

Beyond the Emergency Obstetric and Neonatal Care Trial:

The process and impact of the community mobilization efforts in Nagpur, India

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My Time in Nagpur:

In April 2017 I spent a month in Nagpur, India rounding with the pediatric teams at the Indira Gandhi Medical College, and working with the Lata Medical Research Foundation (LMRF) on a qualitative research study building off of the NIH-funded Emergency Obstetric and Neonatal Care trial -- a trial which was conducted in Nagpur (and in six other sites) between 2009 and 2011. The purpose of this qualitative research project was to use the Nagpur site to better understand the logistics of the community mobilization component of this trial, and to better understand the long-standing effects of the trial on the communities and female community health workers who were involved. While papers have been written about the trial more generally, the community mobilization and the effects of this mobilization effort have been overlooked in the literature, so the purpose of this research specifically was to shine a light on this critical element of the trial, and to use this trial to better understand how to develop and evaluate community mobilization and empowerment initiatives more generally. In order to do this research I worked one-on-one with a researcher from LMRF to carry out 20 interviews with community health workers across five different rural regions in the areas surrounding Nagpur city. Each day we would set out early in the morning from the office for the journey to the different primary health centers where the interviews were conducted. Despite the excruciating heat, with temperatures that reached 112 degrees, we were usually able to find a cool spot within the health facility to carry out the hour-long interviews with each of the four facilitators. During one interview a monkey broke into the room where we were conducting the interview and tried to steal our water bottle. We had to chase him out with chairs and lock the door so he couldn't get back in. In addition to the interviews, I was able to spend some time with each of the primary health center medical directors, and observe them while they ministered to patients in the clinic.

On days when we weren't conducting interviews, or when I wasn't at the hospital, I spent my time combing through piles of old trial data, reading through old trial documents, looking at the community empowerment literature, and analyzing the findings of our interviews as we went along. In addition to the work I did on the EmONC project, I also was able to help my colleagues at LMRF with a qualitative research paper they were writing on nutritional practices for young infants and children, and to give a talk for the office on qualitative data analysis (an area the foundation director felt would be beneficial). In my short time in Nagpur I felt like I was able to not only experience healthcare in the hospital setting, but also to contrast it with care in the community setting, while at the same time contributing to a valuable community health research project that I hope will change the way organizations and funders think about evaluation of community mobilization and

community empowerment efforts. Below I have shared with you a draft of an article that has resulted from my work on the EmONC project in Nagpur.



Me overseeing a discussion with the ASHA workers who participated in the EmONC Trial



Me outside the primary health center with a group of ASHA workers who participated in the EmONC Trial

1. Introduction

1.1 Background

In many countries a high percentage of women still die in childbirth or in the early postpartum period. Similarly, many infants do not survive past the neonatal period [1,2]. Each year there are more than a quarter million maternal deaths, over three million stillbirths and more than four million infant deaths, the majority of which are in sub-Saharan Africa and South Asia [3,4]. India is still one of the South Asian countries known for having some of the worst maternal and neonatal health statistics in the world. In India alone, the neonatal mortality rate in 2013 was 40 per 1,000 live births and the maternal mortality ratio was 178 per 100,000 live births, better than many sub-Saharan countries, but worse than most of the rest of the world [5,6,7]. In order to address these high mortality rates the Government of India has introduced a multitude of different programs targeting maternal and neonatal health [8]. One such program, the Janani Suraksha Yojana (JSY) scheme, offers conditional cash transfers to women who deliver in facilities and the health workers who accompany them to those facilities [9]. Despite the fact that on some level these programs, and JSY in particular, have been successful in increasing facility-based deliveries and contributing to moderate declines in mortality and morbidity, many of them fail to adequately engage the communities in their implementation and execution, and as a result, many of them fail to foster the necessary, sustainable, grass-roots change that can ultimately turn these statistics around permanently.

Defining Community Empowerment (Rifkin, 2001)

The process and outcome of those without power gaining information, skills, and confidence, and thus control over decisions about their own lives.

While the importance of community empowerment and mobilization has been well established as a critical component of any program hoping to sustainably improve maternal and neonatal health, it remains a difficult concept to operationalize and execute [10,11,12]. Community empowerment programs traditionally involve “assets-based” approaches that capitalize on existing community strengths and

leverage existing community resources with the goal of improving health behaviors and, ultimately, health outcomes [13,14]. In doing so, they aim not only to actively involve the beneficiaries and system users from the very start -- from conception through to evaluation, through to scaling up and sustaining the efforts – but also to foster a sense of true community ownership of every decision.

The formation and training of women's groups to improve maternal and newborn care practices is one such example of a community empowerment initiative. Studies have shown that facilitated participatory learning with women's groups can be an effective way to help communities identify their most pressing problems, build their individual and group capabilities and develop their own feasible plans for how to tackle their most pressing problems [10,12,15]. Several RCTs in various contexts have demonstrated the favorable impact of these women's groups on newborn mortality and women's reproductive health among other outcomes [16,17,18,19].

Despite growing evidence of the importance of community mobilization and empowerment, despite several small trials indicating the effect of such empowerment programs on health outcomes, and despite what may seem like, in theory, a straight-forward process, many programs have struggled with the best ways to move beyond simply awareness-raising to really engaging communities and empowering them to bring about lasting change [10,20].

