

## FORM 1: Background and screening sheet of each considered "Intervention"

### Thematic area: Community-Based Newborn Care

#### Section A: Background

| Sl. | Topic  | Description  |
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| 1   | Intervention name  | <b>ANKUR Project</b>   |
| 2   | Location (urban/rural, block, district, state) & time period | Maharashtra (seven sites), in a mix of rural tribal and urban population; 2001 - 2005  |
| 3   | Goal & objectives  | <p><b>Aim:</b> To develop and test the methods of replicating the HBNC approach from SEARCH to seven selected NGOs in Maharashtra , as the initial step in demonstrating its generalisability for incorporating it into health policies and programs on a broader scale</p> <p>The main research questions were</p> <ol style="list-style-type: none"> <li>1) Can the HBNC be replicated by other NGOs?</li> <li>2) How? What inputs are required for replicating the HBNC?</li> <li>3) What is the effectiveness of HBNC when replicated?</li> <li>4) Can selected elements of maternal and child health care be integrated with the HBNC?</li> </ol> |
| 4   | Lead agencies  | SEARCH (Society for Education, Action and Research in Community Health)  |
| 5   | Scale/coverage   | 91 villages and six slums over a population of 88117   |
| 6   | Key strategies   | To implement the Home based Newborn Care (HBNC) approach (strategies and intervention package as were used in Gadchiroli trial) in the seven NGO sites with suitable modification necessitated by local conditions at different sites by transferring vision, motivation, skills and knowledge from SEARCH to the seven NGOs and their workers including the VHW   |
| 7   | Key contacts/champions:                                      | Dr. Abhay Bang and Dr. Rani Bang   |

| <b>Information collected from:</b> Publications in the <i>Journal of Perinatology</i> , 2005 (supplement) <b>by:</b> Dr. Anchita Patil (Consultant); <b>on:</b> May 7, 2007 |  |  |
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| <b>Section B: Screening information</b>   |  |  |
| 1   | Is evaluation data available, indicating the "intervention" impact, outcomes or outputs?   | Compared to the Gadchiroli field trial, the ANKUR project shows a slightly less reduction of about 51 per cent (pre-publication).  |
| 2   | Are there standardized process? Are the key processes documented (with agreed upon guidelines and approaches)?   | The originators state that the documents regarding training and replication under ANKUR are to be published soon   |
| 3   | Has it been implemented in at least two different setting (districts, states or neighboring countries)?  | Yes. It is a replication of the Gadchiroli field trial. This project itself was implemented in six districts, and three settings, i.e. rural, urban slums and tribal   |
| 4   | Does the intervention focus on family, HH & community level improvements?  | Yes. The implementation is through the community-based VHWs. Selected through active participation of the community. The beneficiary families are also actively involved through health education and advice Further the intervention in effect empowers women, their families and the community to take charge of health of the pregnant women and children at the village level only. It also empowers the village health worker to participate meaningfully in the affairs of the village and the community |
| 5   | Is it implemented at block level or above?   | It was implemented in six districts. The block level distribution is not described. However, it covered a population of over 88,000.   |
| 6   | Are there indications that the intervention could be adapted and implemented in different socio-cultural settings?   | Similar to the Gadchiroli field trial, the ANKUR project is primarily independent of the government health services, except for referral of the required cases to the district hospital.   |
| 7   | Are there indications that the intervention is not extremely expensive (in terms of time, funding, personnel) or is competitive in relation to the cost to the current dominant approaches and models? | The model requires an investment in personnel for training and supervision, and also in time for building confidence and rapport in the community served<br><br>The ANKUR project was implemented was a mixed group with variations in terms of prior community presence. Hence prior community presence although helpful is not a necessary pre-requisite   |

