

Home-Based Newborn and Child Care



SEARCH
Gadchiroli, India

Newborns in distress

Global Problem

- 4 million neonatal deaths + 4 million still births each year⁽¹⁾.
- Hospital care is accessible to few newborns in developing countries.
- Parents are unwilling to take the sick newborns to health facility.
- A large proportion of women deliver at home.
- Very low coverage of post-partum care to mothers.

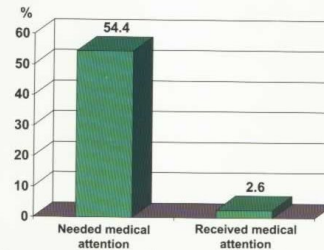
Neonates in the Community :

A) The Burden of Disease.

(Based on the prospectively observed 763 neonates in 39 villages of Gadchiroli, during one year, 1995-96)

- High incidence (48%) of neonatal morbidities⁽²⁾. Mean number of morbidities per neonate 2.2
- Only 2.6 % of the rural neonates received medical attention.
- Huge care-gap in community (Fig. 1)

Fig. 1 : Care gap for sick neonates



B) Why do neonates die in rural homes?

- Bacterial infection (Sepsis/Pneumonia) was the commonest primary cause of neonatal death. Preterm birth and birth asphyxia were other main causes⁽³⁾
- Single morbidity usually did not result in death.
- More than 80 % deaths occurred in neonates with two or more morbidities especially important were preterm birth and low birth weight.

Home-Based Newborn Care

Goal : To reduce neonatal mortality by developing a low-cost home-based model of primary neonatal care by using the human potential in villages.

Strategy :

Even if preterm birth or low birth weight can not be prevented today, newborn deaths can be reduced by either preventing or treating other morbidities, such as infections, asphyxia or hypothermia, which constitute the modifiable component of the cause of death.

Since the hospital care is neither available nor acceptable to parents, newborn care should be provided at home by training health workers in community.

The Gadchiroli field trial :

Community based newborn care package developed by SEARCH, was field-tested for 8 years (1995 to 2003) in 39 intervention villages in the Gadchiroli district. ^(4,5,6)

Contents :

1. Community sensitization about newborn care.
2. Selection and training of a female community health worker (CHW) in each village.
3. Ensuring cooperation of the community, TBA and health services.
4. Making a list of pregnant women in community, and updating it regularly.
5. Health education of mothers and grandmothers by home visiting and by group sessions.
6. Attending delivery, along with the TBA.
7. Encouraging the family and the TBA for referral when necessary.
8. Taking charge of the baby immediately at birth.
9. Assessment, and if present, management of asphyxia by following a medically approved algorithm, and using bag and mask.



Health education of mothers



Birth asphyxia management

10. Initiation of early and exclusive breast feeding, and supporting/ teaching mother to breast-feed successfully.
11. Assessing for the high-risk status of newborn on the first day. If present, extra care.
12. Home-based care of LBW or preterm neonates.



Sepsis management

13. Repeated home visits (7-13) during neonatal period to ensure breast-feeding, thermal care, hygiene, and to monitor the baby for any infection superficial or systemic (sepsis).
14. Early diagnosis of neonates with sepsis by using clinical criteria(4,7), and treatment with two antibiotics co-trimoxazole and gentamicin.
15. Weekly weighing, problem solving, advising
16. Referral of newborns when necessary.
17. Field supervision (twice in a month) by a doctor or nurse.
18. Support, supplies, records, performance-linked remuneration and continued training to CHWs.
19. Vital statistics and service data monitoring.



The four pillars of home-based care : A semiskilled team

Effect of the home-based newborn care

(Based on 6682 newborns in 39 intervention villages, during the intervention years (1995 to 2003) and vital statistics collected by an independent system in 39 intervention and 47 control villages.)^(4,5,6)

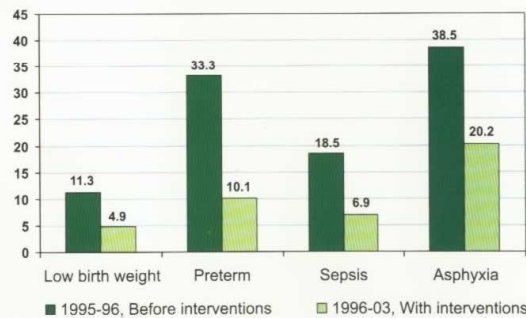
On morbidities :

- Infection , hypothermia, feeding problems in neonates declined by >55 %

On case fatality :