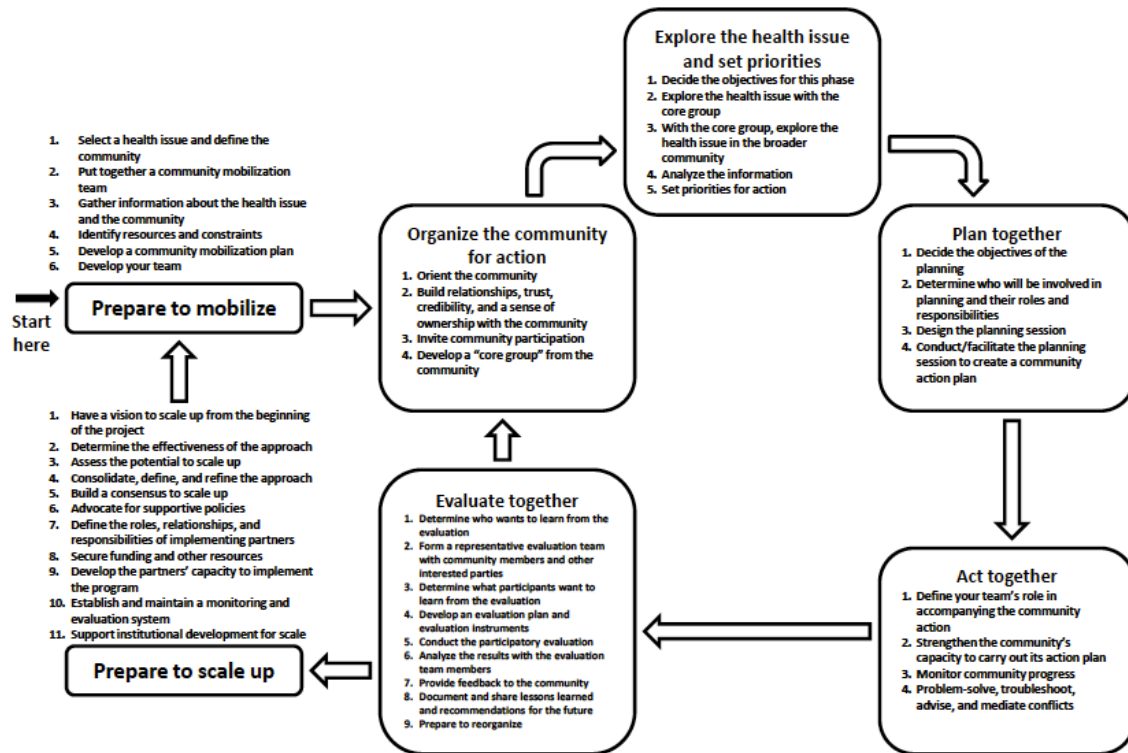
1.2 The EmONC Trial: Empowering Communities to Improve Maternal & Neonatal Health

The NIH-funded Emergency Obstetric and Neonatal Care (EmONC) Trial was one such attempt at mobilizing communities in order to improve maternal and neonatal outcomes. More specifically, it was a multi-site (seven sites in total), cluster randomized-control trial aimed at reducing neonatal and maternal mortality and morbidity in part by building capacity within the villages to help community members recognize important maternal and neonatal health emergencies and seek adequate and timely care to address them, and in part by contributing to health

facility strengthening. The three components of the trial included: facility assessments, community mobilization and community training in home base life saving skills (HBLSS) [21]. The ultimate goal of the community mobilization component of the trial was to foster a strong sense of community ownership over the strategies each community group collectively devised to address the problems that they collectively deemed as most pressing for their particular communities [22]. The other specific community mobilization objectives as articulated by the EmONC implementing team/researchers were as follows [23]:

- Empower pregnant women, women of reproductive age and the community in general to make informed decisions regarding maternal and neonatal care;
- Change social norms that result in harmful practices;
- Strengthen the social-support system for pregnant women;
- Increase collective efficacy to identify and address barriers to accessing and using preventative and curative care;
- Develop community-based referral systems to increase use of trained professionals and facilities for antenatal care, postnatal care and safe deliveries.

The community mobilization was accomplished in part by selecting and training community health facilitators (CHFs) in each of the villages to carry out community meetings. The community meetings unfolded in seven key phases following the Community Action Cycle (CAC) devised by Howard-Graham and Snetro (2003) for their participatory work with communities in Bolivia [24,25]. The seven key phases were: (1) prepare to mobilize, (2) organize the community for action, (3) explore maternal and neonatal health issues and set priorities, (4) plan together, (5) act together, (6) evaluate together, and (7) prepare to scale up (figure 1.1).



*L. Howard-Grabman and G. Snetro, How to Mobilize Communities for Health and Social Change, (Baltimore, MD: Health Communication Partnership/USAID, 2003), 3.

Figure 1.1 The Community Action Cycle
(Adapted from Howard-Grabman et al., 2002; Howard-Grabman & Snetro, 2003) [24,25]

The model was rolled out using a train the trainer process in which master trainers trained country trainers, who then trained both cluster coordinators in each intervention cluster and specific CHF, many of whom were already community health workers, in each village. The CHF, who were selected through a questionnaire and interview process and endorsed by local officials, were then responsible for forming core community groups and carrying out community meetings with oversight from the cluster coordinators and support from the country trainers. The trainings that the master trainers received followed a rigorous curriculum devised by The Global Network for Women's and Children's Health Research¹. The curriculum outlined detailed objectives and activities for each phase of the CAC that the CHF would ultimately be responsible for guiding their community groups through. More specifically, the trainings involved a 43-step community mobilization process as well as strategies for carrying out community meetings and trainings in home-based life-saving skills (HBLSS)². The master trainers in turn taught the country trainers, who in turn taught the CHF and cluster coordinators in a ten day curriculum. During the CHF training process, they were taught how to engage community members in productive discussions, the types of questions to ask to facilitate these discussions and the strategies to get community members to work together to devise action plans to overcome barriers to accessing quality maternal and neonatal health care services and interventions in emergencies. In particular they were taught the seven steps for conducting community meetings on maternal and neonatal problems [23]:

1. Review the previous meeting
2. Ask what the participants know
3. Share what the trained health workers know
4. Agree on what to do next
5. Practice the actions
6. Determine how to assess if the actions are helpful
7. Review how maternal and newborn problems can be prevented

¹ This curriculum was adapted from the field guide and training guide for, *How to Mobilize Communities for Health and Social Change* [23].

² A more detailed overview of the Community Mobilization process can be found in Appendix A.

³ Angone et al. 2016. *How to Mobilize Communities for Health and Social Change*. Appendix B. Ensuring children are

The community mobilization process was overseen by ten cluster coordinators (CCs), all of whom were medical officers at the primary health centers in the clusters, and five field research officers (FROs), who worked for the local trial implementing agency. The job of these FROs and CCs was to observe some of the meetings, document their meeting observations and ensure that the CHFs were doing an adequate job facilitating the community meetings. The FROs followed up with the CHFs every six months, and the CHFs met monthly for a re-orientation process.

Core groups were expected to meet approximately one to two times per month at a location and time convenient for all members. Meetings were advertised and announced in various ways, and members of the broader community were encouraged to attend to observe and participate. In general, the community meetings were supposed to involve a combination of experience sharing amongst the members, role plays to demonstrate particular concepts, story-telling using specific stories from the training manuals to illustrate various health themes, problem prioritization using picture cards and marbles, and collective strategizing about how to tackle problems and act on those strategies using planning matrices.