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|  |  | However it is not too demanding on monetary fund requirement |
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|  | <b>Section C: Included in Evidence Review</b>  | Yes  |
|  | <b>Comments on the parameters that are not addressed above:</b>  |  |
|  | The intervention is one that focuses almost exclusively on the area of newborn care (and related issues of skilled attendance at birth). With NRHM being an 'umbrella' effort looking at a multitude of health problems, this intervention must be integrated with ongoing efforts in other areas of Reproductive & Child Health to ensure optimum utilization of resources, especially manpower |  |

| <b>Form2: Evidence Review for Community-Based Newborn Care</b>   |                                      |   |                                 |   |   |
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| <b>Name of the Intervention: ANKUR Project</b>   |                                      |   |                                 |   |   |
| <b>Date of Review: September 2007</b>  |                                      |   |                                 |   |   |
| <b>1. Location and scale</b>   |                                      |   |                                 |   |   |
| <b>Number of villages by block, district and state names</b>   |                                      | <b>Population covered</b>   |                                 | <b>Comments</b>   | <b>Time period</b>  |
| Maharashtra, seven sites, in six districts: Nasik (rural), Sangli (rural), Osmanabad (rural), Nagpur (rural), Nagpur city (urban slums), Yavatmal (tribal) and Gadchiroli (tribal) |                                      | 91 villages, six slums. Total population of about 88,311  |                                 |   | Started in 2001 and it lasted for three years, the third year being 2004-2005 |
| <b>2. Agencies</b>   |                                      |   |                                 |   |   |
| <b>Lead agency(ies)</b>  | <b>Other Key agencies (partners)</b> | <b>Implementing agencies</b>  |                                 | <b>Sponsor/donor</b>  | <b>Comments</b>   |
| SEARCH (Society for Education, Action and Research in Community Health)  | Seven NGOs in Maharashtra            | <b>List</b>   | <b>Type (Govt./NGO/Private)</b> | 1. Bill and Melinda Gates Foundation (ANKUR study)<br>2. Saving newborn lives, Save the children US |   |
|  |                                      | For ANKUR Project: SEARCH and 7 NGO partners, namely<br>a. ISSUE, Nagpur<br>b. NIWCYD, Nagpur<br>c. Sahayog Nirmitti, Osmanabad<br>d. Rugna Seva Prkalpa, Sangli<br>e. Aamhi Aamchya Aarogyasathi, Gadchiroli<br>f. Srujan, Yeotmal<br>g. VACHAN, Nasik | Multiple NGOs                   |   |   |

| <b>3. Intervention description</b>   |  |   |  |  |
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| <b>Goal and objectives</b>   | <b>Key strategies</b>  | <b>Key components/activities</b>  | <b>Primary target group</b>  | <b>Secondary target group</b>  |
| <p><b>Aim:</b> To develop and test the methods of replicating the HBNC approach from SEARCH to 7 selected NGOs in Maharashtra, as an initial step in demonstrating its generalisability for incorporating it into health policies and programs on a broader scale.</p> <p><b>Research questions</b></p> <ol style="list-style-type: none"> <li>1) Can the HBNC be replicated by other NGOs?</li> <li>2) How? What inputs are required for replicating the HBNC?</li> <li>3) What is the effectiveness of HBNC when replicated?</li> <li>4) Can selected elements of maternal and child health care be integrated with the HBNC?</li> </ol> | <p>Implementing the HBNC approach (strategies and intervention package as were used in the Gadchiroli Field trial) in the 7 NGO sites with suitable modifications as necessitated by local conditions at different sites by transferring vision, motivation, skills and knowledge from SEARCH to the 7 NGOs and their workers including the village health workers</p> | <p>Key components of the HBNC approach are:</p> <ol style="list-style-type: none"> <li>1. Community consultation</li> <li>2. Knowledge attitudes and practices (KAP) study</li> <li>3. Baseline and prospective collection of vital rates</li> <li>4. Health education of the community for community mobilization</li> <li>5. Selection of a cadre of female village health workers (VHWs) through community consultation</li> <li>6. Training of the VHWs in the care of normal, high-risk and sick neonates at home</li> <li>7. Health education of pregnant women, mothers, families for care during pregnancy, preparedness for delivery and care of mothers and neonates including identification of danger signs</li> <li>8. Training of TBAs in support of HBNC</li> <li>9. Attendance by VHW at birth and home visits by the VHW to provide care to the neonates at and after birth and in neonatal period including surveillance to identify those neonates at risk of death and providing special specified care to such babies</li> </ol> | <ol style="list-style-type: none"> <li>1. Newborns</li> <li>2. Mothers of newborns</li> <li>3. Pregnant women</li> </ol> | <ol style="list-style-type: none"> <li>1. Families and communities</li> <li>2. Community health workers (to be trained)</li> <li>3. TBA (Cooperation and raining)</li> </ol> |