- Significant reduction in case fatality in LBW (by 58%) & preterm (by 70%) newborns and in neonates with sepsis (by 63%) and asphyxia (by 48%) (Fig.2)

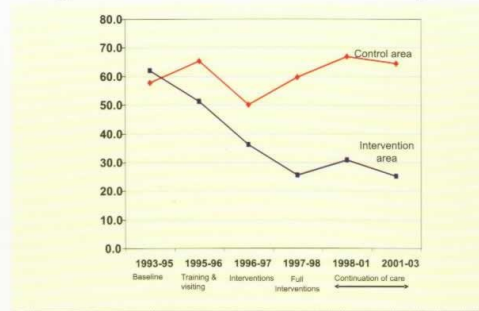
Fig. 2 : Changes in (%) case fatality before and after interventions



On mortality rates :

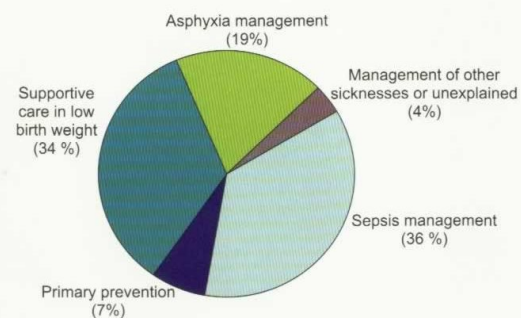
- The neonatal mortality rate (NMR) in the intervention area declined by 70% in comparison to the control area⁽⁵⁾. (Fig. 3)

Fig. 3 : Effect on Neonatal Mortality Rate

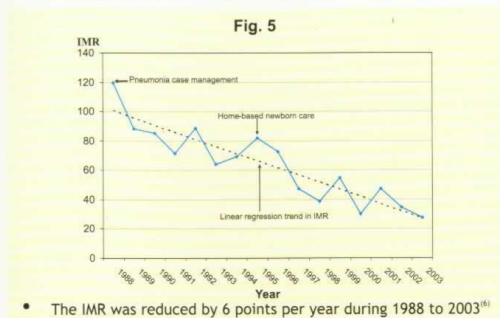


- Still Birth Rate reduced by 49 % and the Perinatal Mortality Rate by 56%
- The IMR reduced from 76 in 1993-95 to 30 in 2001-03, a net reduction by 57 % in comparison to the control area.

Fig. 4 : Contribution by different components of home-based neonatal care in preventing neonatal deaths : 1996-03



The effect of combining child survival interventions with the home based newborn care in Gadchiroli : The experience of 15 years (1988-2003)



Cost :

- Time spent by the CHW per day: 1 hour 23 minutes.
- Cost (Recurring + Non-recurring) per mother-newborn served : \$ 7.0
- Cost (Recurring + Non-recurring) per death averted : \$ 150.

Cost-effectiveness of the Child Survival Interventions*

Intervention	Cost per DALY saved (\$)
Home-based neonatal care	7
Zinc fortification	14
Zinc supplementation of children	47
Case management of pneumonia in children	86
Oral rehydration therapy	194
Vitamin A fortification	237
Vitamin A supplementation of children	2137
Growth monitoring and supplementary food to undernourished infants	8235

* WHO CHOICE project on cost effectiveness in the SEARO region at 95 % coverage, 2000

Replication of Home-Based Newborn Care

Can this model be replicated elsewhere?

1) ANKUR project :

Aim : To test the replicability through NGOs and to develop methods.

The project ANKUR has started at 7 sites in Maharashtra by SEARCH and 7 NGOs, with the support by the Saving Newborn Lives Initiative. Using the field methods developed in Gadchiroli, the Home-Based Newborn Care is being introduced in 100 villages and 6 urban slums in the different parts of Maharashtra.

After the two years of baseline study (1998-2000), implementation of the project progressed (2001-05) with excellent results.

The coverage of newborns with the home-based newborn care was 85%. Neonatal mortality rate reduced by 51 to 67%. Due to the management by the health workers of pneumonia and diarrhoea, the child mortality also reduced by nearly half.