Unfortunately, in the end, the trial did not result in statistically significant reductions in maternal and neonatal mortality or morbidity in the intervention clusters, but there is still much to be learned from the trial, and from the Nagpur site specifically [22]. Despite the robust activity that took place throughout the CAC, limited attention has been paid to understanding the community mobilization and community engagement process itself. Namely, little attention has been paid to understanding exactly *how* these meetings were carried out -- to figuring out who participated and what types of discussions took place during the meetings. More, limited attention has been paid to actually understand the perspectives of the community about the trial, and the potential effects participation in the trial may have had on those who were involved (even many years later). When it comes to understanding the true impact of community mobilization efforts, it behooves us to

look beyond mortality statistics, and to think about the multitude of other ways in which such programs may impact those who participate.

With that in mind, the purpose of this qualitative study was to move beyond the original EmONC trial in Nagpur, India in order to take a more nuanced look at the process of community mobilization, and to examine, through semi-structured interviews with the CHF's the logistics of the community meetings, the community perspectives on the trial, and the sustainable effects of the trial on the CHF's themselves, and on the community more generally (even six years after the conclusion of the trial).

By further examining this specific mobilization effort, and by attempting to understand the ways in which this trial may have impacted or failed to impact those who participated, we can work towards designing more effective community empowerment programs in the future – programs that have the potential to result in sustainable health improvements.

2. Methods

Primary data was collected via semi-structured interviews with 20 purposively selected CHF's from five of the ten EmONC intervention clusters (four interviews per cluster) in Nagpur, India. Details of the trial setting and data collection process are described below.

2.1 Setting: Maharashtra State, Nagpur Region



Figure 2. 1 Map of Maharashtra state.

Obtained from: <https://sco.wikipedia.org/wiki/Maharashtra>

Maharashtra, a large state in the western region of India with a population of over 112 million people, was one of the most active of the seven trial sites. As such, it serves as an excellent foundation for further research on the community mobilization process. The coordinating center for the Maharashtra site was in Nagpur city, and as a result, this study site is referred to as the Nagpur site. The study region encompassed 20 primary health centers, each staffed by physician medical officers and nurses covering a population of roughly 6,000 people, and 119 sub-centers, providing basic maternal and child health care and staffed by Auxiliary Nurse Midwives and Anganwadi Workers³. The sub-health centers cover a population of roughly 34,000 people. There were ten tertiary care hospitals, two public and eight private, and 129 secondary hospitals, 27 public and 102 private, in the trial region [26].

³ Anganwadi workers are government health workers responsible for providing care for newborns, ensuring children are immunized, providing supplemental nutrition to children and pregnant women, and providing antenatal care and postnatal care for pregnant women. More information can be found here: <https://en.wikipedia.org/wiki/Anganwadi>

In terms of health statistics, Maharashtra is overall better off than the rest of the country, with an infant mortality rate of 24 per 1,000 live births, and a maternal mortality rate of 87 per 100,000 live births [6].

2.2 Setting: Trial Logistics in Nagpur Region

In Maharashtra, four out of the thirty-three districts in the state were selected for trial participation – Nagpur, Wardha, Bhandara and Chandrapur.

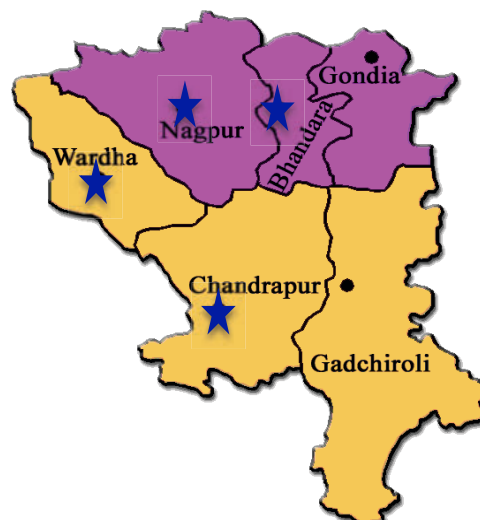


Figure 2. 2 Map of trial districts in Maharashtra state (starred)

Obtained from: <http://www.justmaps.org/maps/asia/india/nagpur.asp>

In these four districts, ten clusters (the jurisdiction of 10 primary health centers) were randomly assigned to participate in the intervention group, while the remaining ten clusters were assigned to the control group. These 10 intervention clusters comprised 318 villages with a population of 261,608 people in total. As part of the trial one thousand and ninety-five core community groups of 12-15 villagers each were formed, and two hundred and eleven CHF's were selected to oversee 4-6 core groups each (this group of groups was referred to as a unit).

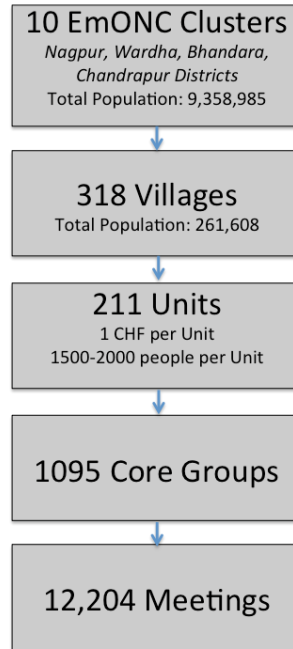


Figure 2. 3 Overview of community mobilization process in Nagpur

In total, between June 2009 and September 2011, 12,204 community meetings were held, with an average of 11 meetings per core group. A breakdown of the meetings by cluster can be seen in table 2.1.

Table 2.1 Trial characteristics broken down by cluster. Adapted from Lata Medical Research Foundation, AMBA Trial Report [23].

Sr No.	Cluster	Population	Units	Community Health Facilitator	Core Groups	No. of Community meetings
1	Kardi	30773	28	28	142	1632
2	Shankarpur	25454	24	24	156	1332
3	Badegaon	21725	21	21	101	1211
4	Kanholibara	23636	20	20	105	1279
5	Kondhali	36364	23	23	103	958
6	Salwa	20022	16	16	80	899
7	Satak	17360	14	14	76	811
8	Takalghat	32105	24	24	109	1322
9	Mandgaon	31376	27	27	157	1960
10	Sindhi-Rly	22793	14	14	66	800

Of the CHF's selected for participation, the majority (84%) were already official community health workers, also known as Accredited Social Health Activists (ASHA), while 15% were housewives and 1% were Anganwadi Workers. The facilitators selected were all women between the ages of 25-40, who were permanent residents of the study area. They were all approved by the Village Health and Sanitation Committee, and more than 50% had at least a high school education. The most important factor in the selection process was their motivation and willingness to work without compensation.