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|                               |                          | <p>The technical components of HBNC are:</p> <ul style="list-style-type: none"> <li>a. Primary prevention of morbidities</li> <li>b. Diagnosis and management of <ul style="list-style-type: none"> <li>i) Birth asphyxia</li> <li>ii) Breastfeeding problems</li> <li>iii) Preterm and LBW babies, including supportive care</li> <li>iv) Hypothermia</li> <li>v) Sepsis</li> </ul> </li> </ul> <p>The technical components for the ANKUR project were identical to original HBNC model with a few modifications as per demand of the local condition at the individual site</p> |                 |  |
| <b>4. Information sources</b> |                          |   |                 |  |
| <b>Publication names</b>      | <b>Websites)/on-line</b> | <b>Unpublished project documents</b>  | <b>Comments</b> |  |
|                               |                          | <ol style="list-style-type: none"> <li>1. Replicating the Home-Based Newborn Care in India. New evidence from 12 sites and implications for national policy. Report of the convention. New Delhi, 10th August 2006. ICMR, SEARCH, PFI</li> <li>2. ANKUR project. A Case Study of Replication of Home Based Newborn Care: Case study prepared by Dr. Dileep V Mavalankar, Ms. Parvathy Raman ( Centre for</li> </ol>   |                 |  |

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|   |  | Management of Health Services, IIM Ahmedabad) [Pre-publication results]<br>3. Meeting at PFI office (Venkateswaran - PFI, Rajni Ved – MSI and Shavanti – PFI) to discuss the role and support of PFI in scaling up HBNC model  |  |
| <b>5. Monitoring and Evaluation</b>   |  |  |  |
| <b>Methodology/design</b>   | <b>Key measures/indicators</b>   | <b>Key lessons learnt</b>  |  |
| <b>ANKUR project</b>  |  |  |  |
| <p>The ANKUR project aimed at testing the replicability of the HBNC model developed by SEARCH. It involved replicating the efforts through seven NGOs in different parts of Maharashtra. The NGOs selected included those working in tribal, rural and urban slum areas.</p> <p>It involved a comparison of indicators before and after the intervention period.</p> <p>1. The effect of HBNC on the impact indicators such as NMR, IMR etc. was assessed by calculating the net difference, i.e. the change in the intervention area from the baseline (1998-2000) to the third year of intervention (2004-05) It was estimated as absolute change in rate as well as the percentage change.</p> <p>2. Census was carried out in January 2004. baseline vital statistics collection in the year 1998-2000 for baseline and every six months thereafter the methods, formats and the workers were similar to that in Gadchiroli field</p> | <ol style="list-style-type: none"> <li>1. NMR</li> <li>2. Beneficiary satisfaction</li> <li>3. Coverage of mothers and newborns <ul style="list-style-type: none"> <li>- Mothers who received one health education in pregnancy and one HE in the post-partum period</li> <li>- Home deliveries attended by the Community Health worker (CHW)</li> <li>- Newborns delivered at home examined by a CHW within 24 hours of birth</li> <li>- Newborns who received exclusive breastfeeding within 24 hours after delivery</li> <li>- Newborns who received at least four visits by a CHW during the neonatal period</li> <li>- Newborns who received at least one supervisory visit during the neonatal period</li> <li>- Sepsis diagnosed babies received treatment by a CHW or got referrals from CHWs.</li> </ul> </li> <li>4. Neonatal mortality by cause</li> <li>5. Still birth rate (no. of births of a dead fetus &gt; 28 weeks of gestation per 1000 live</li> </ol> | <ul style="list-style-type: none"> <li>• HBNC can be replicated by NGOs</li> <li>• Though the government system was kept informed, there was no linkage with the PHC system. Hence though some of the government officials were aware of the existence of the project, they did not know any details</li> <li>• Coverage difficulties arose in tribal areas with small dispersed hamlets</li> <li>• Though there was acceptance of the activities conducted by NGOs, there was little community ownership</li> <li>• It is not possible to sustain this without financial support</li> </ul> |  |