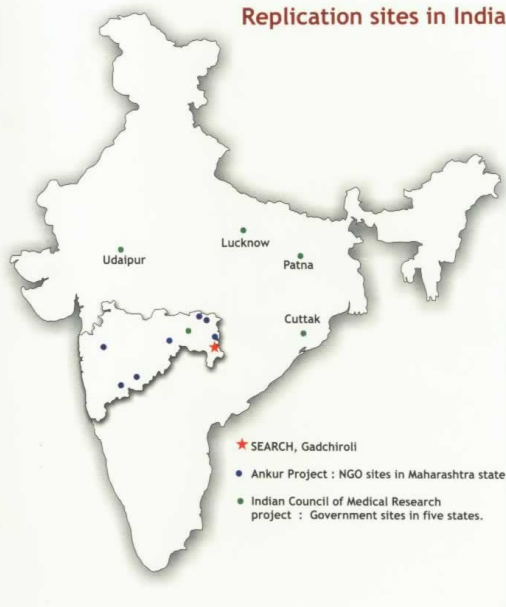
The newly selected CHWs in ANKUR received the mantle from the CHWs of SEARCH.

2) Indian Council of Medical Research Project

Government of India, Ministry of Health and Family Welfare, has initiated a multi-site pilot project in 5 states to replicate the SEARCH model, through the existing health and ICDS services.

This study is being implemented by the Indian Council of Medical Research with the training and material support from SEARCH.

The training of trainers and community health workers has been successfully completed, and the interventions have been introduced.

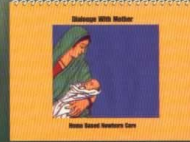


What can the SEARCH offer?

- Field demonstration of the Home-based Newborn Care in 39 villages in Gadchiroli.
- The methods of training of CHWs (31 days): Training manual and the training material.
- Training of trainers and supervisors.
- Monitoring tools, records and the reporting system.
- Health education material : A video film and flip chart.
- Research publications.



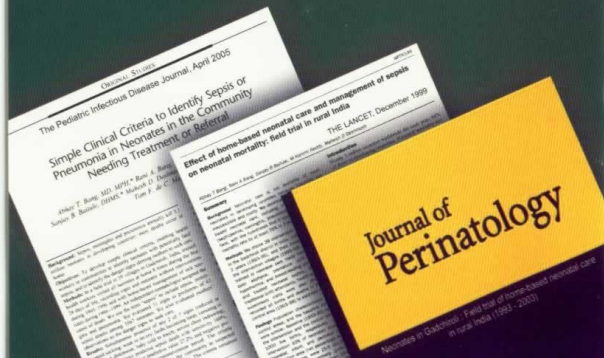
CHW Training Manual CD (English)



Flip-chart for Health Education of Mothers (English, Hindi, Marathi)



The Tiny Life
A Film for Health Education of Mothers (Hindi & Marathi)



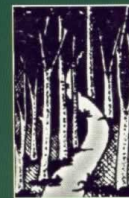
References :

- 1 State of the World's Newborns : Save the Children, Washington (2001).
- 2 Bang AT, Bang RA, Baitule S, Deshmukh M, Reddy MH. Burden of morbidities and the unmet need for health care in rural neonates- a prospective observational study in Gadchiroli, India. Indian Pediatr 2001; 38 : 952-965.
- 3 Bang AT, Paul VK, Reddy HM, Baitule SB. Why do neonates die in rural Gadchiroli, India? (Part I) :Primary cause of death assigned by neonatologist based on prospectively observed records. J Perinatol 2005;25: S29-34.
- 4 Abhay T. Bang, Rani A. Bang, M Hanimi Reddy, Sanjay B. Baitule, Mahesh D. Deshmukh. Effect of home-based neonatal care and management of sepsis on neonatal mortality : field trial in rural India. The Lancet. 1999; 354; 1955-1961.
- 5 Abhay T. Bang, Rani A. Bang, M Hanimi Reddy, Sanjay B. Baitule, Mahesh D. Deshmukh. Neonatal and infant Mortality in the Ten years (1993-2003) of the Gadchiroli field trial: Effect of Home-based Neonatal Care. Journal of Perinatology (2005) 25, S92-S107.
- 6 Abhay T. Bang, Rani A. Bang, M Hanimi Reddy. Home-Based Neonatal Care : Summary and Applications of the field Trial in rural Gadchiroli., India (1993-2003). Journal of Perinatology (2005) 25, S108-S122.
- 7 Abhay T. Bang, Rani A. Bang, M Hanimi Reddy, Sanjay B. Baitule, Mahesh D. Deshmukh, Vinod K Paul and T.F. de C. Marshal. Simple Clinical Criteria to identify Sepsis or Pneumonia in Neonates in the Community Needing Treatment or Referral . Pediatr Infect Dis J 2005; 24: 335-341

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