2.3 Setting: Neonatal and Maternal Health Statistics in Nagpur Region During the Trial Period

During the course of the trial, there were a total of 19,299 deliveries, 13 maternal deaths, 496 stillbirths and 362 neonatal deaths in the study region (including both control and intervention areas). Of the approximately 20,638 total pregnancies (including stillbirths and abortions), 3279 women (16%) experienced some obstetrical complication, the majority of which were obstructed/prolonged labor (60% of those experiencing complications) or breech presentation (18% of those experiencing complications). (See tables 2.2 and 2.3 below for a more detailed overview of the neonatal and maternal outcomes broken down for control and intervention clusters).

Table 2.2. Neonatal outcomes and causes of neonatal deaths in control and intervention clusters during the trial period. Data obtained from Maternal National Health Registry [26].

	Control Clusters (Column %)	Intervention Clusters (Column %)
Neonatal Outcomes		
Miscarriage	419 (4%)	422 (4%)
Termination	204 (2%)	155 (1.5%)
Stillbirths	252 (3%)	244 (2%)
Born Alive, Died Before 2 Weeks	177 (2%)	185 (1.5%)
Alive at 2 Weeks	8892 (89%)	9658 (91%)
Total	9974	10664
Causes of Neonatal Deaths Within First 2 Weeks		
Birth of Asphyxia	40 (23%)	45 (24%)
Infection	83 (47%)	72 (39%)
Low Birth Weight (<2500g)/ Prematurity	20 (11%)	22 (12%)
Congenital Malformation	11 (6%)	7 (4%)
Other	4 (2%)	13 (7%)
Unknown	19 (11%)	26 (14%)
Total	177	185

Table 2.3 Maternal complications and causes of maternal deaths in control and intervention clusters during the trial period. Data obtained from Maternal National Health Registry.

	Control Clusters (Column %)	Intervention Clusters (Column %)
Maternal Complications		
Obstructed/Prolonged Labor	824 (56%)*	1154 (64%)*
Antepartum Hemorrhage	198 (13%)*	86 (5%)*
Postpartum Hemorrhage	20 (2%)	19 (1%)
Hypertensive Disease	152 (10%)*	222 (12%)*
Breech Presentation	284 (19%)	320 (18%)
Total	1478	1801
Causes of Maternal Death		
Pre-Eclampsia/Eclampsia	-	1 (14%)
Sepsis	2 (33%)	1 (14%)
Hemorrhage	-	1 (14%)
Cerebral Malaria	1 (17%)	-
Hepatitis	1 (17%)	-
Burn	-	1 (14%)
Electric Shock	-	1 (14%)
Suicide	-	2 (30%)
Unknown	2 (33%)	-
Total	6	7

*Statistically significant difference; chi-squared test $p < 0.05$

2.4 Data Collection Overview

Data for this study was collected through semi-structured interviews with 20 purposively CHF's in five purposively selected intervention clusters (four interviews per cluster). The goal of these interviews was to explore the process and impact of the community mobilization activities of the EmONC trial, and to obtain additional information about:

- The community meeting logistics
- The community meeting content
- The CHF's understanding of the EmONC trial's purpose
- The CHF's perceptions of the effect of trial participation on their current activities, performance, status, self-efficacy beliefs and self-confidence (now six years after the trial's conclusion)
- The CHF's perceptions of the effects and impact of the trial on the behaviors of the men and women in the intervention communities

2.5 Site & Participant Selection

These five clusters were selective from the list of the ten EmONC intervention clusters to represented two of the most active clusters (where the greatest number of meetings had occurred), two of the least active clusters (where the least number of meetings had occurred) and one cluster with activity levels in between the other four. The five clusters included Kondhali and Satak (least active), Mandgaeon and Takalghat (most active), and Badegaon (intermediately active). These clusters were also purposively selected on the basis of their population sizes to represent two large, two small and one medium-sized cluster, and based on their distance from Nagpur city (two of the farthest away from the city, two of the closest to the city and one intermediate distance from the city).

CHF's within each of the clusters were also selected purposively to represent two the most active and engaged CHF's and two of the least active and engaged CHF's in each cluster. The level of CHF activity was determined by one of the LMRF staff members

who was involved with overseeing each of the CHF's during the trial itself. The names of the most active CHF's had also been recorded in the study close-out report. The majority of the CHF's interviewed were also community health workers (ASHA), but two of the interviews were conducted with CHF's who were not ASHA workers. A total of four CHF interviews were conducted per cluster

2.6 Data Collection

Within the selected clusters, the purposively selected CHF's were called to the local PHC for participation. All participants were informed about the study purpose, and no identifying information was recorded. A standard interview transcript was followed, and all interviews were conducted in English and translated into Marathi with the help of a local translator who worked for LMRF. The interviews were recorded without any identifying information, and the responses were back-translated from Marathi into English in real-time. Copious notes were also taken by myself throughout the discussions. Interviews were conducted until beyond when data saturation had been achieved.

2.7 Data Analysis

Responses and observations were documented in copious notes throughout the discussions. I then performed a modified transcription of the interviews in which I transcribed the back translations and questions, and noted the timing of the participant responses. The response timing along with the general response theme (as obtained from the back-translation) were then noted, and another LMRF staff member fluent in both Marathi and English was asked to transcribe and translate the relevant responses verbatim. In this way only those relevant responses as determined from the back-translations were translated, which facilitated a much faster transcription and translation process. Upon completion of all the interviews these translated transcripts were coded and grouped into broader themes. The analysis involve both coding up – allowing novel categories to emerge from the data itself – and coding down using pre-ordained categories as determined through

literature reviews, the interview questions and the secondary data analysis already performed in 2013. Themes were then compared across the interviews and across the clusters to look for convergence and divergence.

2.8 Ethical Approval

IRB exemption for this research was determined through Harvard Medical School and through the local Lata Medical Research Foundation IRB in Nagpur, India.

3. Results

3.1 EmONC Trial Community Mobilization Logistics

Community health facilitators (CHFs) were selected through a written test and an interview. They were selected on the basis of their willingness to work for the community without pay and their ability to be available whenever pregnant women needed them. In the interview they were asked questions about how to encourage women to deliver at facilities and how to counsel a mother if she did not want to vaccinate her baby amongst other things.

