Gadchiroli’s trudging doctors spell hope

A healthcare model relying mainly on people from within the community to provide care is reaping success

Pramit Bhattacharya

Mumbai: One of India’s most backward districts and Maharashtra’s worst ranked in human development indicators, Gadchiroli, today finds itself at the forefront of a healthcare revolution that can potentially save millions of infant lives and help India rapidly reduce her abysmal infant mortality rate (IMR).

Under the aegis of the National Rural Health Mission (NRHM), India is replicating a unique model of using “barefoot doctors” to save infant lives, pioneered by an extraordinary team of physicians led by Abhay and Rani Bang and their Gadchiroli-based non-governmental organization, Society for Education Action and Research In Community Health (SEARCH).

With around 4,600 children dying each day, India has the highest number of child deaths in the world. Seventy per cent of under-five deaths occur in infancy and a majority of infant deaths occur in the first four weeks of life.

India’s IMR, or the number of infant deaths per 1,000 live births, at 47, is close to that of poorer African nations such as Senegal and Ghana. Even neighbouring Bangladesh and Nepal have lower IMR. The country’s IMR has declined only by 2 percentage points per year over the past five years despite the introduction of a cash incentive scheme for mothers who deliver at hospitals. At the current rate of decline, India will easily miss the millennium development goal of bringing down IMR to 27 by 2015.

Most deaths in the newborn period are preventable, and occur because households, communities and health facilities are often unable to provide the required care, according to the United Nations Children Fund (Unicef). Health workers are often unavailable and most are ill-equipped to provide newborn care.

SEARCH’s strategy to curb infant deaths relies on training community health workers to diagnose and treat
newborn diseases and has been dramatically successful in reducing IMR. Over a span of 15 years, SEARCH has been able to reduce IMR in its intervention area by 75% to around 30, by providing home-based newborn care (HBNC).

Also See | Key Parameters (PDF)

At a time when India plans to universalise basic healthcare, the Gadchiroli model has emerged as a cost-effective way to correct the nation’s dismal child-health record. At $7 per disability-adjusted life years saved, SEARCH’s intervention is more efficient in saving lives compared with other tested methods, such as micro-nutrient fortifications for malnourished children.

Behind SEARCH’s success lies the meticulous research and undying perseverance of its founders, the Bangs, honoured as global heroes in health by *Time* magazine in 2005. Trained in public health at the US-based John Hopkins University, the couple returned to India in the mid-1980s to study the health problems of the rural poor, and founded SEARCH at Shodhgram (or research village) in Gadchiroli. Six hours away from Melghat, Shodhgram shows how the drive of a small but committed team can succeed where the state has failed.

Abhay Bang, 61, said he was inspired by the Chinese example of barefoot doctors. “The Chinese adopted a simple principle that said that healthcare must be available within that distance, which a mother on foot can walk with a sick baby,” he said in an interview. In the Bangs’ case, that principle meant providing care to the newborn at home.

Almost all Indian states barring Kerala and Tamil Nadu (which have low IMR) and Chhattisgarh (that already has a similar ‘mitanin’ programme) have initiated the first phase of implementing the Gadchiroli model. The National Health System Resource Centre (NHSRC)—a nodal agency for training community health workers or accredited social health activists (Asha)—is facilitating the training with inputs from SEARCH. Each Asha worker will be paid Rs 250 for each infant each tends to, using NRHM funds. Around 30 batches of Asha trainers have been trained at Shodhgram so far.

“This is a first of its kind initiative at such a large scale,” said Rajani Ved, adviser, community processes, NHSRC. While HBNC was emphasized when NRHM was started six years back, it is only now that the state is providing the training and incentives to health workers to implement the Gadchiroli model in right earnest.

Several aspects of the model have already been adopted in Nepal, Bangladesh, Pakistan and parts of Africa. Both the World Health Organization and Unicef have approved the Bangs’ community based intervention as an effective strategy for infant and childcare.

The Bangs have helped focus the world’s attention on neonatal deaths.

