part of the team that ensure continuum of care home-community-facility</li> </ul> <p><b><u>At community level:</u></b></p> <ul style="list-style-type: none"> <li>• HSA, preferably female</li> <li>• CHDs volunteers</li> <li>• Mother-Baby Care Workers (Mai-Mwana Care Giver)</li> <li>• TBAs</li> <li>• VHC – members</li> <li>• Women groups</li> </ul>	<p><b><u>EHP/ACSD delivery strategies:</u></b></p> <ul style="list-style-type: none"> <li>• Family/Household care practice:</li> <li>• Home visit by workers</li> <li>• Village Clinic Days</li> <li>• Outreach/mobile services</li> <li>• Facility-based (EPI+; ANC+; Maternity; PNC; MCH)</li> <li>• Child Health Days</li> <li>• HTC week</li> </ul> <p><b><u>Family/Household care practice:</u></b></p> <ul style="list-style-type: none"> <li>• Birth attendant to know what to do with a none breathing baby;</li> <li>• Provide performance-based incentives for every newborn successfully cared for.</li> <li>• Team may vary from community to community but consists of HAS, TBA, <i>Mai-Mwana</i> worker; VHC members and women groups.</li> </ul>	<ul style="list-style-type: none"> <li>• Home visits by CHW</li> <li>• Strengthen capacity and community level</li> <li>• Referral should be for both emergency obstetric care and newborn care</li> <li>• Refer for injections at the nearest health facility</li> <li>• Revise the VHR to include parameters important for the new born care.</li> </ul>

### Group 3 Work

What	Who	Where	When	How
1. PMTCT	HSAs, TBA	Sensitization- Community VCT/other components- Health facility	Pre natal Post natal - day 1, 3	Policy and guidelines to be put in place
2. IM Antibiotics	HSAs	Community – identification Referral to Health facility	Post-natal	
3. Ambu Bag	HC, focus to DH, RH, HC	Health facility	Post delivery	
4. Prevention of Hypothermia	TBA, HSAs	Home/community referral	Post natal	
5. Breastfeeding	TBA, HSAs	Home/community referral	Post natal	
6. Skin to skin care (KMC)	TBA, HSAs	Home/community referral	Post natal	
7. Clean delivery	TBA	Home/community referral	Delivery	
8. Clean cord care	TBA, HSAs	Home/community referral	All the time from delivery to postnatal period	
9. Birth preparedness	TBA, HSAs	Home/community referral	Pre-natal	
10. Immunisation	HSAs	Community Health Centre	Soon after birth	
11. Post natal check ups	HSAs,TBA, Health worker	Home/community Encourage health facility visit	Day 1, 3, 7, 6 weeks	
12. Special care for pre term/low birth weight	Home, HSAs, TBA, HC	Home/community referral	Day 1, 3, 7, weekly follow up until 2.kgs	
13. Assist care of the newborn at delivery	HSAs, HC	TBA	Immediately after delivery	

What is needed?

1. Checklist for administering of antibiotics (how many to consider, for how long treatment, need for policy change)
2. Low birth weight baby – need for checklist for pre term and low birth weight babies
3. HSAs – need to recruit more female HSAs
4. Need for community mobilization