Most core groups met once or twice per month with between ten to twenty people participating in each meeting. Most meetings lasted one and a half hours, and few CHFs planned in advance for the meetings. Fifteen minutes were reserved at the end for documenting meeting content and filling out the EmONC community meeting logs. There were some difficulties finding places for the groups to meet, but the majority met in the Anganwadi office, which is the office where vaccinations and nutrition counseling were typically provided by the Anganwadi workers. There were occasionally some difficulties scheduling the meetings due to festivals, agricultural work and climate, but most groups were able to make up for missed meetings.

In terms of who participated in the meetings, the majority of core groups included auto-drivers, who were chosen because it was felt they had a critical role to play in helping women get to facilities in emergency circumstances. It was felt that by including them, the pregnant women in the group would be more familiar with them, and be able to call on them should an emergency arise. Other members involved in the groups included pregnant women, postnatal women, teachers, heads of villages, family members of pregnant women, and traditional birth attendants. The core group remained the same through the trial, and most core group members attended the majority of meetings, although the meetings were all opened to the rest of the community members who decided which meetings they would attend.

Meetings were advertised during home visits conducted by the ASHA workers, and future meetings were also advertised during the meetings themselves. The CHF's encouraged people to attend the meetings by stating that they had valuable information to share. They also relied on the community itself to help advertise the purpose and content of the meetings:

"If we inform a woman about the project in the meetings, then she tells others about the project and its purpose. This helps in solving the problems." (CHF 2, Satak)

Or to help convince those who were resistant to attending:

"...if a woman did not attend a particular meeting then we used to ask other women who were close to her to convince her to attend them." (CHF 4, Satak)

One CHF spoke about how it was initially hard to get the community members to be willing to attend the meetings, but how the core group was able to convince the rest of the community to get involved by demonstrating how much they had learned from participation. She spoke about the power of the community to get others involved:

"Initially people used to ask what will we gain from these meetings? Then when we made them understand that it is for their betterment, then we were able to

form the first core group. The women from this group convinced others to develop core groups and thus expand our coverage. They told others that we are getting trained and educated in a good way, and so it is benefitting us, which made others join in.” (CHF 3, Satak)

Another CHF spoke about how she used the local health provider, the Auxillary Nurse Midwife, to help make people aware about the project and convince them to attend the meetings:

“The Auxillary Nurse Midwife used to visit the village for immunizations and we asked her to address the people and make them aware of the project. She explained to the villagers that the project will benefit them and help to save lives of pregnant women and newborn babies. The villagers were convinced and they started to attend the meetings regularly.” (CHF 3, Takalghat)

In the meetings themselves community members shared their personal experiences related to maternal and newborn health, the CHFs answered questions, the group devised and practiced role-plays addressing maternal and newborn health problems, and the group voted on newborn and maternal priority problems and strategies using marbles and picture cards. An emphasis was placed on using stories to convey more complex concepts. One such story that was utilized by all the groups was Ragini’s story, which was intended to help the groups think about the impact of education and poverty on health. Ragini’s story, however, was used to convey different lessons for different core groups. According to one CHF, Ragini’s story was used in her meetings to emphasize the importance of maternal health awareness and planning:

“Ragini’s story emphasized that it is possible to prevent maternal death. It is very important for pregnant women to take care of themselves during pregnancy, be informed about the dangers that can occur during pregnancy and take appropriate steps to avoid them or manage them properly if there are any problems.” (CHF 1, Satak)

According to another CHF, the purpose of Ragini's story was not just about increasing awareness, but also about the importance of women sharing their pregnancy concerns with others and seeking care in a timely manner:

"This [Ragini's] story made the community aware about problems during pregnancy, like bleeding too much, and made them realize the importance of conveying their problems to the appropriate person, and seeking immediate help to avoid further complications." (CHF 4, Satak)

Yet another CHF spoke about how Ragini's story emphasized the importance of utilization of health facilities in order to avoid maternal death:

"Ragini's story depicted the plight of a poor village woman who succumbs to death due to lack of facilities for her medical care, and lack of transport to the health facility." (CHF 4, Takalghat)

The stories were touted as a useful tool for helping draw comparisons between the plights of the characters and the plight of the villagers themselves:

"Using the stories makes them feel that this is about us, and we should do something to help ourselves, which I guess motivates them." (CHF 3, Takalghat)

Although the groups roughly progressed through the phases of the community action cycle over the course of their multiple meetings, the phases often bled into one another, and each meeting involved an amalgam of different activities regardless of the phase. Despite this, most groups focused on capacity-building activities during the organize phase, experience-sharing and priority problem identification during the explore phase, barrier identification and strategy development during the plan phase and role plays, distribution of automobile driver's numbers and teaching of home-based life saving skills during the act phase. No groups made it all the way to the evaluation phase.

3.2 Strategies for Community Engagement & Information Dissemination

While the content of the meetings was relatively consistent across the groups, each of the CHF's employed different strategies for engaging their groups during the meetings themselves. A few of the CHF's talked about the importance of using local terminology, calling on individuals within the group or using non-judgmental language to ensure successful meetings:

"Using local language helped in making the meetings successful. If anyone is silent in the meetings then we ask them more questions to make them talk. Effective communication, active listening, use of simple language which is understood by all, answering all their questions satisfactorily, treating them respectably, speaking in a language that will not hurt anybody's feelings helps in conducting meetings successfully." (CHF 2, Khondali).

Other CHF's talked about the importance of using open-ended questions and inviting people to share their own experiences:

"[During the meetings] we ask questions to those who do not talk. We ask them to share their experiences, stating there are no wrong answers, just share what you have gone through." (CHF 3, Badegaon)

One CHF spoke about the importance of actively listening to the community members to enable them to convey their concerns:

"We should actively listen to the community members and not just speak ourselves; we should give them a chance to speak." (CHF 4, Mangaon)

Another CHF spoke about how using practical demonstrations in the meetings were necessary to enable full comprehension:

"Unless we discuss in the community through meetings and demonstrate the appropriate techniques, the community does not understand. When we demonstrate practically, then they realize that if they could have learned these things before, then our babies could have been saved." (CHF 1, Mangaon)

Still other CHF's talked about the importance of preparedness for meetings in order to facilitate better discussions:

"Preparedness for meetings like placing the floor mats, making arrangements for drinking water and keeping materials ready before they [group members] arrive helped us for conducting meetings. We should prepare the questions to be asked beforehand, and make them talk in them meetings by encouraging them to ask questions." (CHF 2, Mangaon)

That same CHF, as well as another CHF, spoke about how involving influential and respected community members in the meetings made the community more receptive to the meetings:

"We would invite some respected and influential elderly persons and discuss meeting points with them so that their advice became more acceptable to the community. The community became more receptive to us." (CHF 2, Mangaon).