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| <p>3. Counting neonatal deaths was done and verbal autopsy used for determining cause of death.</p> <p>Primary cause of newborn death assigned by a neonatologist</p> <p>4. Study of local beliefs and practices was carried out to establish the same on the basis of which the health education messages were devised.</p> <p>5. Study of the incidence of morbidities among home-cared neonates in rural areas was done - a prospective observational study, nested in the first year of the intervention</p> <p>6. Review by a peer group was done at the end of the project</p> <p><i>(There is no information on sample design. On the face of it, it seems like a 'convenient' sampling)</i></p> | <p>births) and Perinatal Mortality Rate {PNMR (sum of stillbirths and early neonatal deaths per 1000 live births</p> <p>6. Infant mortality rate</p> <p>7. Neonatal morbidity</p> <p>8. Incidence of LBW</p> <p>9. Breast-feeding</p> <p>10. Complications of antibiotic injections</p> |  |  |
| <b>6. Program cost</b>  |   |  |  |
| <b>Total per year</b>   | <b>Estimated cost per component</b>   | <b>Estimated cost per beneficiary/unit</b> | <b>Comments</b>  |
|   |   |  | <i>No data available regarding cost from the ANKUR Project</i> |

## FORM 3a - Data sheet for Effectiveness- Community-Based Newborn Care

Name of the Intervention: ANKUR Project

| List of "impact" indicators with achievements  | List of "outcome" indicators with achievements | List of "output" indicators with achievements   | Quality of data |
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| <b>ANKUR project</b>   |  |   |                 |
| <p><b>NMR:</b> 51 per cent reduction in NMR. The baseline and endline figures are not available in the documents studied</p> |  | <p><b>Beneficiary satisfaction:</b><br/>Beneficiary satisfaction was 93 per cent</p> <p><b>Coverage of mothers and newborns:</b> In the third year of intervention, coverage of mothers and newborns, using a composite of seven indicators, was 85%)</p> <ul style="list-style-type: none"> <li>• Mothers who received one health education in pregnancy and one HE in the post-partum period = 80.3 per cent</li> <li>• Home deliveries attended by the Community Health Worker (CHW) = 63.8 per cent</li> <li>• Newborns delivered at home examined by a CHW within 24 hours of birth = 77.4 per cent</li> </ul> |                 |

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|  |  | <ul style="list-style-type: none"><li>• Newborns who received exclusive breastfeeding within 24 hours after delivery = 90.2 per cent</li><li>• Newborns who received at least four visits by a CHW during the neonatal period = 90.2 per cent</li><li>• Newborns who received at least one supervisory visit during the neonatal period = 98.9 per cent</li><li>• Sepsis diagnosed babies received treatment by a CHW or got referrals from CHWs = 91.1 per cent</li></ul> |  |
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| <b>Form 5 - Expandability Data</b>                 |   |   |                          |
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| <b>Thematic Area: Community based newborn care</b> |   |   |                          |
| <b>Name of the Intervention: ANKUR Project</b>     |   |   |                          |
| <b>SN</b>  | <b>Broad issues</b>   | <b>Available information</b>  | <b>Expert's comments</b> |
| 1  | Simplicity and clarity:<br>(is the intervention clear and simple, are the components clear and simple? could it possibly be simplified and still have results? does it take long to get results?) | <p><b>a) Project notes:</b><br/>The intervention is simple. It basically involves creating training of a special cadre of workers from the local communities who work exclusively in the field of maternal and newborn care. The project lasted for ten years, though the impact could be seen much earlier. However, it must be kept in mind that the organization SEARCH had been in the field for much longer (from 1988) and had enough time to rapport with and a credible name in the community</p> <p><b>b) Originator's comments:</b><br/>The worker provided only Mother-Newborn health care for clear evaluation of the effect in the research study. However, that is not necessary in the program mode. A multipurpose CHW can deliver the HBNC care<br/>The impact was visible in the first year, reached its full effect (62%) reduction in the NMR in the third year period. In the subsequent the impact was almost stationary. Thus at least three years are needed for the interventions to make full impact.</p> |                          |
| 2  | Key processes documented (are the key processes well documented?)   | <p><b>a) Project notes:</b><br/>Yes, the key processes are documented in the various reports. The training methodology for various cadres of workers (the village level worker, supervisors, master trainers etc.) is standardized and easily available from the organization upon request. The supervision methodology is also well documented.<br/>Information is also available through per-reviewed journals and upon the website of the organization.</p>  |                          |