Tested Models of Community-Based Newborn Health Care: Evidence and Experience from South Asia						
Package	Baseline/Context	Design	Content	Delivery Strategy	Results	Lessons
<b>Home-based neonatal care (HBNC)<sup>1,2</sup></b> SEARCH (India)	- NMR > 60 - Facility delivery 5% - Established relationship between SEARCH and Gadchiroli villages	- Before and after mortality - Non-intervention areas as comparison	- Pregnancy surveillance - Antenatal counseling - Newborn care at delivery - Birth asphyxia management - Special care for preterm & LBW - Sepsis identification & management (Cotrim + Gent)	- CHW routine home visits (8); additional visits for high risk - Trained TBAs for deliveries - Group session for pregnant women - Medical supervision every 2 weeks - Performance-based incentives	- Neonatal mortality: NMR ↓ 62% in 3rd yr - Sepsis case fatality: CFR ↓ 58% - Asphyxia specific NMR declined - Cost: \$5.30 USD per newborn	- Mortality surveillance helped to sensitize and mobilize communities - Helpful to integrate with community management of ARI man - Links with TBAs enabled high CHW attendance at deliveries
<b>Home-based neonatal care (HBNC)<sup>3</sup></b> Ankur NGO (India)	- NGO area baseline NMR 32 – 69 - Facility deliveries range from <10% (tribal) to around 50% (urban)	- Before and after mortality - No controls	- Same as SEARCH (changed from tube-mask to bag-mask)	- Same as SEARCH except two fewer routine CHW postnatal visits	- Neonatal mortality: NMR ↓ 51% in 3 yrs - Coverage: 90% received at least 4 CHW post-natal visits	- High coverage possible in various NGO settings - Importance of NGO management & leadership
<b>Community management of newborn infection<sup>4</sup></b> MINI (Nepal)	- NMR 39 - Facility delivery 9% - High coverage of c-IMCI & community management of ARI	- Before-after study of feasibility & coverage for newborn sepsis with appropriate antibiotics - Comparison non-intervention area - Cohort study of sepsis cases	- Volunteer: 1 <sup>st</sup> day counseling on danger signs - Volunteer: identifies sepsis + cotrim + referral for injection Gent - CHW: injects gent x 7d	- Existing health system: female community health volunteers + government peripheral health workers (CHW)	- Coverage: among possible severe bacterial infections, 90% received Gent injections, 80% received 7 doses Gent	- Acceptable to families, volunteers, and health providers - Volunteers weighing newborns facilitated demand for early (Day 0) visit
<b>Home Newborn care package<sup>5</sup></b> Sylhet (Bangladesh)	- NMR 49 - Facility delivery 8%	- Cluster randomized controlled trial	- CHW pregnancy surveillance - 2 antenatal visits - Postnatal visits days 1, 3, 7 - Newborn sepsis mgmt (PCN + Gent)	- Paid CHWs provide pregnancy surveillance, counseling, newborn visits - Community group education sessions - Strengthened health facilities	- Neonatal mortality: NMR ↓ 43% in 3rd yr - Practices: rapid and large improvement in household practices <sup>6</sup>	- CHW attendance at delivery big challenge - Sick infants identified by home visits much more than via care-seeking by families
<b>Clinic-based newborn care Package<sup>5</sup></b> Sylhet (Bangladesh)	- NMR 49 - Facility delivery 8%	- Cluster randomized controlled trial	- Community mobilization + education sessions - (No CHW home visits) - Health facility strengthening	- Paid male & female community mobilizers - Strengthened health facilities	- Neonatal mortality: NMR ↓ 9% (NS) in 3rd yr - Practices: modest & slow improvements in household practices & care-seeking	- Intervention without home visits, relying only on improved care-seeking, is slow to achieve impact

Tested Models of Community-Based Newborn Health Care: Evidence and Experience from South Asia						
Package	Baseline/Context	Design	Content	Delivery Strategy	Results	Lessons
<b>Integrated newborn health package in existing system</b> <sup>7</sup> Hala (Pakistan)	- NMR 42 - Facility delivery 26% - Lady Health Workers (LHW) cover 60-70% of population - Home deliveries attended by TBA	- Cluster randomized controlled trial (pilot)	- Pregnancy surveillance - 2 LHW antenatal visits - 5 LHW postnatal visits - ENC messages and basic care by LHWs - Newborn sepsis management in facilities	- Existing system of LHWs + additional CHWs where LHW coverage is low - Community health committees (CHC) to address emergency transport	- Neonatal mortality: NMR ↓ 16% in one year - Practices: increased deliveries with skilled attendant	- Delivery attendance by LHW is challenge - Community emergency transport fund possible (but difficult) - Both 'supply' and 'demand' should be addressed
<b>Participatory women's groups to improve newborn health</b> <sup>8</sup> Makwanpur (Nepal)	- NMR 39 - Facility delivery 4%	- Cluster randomized controlled trial	- Women's group action cycle: problem identification, prioritization, planning to address causes of maternal/newborn mortality	- Paid facilitators for women's groups - Health system strengthening	- Neonatal mortality: NMR ↓ 30% after 2 yrs - Significant reduction in maternal mortality - Improved ANC, hygienic care, trained birth attendant - Cost: \$0.90 per person per year <sup>9</sup>	- 'Direct' coverage of only 31% of pregnant women attending any group suggests intervention may have changed norms for household practices
<b>Community mobilization and BCC to improve newborn health</b> <sup>10</sup> Shivgarh (India)	- NMR 62 - Facility delivery 12%	- Cluster randomized controlled trial	- Pregnancy surveillance - Community mobilization and BCC around key messages: birth preparedness, clean delivery, immediate breastfeeding, skin-to-skin care, clean cord & skin care	- Paid CHWs + volunteer community activists - Community meetings (targeting community gatekeepers) - Home visits: 2 antenatal, 2 postnatal (Days 0/1 + 2/3)	- Neonatal mortality: NMR ↓ 50% after 18 mos - Near universal acceptability and practice of skin-to-skin care <sup>11</sup>	- Community mobilization facilitated rapid acceptance, use, and 'demand' for improved care practices

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