While another emphasized the importance of making sure to involve any new members in the discussions, and making sure to summarize the main meetings points:

"When new members were there we asked them about how they came to know about the meeting. Then at the end of the meeting, the main points were summed up for the benefit of all attending the meetings." (CHF 3, Takalghat)

The strategies utilized by the CHF's appeared to be not only effective in getting community members to participate in the meetings themselves, but in helping to ensure that the content of the meetings was disseminated to the broader community beyond just those who attended in person. Several CHF's discussed the informal sharing of the meeting information that took place during women's daily activities:

"The women used to share health information with others when they went to the farms, went to fill water from the community taps, and also with any relatives attending their place. They informed about the project activities to others." (CHF 1, Mandgaon)

“The women who used to attend the meetings discussed the topics of the meetings with those who did not attend the meetings, and thus the information was spread in the community...whenever three or four women sat together they would discuss about the messages given in the meetings, and this gradually helped in spreading the information to most of the villagers.” (CHF 3, Takalghat).

Others discussed the more formal sharing of information that took place during other organized groups or functions:

“The sharing [of meeting information] with the other community members took place at the community self help group meetings and also during any functions or social gatherings.” (CHF 4, Mandgaon)

Involving the community members in the information dissemination process outside of the meetings enabled the message to be spread more broadly:

“Because we involve the community then the message spreads widely. If we make a group of ten women, then they bring ten more women and the information is disseminated in the whole village.” (CHF 2, Satak)

Another CHF discussed how organizing the whole community was critical to ensuring that the community members were capable of helping one another when the health workers or study team were not available. In other words, community involvement was the key to intervention sustainability:

“It is important for the community to be organized and not only one or two individuals, because if the community is involved then they will remember what the ASHA [Community Health Worker] had taught them during the project, and will be willing to help a mother when the need arises and when other persons who are actually conducting the study are not available.” (CHF 1, Badegaon)

The purpose of the meetings, then, according to one CHF was to foster a sense of unity amongst the community members:

“Involving the community is essential for wider dissemination of information to all the community members. When the community is united, it makes things possible.” (CHF 2, Mangaon)

In short, many different techniques were employed by the CHFs to ensure that the community members felt engaged with, and actively participated in the meetings. This active participant involvement during the meetings was key to ensuring dissemination of the meeting information and knowledge outside of the meetings to the broader community. In order to fully tackle the maternal and neonatal health problems, it was felt that the entire community beyond just the core groups needed to be aware of the problems and aware of the best techniques for addressing them.

3.3 Effect of EmONC Participation on the Community

Given the wide level of community engagement with the trial, almost all of the CHFs felt that participation in EmONC had a profoundly positive impact on the community in many different ways. First, many of the CHFs felt that participation in EmONC resulted in increased community awareness of maternal and neonatal health problems, and increased knowledge about how to address those problems acutely in the home before even seeking care from a facility:

“There has been a tremendous change; people started talking about their problems, they became aware about their health.” (CHF 1, Khondali)

“They [Mother-in-Laws] became aware of danger signs. For example, if a woman had excessive bleeding during pregnancy then they came to know about the importance of giving a sanitary napkin and making her keep her legs folded over one another to reduce the bleeding.” (CHF 3, Khondali)

Second, many of the CHFs felt that participation in EmONC led to increased community awareness about the importance of emergency preparedness and birth planning more generally:

“Community members realized the importance of savings, arranging transport and taking action for important health problems.” (CHF 2, Badegaon)

Many CHFs felt that participation not only led to increased awareness about health problems and how to plan for them, but also actually led to behavior changes such as decreased reliance on “black magic” and decreased usage of unhygienic traditional practices such as rubbing dirt on the umbilical cord or blowing smoke on a baby who was having respiratory difficulties:

“Before EmONC they [the community] were into black magic and other stuff, which considerably reduced after the start of EmONC. Their superstitions also diminished.” (CHF 2, Khondali)

The CHFs also felt EmONC resulted in increased hospital deliveries, decreased home deliveries and increased saving behaviors (even if these changes in behavior were not statistically significant changes as recorded in the original EmONC papers):

“Home deliveries have reduced a lot. Importance of savings was realized by the community. They started savings from early pregnancy and hence the problems of debts and lending of money for health reasons have also reduced.” (CHF 2, Mangaon).

“The community has inclined more towards approaching the health centers for their health problems. They have completely given up on visiting quacks and traditional faith healers.” (CHF 1, Mangaon)

Several CHFs actually spoke about how the behavior change directly resulted from the increased awareness that was created during the trial:

“Those who didn’t visit the hospitals frequently also started going to the hospital for danger signs observed, and also for delivery because of the awareness created during the project.” (CHF 1, Badegaon)

“The community became aware regarding the importance of savings, and when any problems arose they began arranging transport and other things on their own accord before even informing us.” (CHF 1, Mangaon)

Other CHF's felt that because of EmONC the community became more open to sharing their health problems with one another, and women in particular became more willing to share information about their pregnancies with the health workers as early as possible:

"The community understood their own health problems. They have started to share their problems amongst themselves, which did not happen earlier. They [women in the community] used to not inform us about their pregnancies for three to four month, but now they inform us much earlier." (CHF 4, Khondali)

Not only were women in the community more opened to sharing their problems with each other and with the community health workers, but it was also felt that they were taking better care of themselves and adhering to good prenatal care practices more generally as a result of EmONC:

"The women informed us about their problems at the earliest. They became aware about the steps they should take in order to deliver a healthy baby. Their behavior towards self-care improved through EmONC...They went for antenatal visits, regularly, took medicines and iron folic acid supplements regularly." (CHF 1, Mangaon)

The men in the community were also perceived by the CHF's as changed by EmONC. Many CHF's mentioned how as a result of EmONC the men became more aware of the importance of prenatal care and utilization of health facilities for their wives, and thus allowed them to seek care in ways they had prohibited prior:

"There are changes in the men too. Initially they didn't allow their wives to go out of the homes alone, but now they are allowed to go alone to meet us or even to the health centers. Now they trust the ASHA [community health workers] more than before." (CHF 3, Khondali)