Deaths in the neonatal period or first four weeks account for roughly 40% of all under-five deaths and their proportion has grown by 10% since 1990, according to the latest Unicef estimates. Of the 3.3 million neonatal deaths globally in 2009, the Indian share of 28% was the highest, even as it accounted for fewer than 20% of live births in the world.
A 1999 *Lancet* research paper by Abhay Bang and his colleagues at SEARCH, based on their interventions in Gadchiroli, showed for the first time how very sick newborn babies could be saved even in poor nations with a novel cost-effective strategy. Bang’s paper found a place in a 2005 compilation of “vintage papers” in the 180-year-old history of the prestigious medical journal.

Global impact is not new to the Bangs. Their earlier work on the widespread prevalence of sexual health problems among rural women had forced a big shift in maternal health policies from birth control to reproductive health in the late 1980s. Maternal health policies had until then focused only on family planning.

Their work on neonatal health turns conventional medical wisdom on its head. The traditional approach to improving maternal and child health lays emphasis on widening the reach of hospitals in under-served communities.

In contrast, the Gadchiroli strategy relies almost exclusively on people from within the community, usually uneducated traditional birth attendants and community health workers, to deliver care for the mother and her child.

These health workers, who have undergone rigorous training, form the backbone of SEARCH’s intervention in 39 villages. They diagnose and treat infections such as sepsis and pneumonia, two major killers in the neonatal period. Their home visits start when a woman is pregnant and continue till her child is two months old.

In case of low birth weight or pre-term babies who are at the greatest risk of death, health workers visit roughly once in two days to check for signs of infection in the neonatal period. A system of rewards and penalties depending on whether or not the correct diagnosis is made and regular visits by a supervisor have ensured that the strategy has worked efficiently.

“Everyone including doctors of the village trust us to take care of their children’s illnesses,” said Anjana Uikey, one of Bang’s “miracle workers” at Bodhli village in Gadchiroli.

After Abhay Bang’s research was published in 1999, it has taken more than a decade of advocacy in partnership with a global alliance called Saving Newborn Lives (SNL)—supported by Save the Children USA and the Bill and Melinda Gates Foundation—and more field trials, to win acceptance at home and abroad.

A lifelong vision to see Indian villages become self-reliant in health propelled Bang. Brought up in Sevagram, Mahatma Gandhi’s ashram at Wardha, Bang had decided early in life that he would follow the path laid out by his hero. “Gandhiji spoke of *gram swaraj* (free or self-reliant villages); I decided to work on *arogya swaraj* (self-reliance in health),” said Bang. The decision was not just about idealism but also a hardheaded assessment of reality: Qualified doctors are often unwilling to work in villages.
“As long as rural communities continue to depend on outsiders for even basic health needs, they will continue to face neglect,” said Bang.

Only 47% of Indian women give birth at hospitals and the figure is much lower for rural areas, according to Unicef. And with 21% vacancies among general physicians and 50-60% vacancies among specialists at rural health centres, access to healthcare is skewed against the rural poor. The Gadchiroli model addresses precisely that gap.

The runaway success of the HBNC model raised doubts on whether this could ever be replicated. Sceptics questioned the wisdom of allowing uneducated health workers to administer injections. Others saw in SEARCH’s work an island of success, which was possible only because of Bang’s commitment.

To answer these doubts, the Ankur project was launched in 2001 to replicate the SEARCH model in seven different parts of Maharashtra in collaboration with local NGOs. In four years, neonatal mortality dropped by 50% and infant mortality by 47%. The Indian Council of Medical Research has also conducted field trials on HBNC in five different states of the country and while the results have not been published yet, the trials have shown significant impact, Bang said.

It is difficult to predict the success rate across the country as the SEARCH model is scaled up since a lot will depend on effective administration. Unlike in Gadchiroli, health workers nationally are selected by the government and not the Bangs, and the technical and moral support that SEARCH gives to its community workers while handling complications will be missing.

Bang is aware of the challenges. “There will be uncertainties in such a large scheme but we will remain focused on how to make things work because the number of lives at stake is in millions.”

(The “Tracking Hunger” series is a nationwide effort to track, investigate and report India’s struggle against hunger and malnutrition. This special report on malnutrition is the result of a fellowship jointly awarded by Save The Children and Mint. To know more about Save The Children: www.savethechildren.in)

Graphic by Sandeep Bhatnagar/Mint.

pramit. b@livemint.com

Copyright © 2007 HT Media All Rights Reserved