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|   |   | <p><b>b) Originator's comments:</b><br/>Other reports on ANKUR exist</p> <ul style="list-style-type: none"> <li>• Process documentation of the ANKUR study by Tata Institute of Social sciences (TISS)</li> <li>• Training process report</li> </ul>   |  |
| 3 | <p>Feasibility for Govt. system to implement (could the Govt. system assimilate this intervention relatively easily, does it match well with current Govt. systems and capacities, does it require a minimum of new learning, new inputs, and change)</p> | <p><b>a) Project notes:</b><br/>The intervention does not depend on well functioning health system. In fact it has been proven to be effective in resource poor settings. However there are a few issues that must be kept in mind insofar as its adaptability to NRHM is concerned</p> <ul style="list-style-type: none"> <li>• One of the most debated issues is that of the community based workers giving antibiotic injections to cases with suspected sepsis. As of now, even ANMs are not allowed to do this under the law. The legal sanction (from the drug controller of India) for this for community-based workers might be difficult to get</li> <li>• Though NRHM has ASHA as the community-based worker, she has been envisaged under a multi-purpose role. This differs from the community-based worker developed under this model, who works almost solely on the issue of maternal and newborn health</li> <li>• The model created a separate cadre of supervisors who provided intensive supervision to the community-based workers. It remains to be seen whether the Govt. health functionaries like the ANMs and the LHVs can fulfill this role (through the ICMR study). If not, can the Govt. afford a separate cadre of supervisory staff?</li> <li>• The training under the model is time consuming (about 35 days). Can the Govt. workers be spared for this long?</li> </ul> |  |

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|   |  | <p>Hence, on the whole it can be said that scaling up of the model will require strategic changes in NRHM, and possibly an increase in fund requirements too</p> <p><b>b) Originator's comments:</b></p> <ul style="list-style-type: none"> <li>• The law is made by the Govt. Hence changes can be made. The MOH has already permitted use of gentamicin by ANMs for maternal sepsis. The MOH has already permitted use of cotrimoxazole and gentamicin by ASHAs to treat neonatal sepsis in ten districts.</li> <li>• The additional time required for the CHW to deliver HBNC is calculated to be one hour 11 minutes per day for 1000 population. ASHA is currently very much unutilized. She can easily devote additional one hour per day more, if incentivised</li> </ul> <ol style="list-style-type: none"> <li>1. A supervisor is certainly needed, especially during the first two to three years. A new person (1: 15000 pop) can be contracted for three years</li> <li>2. Training is now revised to 28 days, to be given over one year i.e. two and half days per month</li> </ol> |  |
| 4 | <p>“Dependencies” (what does the intervention’s success depend on? For eg. strong PRI, strong supervision system, lots of dedicated NGOs in the area, a charismatic leader. Does the intervention have a minimum and practical no. of dependencies?)</p> | <p><b>a) Project notes:</b><br/>A few important ‘dependencies’ that seem to contribute to the success of the model</p> <ul style="list-style-type: none"> <li>• The presence of charismatic leadership in the form of Drs. Abhay and Rani Bang, who spearheaded this intervention</li> <li>• The NGO (SEARCH) had built a name and credibility for itself in the area. The government service delivery system, unfortunately, does not carry such a reputation.</li> <li>• Intensive supervision seems to play a</li> </ul>  |  |

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|  |  | <p>key role in the success of this model</p> <p><b>b) Originator's comments:</b><br/>True. However, the HBNC has been replicated with success by other NGOs (ANKUR) and ICMR. Methods of scaling up have to be developed. Hence the scaling up should be in phases</p> |  |
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