"Men have become more responsible towards the health of their pregnant wives. They help them reach the health facility and also convey any relevant messages to the ASHA when required." (CHF 3, Satak)

The CHF's also felt that as a result of EmONC the men began to take better general care of their wives and respect them more during pregnancy:

"Men began to respect women after EmONC. They became considerate towards their wives' health and took them for antenatal check-ups regularly." (CHF 3, Mangaon)

And were more willing to ask the health workers for help in times of need:

"They [the men] now feel that informing the ASHA (community health workers) about emergencies is very important to seek their help. They [the men] ask for assistance while taking the women for deliveries in arranging for transport etc." (CHF 4, Badegaon)

While there were many tangible community changes that the CHF's discussed, several CHF's felt that participation in EmONC also had less tangible impacts on the community such as increasing community cohesiveness, increasing overall community engagement and improving communications amongst community members and between community members and ASHA workers. Several CHF's also felt that participating in EmONC had made women less shy and secretive about their pregnancies and their pregnancy complications, and that after EmONC they would discuss their problems openly at the communal taps not just in the meetings – the conversations had carried over into their daily routines. Several CHF's also discussed the increases in the number of women who participated in the community self-help groups after seeing the benefits of meeting participation during the EmONC trial. A few CHF's mentioned several core groups that even still existed six years after the trial conclusion, and continued to meet regularly to discuss maternal and neonatal health concerns.

EmONC participation, as mentioned earlier, was felt to have had an impact that was much further reaching than just on those who were directly involved. As one non-CHF ASHA said:

"We are all equal even if we didn't participate in EmONC or have experience leading the community meetings; we all gained something." (CHF 1, Satak)

In summary, EmONC was felt by the CHF's to have a strong tangible and intangible effect on the communities who were involved. Participation in the trial resulted in perceived changes in knowledge, attitudes and even behaviors.

3.5 Effect of EmONC Participation on the Facilitators

Perhaps one of the most valuable impacts of the EmONC trial, however, was not the benefit to the community in its totality, but the benefits to the CHF's individually, and the impact that the trainings had on their roles in the community, their feelings of self worth and their abilities to think strategically about how to tackle community problems moving forward. Many CHF's discussed how facilitating the meetings helped them to build their confidence with regard to speaking in front of large crowds, and how participation as facilitators made them feel more competent with regard to their ability to address the problems of the community:

"We have gained confidence to talk about several issues with the community. We have become more daring after EmONC. We feel more competent to solve their [the communities] problems. We now feel capable of solving the community problems." (CHF 1, Khondali)

Several also felt that EmONC made them more talkative and less shy:

"We became more talkative after joining EmONC. [Before] I was shy to speak with people, but the exposure obtained during EmONC has made me proactive, bold, and enhanced my communication skills." (CHF 3, Mangaon)

One CHF even spoke about how participation made her feel more confident and willing to speak up even when discussing community issues with government officials:

"We have become more daring to meet anyone for solving community problems. [Before] we were hesitant to meet leaders from the local government,

but now we feel confident to meet them and discuss our problems in order to bring out the solutions for [the community].” (CHF 2, Satak)

Many also discussed how participation in EmONC had resulted in increased trust in them by their communities:

“Initially the community members did not trust us with their problems, but now we have become the first point of contact for them in case of any problems experienced by them.” (CHF 1, Mangaon)

“Whatever problem is there in the community, the EmONC ASHA [community health workers] are the main point of contact for the community as they are confident and trust us to be the persons who can solve all their problems.” (CHF 4, Takalghat)

As well as increased community status and popularity:

“Initially we were common residents in our village, but after joining the EmONC project we gained a lot of importance through our work, and are popular among the community.” (CHF 3, Takalghat)

They discussed how more women come to them with their problems now because of their new knowledge and abilities, and several who were not ASHA before serving as CHFs have subsequently been elected as ASHA since participation. Several CHFs also discussed how they had even risen to the status of an unofficial doctor in their community as a result of the trial:

“If I go somewhere now people say that the little doctor has come.” (CHF 2, Mangaon)

Wherever they went during and after the project people would call for them to ask them questions:

“Even our family members were not aware of the health problems and how to handle them effectively, which we are able to do now because of the EmONC training. [Now] where ever I go, I am being called by the people and they ask a lot of questions, invite me at the home and ask me to tell them about specific health issues.” (CHF 1, Satak)

While many mentioned their increased community status, a few also spoke about their increased feelings of community connectedness. One CHF specifically spoke about her closeness with the community as a result of her role in EmONC:

"We have become very close to the community and now they consider us like their family...The women trust us even before informing their mother-in-laws." (CHF 1, Khondali)

Another spoke about how the project enabled her to become more involved and engaged with her community:

"I was staying away from the community. This project [EmONC] gave me the chance to be involved with the villagers and help them during their need. I feel that if I am able to save anyone's life by working on this project, then it is a worthy cause for the community." (CHF 2, Mangaon)

As a result of participation many have also been able to take on increasing responsibilities within their communities, and several now lead community groups or participate actively in community groups they were not involved with prior. One even mentioned how she would be running for local election, which is not something she felt she would ever have been capable of prior to her participation in EmONC:

"[Because of my participation as a CHF] people have advised that I should contest for the general elections at the village level." (CHF 3, Khondali)

In addition to increasing their feelings of self-worth and their status within their communities, many felt that EmONC had trained them to plan and strategize more effectively, and they were able to use the EmONC way of thinking to solve other problems within their communities such as sanitation problems or alcoholism. Several spoke about how in order to improve sanitation conditions they should lead by example, hold community meetings to educate people about proper hygiene and the diseases that come from poor hygiene, involve leaders to make sure rules and regulations were enforced, institute fines for littering and put on role plays in the

street to demonstrate proper hygiene practices. To address alcoholism they spoke about holding support groups for wives of alcoholics, discussing the problem in front of important stakeholders, protesting around shops selling alcohol and trying to implement regulations to ban alcohol sales. Many of the skills and techniques they suggested employing to tackle both of these problems came directly from skills they had gained and techniques they had utilized during the EmONC trial. In short, EmONC taught them how to address community problems in a more systematic way, and made them feel more capable of resolving any community problems that arose:

“I feel that I can now solve any problem very effectively. I am also confident that if I am unable to tackle the problem then I can take guidance from my seniors and then solve the problems.” (CHF 4, Takalghat)

It was not just about the skills they learned, it was also about the sense of pride they felt being able to put their knowledge and skills into practice to save lives:

“I felt happy and excited while working on the project. I felt proud that I was able to save other people’s lives through my work. The community members and our families also encouraged us to do our work, and shared our tasks at home so we could help the community.” (CHF 2, Mangaon)

One CHF gave a long speech about how proud and grateful she had been to participate in the trial. Several CHF told stories about being contacted by families in emergency cases. They talked about how they were able to help stabilize women with hemorrhage for example by providing sugar water and uterine massage, and then help the family to find transport to the nearest hospital. They spoke about the gratitude from the families they helped and the sense of pride they found in their new-found competence and ability to save lives. Many felt the knowledge and skills she had gained from EmONC made them more effective as ASHA (community health workers):

“Things that we have learnt during EmONC are still helping us to solve the community problems, and do our work more effectively as ASHA [community health] workers.” (CHF 4, Mangaon)

Perhaps most importantly, several CHFs spoke about how EmONC had taught them a way to give the community members a voice they did not have before. EmONC gave them a tangible way in which they could really help their communities and ensure that their communities were able to help themselves:

“When the women are going on the own to the hospitals, the doctors ask them about how they know to come at the earliest symptoms. The women informed them that the EmONC project is going on in their villages and the ASHA [we] have taught them to go for health check-ups whenever they first experience a problem.” (CHF 3, Mangaon)

“EmONC gave us the strength and capability to go ahead and change these things in our village, and hence we are able to do such tasks in the community and to help the community help themselves.” (CHF 2, Mangaon).

In sum, participation in EmONC appeared to have a very profound effect on the women who facilitated the meetings. They felt participation in the program fundamentally changed them for the better, and made them more effective at their current community work and more capable of helping the community resolve their problems.

4. Conclusions

From the perspective of the CHF in Nagpur it is clear that EmONC community meetings and community mobilization had an effect that was not reflected in the results of the original EmONC publications [22]. The majority of CHFs felt that the community meeting information was disseminated far beyond just those who participated in the meetings themselves, and that the trial resulted in drastic behavioral changes amongst both the men and women both in terms of their responses to emergency obstetrical and routine prenatal care, and in response to

their health and preventative care behaviors more generally. So, while the focus of the trial was on emergency maternal and newborn care, it appeared that the effects of the trial on the community were not confined to those two domains and instead trickled over into other areas of health. Moreover, many CHF's felt that the trial resulted not just in changes in health behaviors, but also in changes in the community more generally in terms of their openness to sharing their concerns with one another and their abilities to tackle other community problems that might arise. None of these community changes, however, were captured in the original trial data.

Perhaps even more profound, however, was the effect trial participation reportedly had on the CHF's themselves, even six years after the trial's conclusion. Almost all of the CHF's felt that participating in the EmONC trial had an enormous impact on them and their current role in the community, and that this change had sustained over time. Many of them spoke about the increased confidence they gained from the trial, and the new found boldness that enabled them to speak with government officials about community problems and carry out community-wide meetings. They spoke about how the trial enabled them to feel more connected to their communities and more capable of solving any individual or community problems that arose. They talked about how their status in the community had been elevated since participating in the trial, and a few even mentioned new community positions, such as the heads of various community groups, they had been offered as a result of the trial. Others spoke about their pride in being able to save lives, and about how through the trial they had learned ways of strategically thinking through and tackling problems beyond just maternal and newborn health issues. Several CHF's begged us to continue to do such community projects so they could continue to learn more and be able to further help their communities.

So, while the trial did not result in decreased maternal or neonatal mortality or morbidity, it did result in many perceived important individual and community-level changes that have lasted for many years since the trial conclusion. These changes may not have been captured in the quantitative statistics, but they seemed

to have been felt strongly by all the CHF's across multiple trial sites in and around Nagpur.

This study, however, is obviously not without significant limitations. Given that it is based solely on interviews with the CHF's themselves and not with the broader community members who participated, it is hard to be able to corroborate whether these community behavioral changes were real or just perceived by the CHF's. Additional data collection with the community members themselves would be necessary to reinforce these findings. More, given that the data is all self-report data we are reliant on the word of the CHF's themselves, and do not have other sources of data of this nature with which to corroborate the findings. That being said, it is important to understand the trial and its effects from the CHF's themselves, so while there are certainly limitations to this type of qualitative data it is still incredibly valuable in that it provides us with the perspectives on the impact and effects of the trial from those who were most intimately involved with the community mobilization process. Still, the interviews were conducted six years after the conclusion of the trial, which is much longer than the general time frame during which we expect people to be able to recall accurate information. There are many other social and environmental factors that could have shifted within the communities during this six year period that were not attributable to EmONC itself and yet got confused by the CHF's with being due to the effect of the trial. This type of qualitative study does not allow us to truly differentiate, although follow-up interviews were conducted with the CHF's right after the conclusion of the trial (by researchers from LMRF) and three years after the conclusion of the trial (by myself), which were consistent with the findings from these interviews, indicating that these effects were felt immediately and continued to be felt many years later. Even if these results are consistent across time, the human tendency is to look back on things with a more positive light, which could have accounted for the overwhelmingly positive views of the trial by the CHF's. In an attempt to overcome this bias, we did ask open-ended and neutral questions, we welcomed them at the outset to share both the positive and negative things about the trial stating that the bad was as

valuable as the good in helping us to improve in the future, and we even asked several questions which directly solicited negative feedback. Still, the responses were overwhelmingly positive, with very, very few negative remarks were made about the trial or the trial's effects.

Despite some of these limitations, this study demonstrates that by focusing exclusively on mortality and morbidity reduction as the sole outcomes of importance, a lot of the true value and effects of the trial were completely missed. By using qualitative interviews with facilitators to take a more in-depth look at what actually happened during the community meetings in Nagpur, and the effect those community meetings had on both those who directly participated and on the broader intervention communities, we can begin to understand how these trials contribute to or fail to contribute to empowering and mobilizing communities as a valuable end in itself. This concept of empowerment is often taken for granted by most trials that involve community interventions, and is often assumed automatically to be a byproduct of any purported community mobilization intervention. While it is hard to assess empowerment as an outcome in-and-of-itself, it may be critical to do so lest we miss some of the true importance of these interventions – to eventually enable the community to tackle their own problems from the ground up even when funding and outside logistical support have ceased. While this study took a more in depth look at only one site of a multi-site trial, it argues for a more focused look at the community mobilization component of the trial in each of the different trial sites.

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