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U.S. Government Evidence Summit

Enhancing Child Survival and Development in Lower- and  
Middle-Income Countries by Achieving Population Level  
Behavior Change

Evidence Synthesis Packet

Review Team-2: Community Empowerment

Evidence Synthesis Paper (draft) – Please do not cite

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## **Purpose of the Review**

The overarching goal of this summit is to determine evidence-based interventions and strategies that require support for a sustainable shift in health-related behaviors in populations in lower- and middle-income countries to reduce under-five morbidity and mortality and promote child development. The summit will lead to expert recommendations based on the evidence to inform policy and practice for achieving population-level shifts in behavior for improving child survival and child development. It will also identify the knowledge gaps that will inform a research agenda.

The focal question assigned to ERT-2 was “what are the effective means to facilitate and empower communities to organize and advocate for interventions to achieve behavior and social changes that are needed to accelerate reductions in under-five mortality and optimize healthy and protective child development to age five?” So at a fundamental level, we needed to look for literature on "effective means to facilitate and empower communities" that enable communities to "organize and advocate for interventions to achieve behavior and social changes that are needed" towards accelerating change.

Community empowerment may be defined as creating interactive/participatory processes that will gradually lead the community from being dependent on external support and resources, towards reaching a stage the community has freedom of choices, and ability to create their own choices, demand their rights and development opportunities. Since few studies measured community empowerment, we used community participation/engagement as a proxy for community empowerment.

A preoccupation with community participation related to primary health care has a venerable history, stretching back to Alma Ata and earlier [will provide references – Rifkin, Zarkus, Woelk, Espino]. In this paper, we look specifically at evidence on the role of community participation/

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engagement/ empowerment in contributing to improved population health outcomes, mediated through changes in household practices or care-seeking.

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## Review Process and Results

The papers identified through the literature search strategy and call for evidence were distributed among ERT members for relevance review to classify each paper in to one of the following three categories: very relevant, marginally relevant and little or no relevance to the ERT focus question. In addition, the relevance review was designed to collect the following information: type(s) of intervention, transferability of the approach, cost-effectiveness, local capacity to sustain the intervention function, use of the intervention in other contexts, and likelihood of the study to contribute to the recommendations concerning practice and policy that will be made by the ERT. The plan was to have a quality review of the papers deemed relevant. In addition, ERT-2 planned an additional review of each study (intervention/approach) to assess the level of community engagement using an adapted version of Clinical and Translational Science Awards Consortium’s (CTSAC’s) Community Engagement Continuum framework (reference). Outreach implies that the program provides community with information e.g., trained CHW/VHW provision of information to individuals/families. Consult implies that the program shares information and seeks feedback. Involve implies that the program and community cooperate with each other e.g, involvement consists *only* of some role in the selection of the local CHW/VHWs and the involvement of community members in some intervention activities. Collaborate implies that the program forms partnership with community on several aspects of the project including planning and management of the program. The highest level of community engagement is shared leadership where the final decision making is at the community level.

**Comment [B1]:** Need a description of the search strategy and call for evidence

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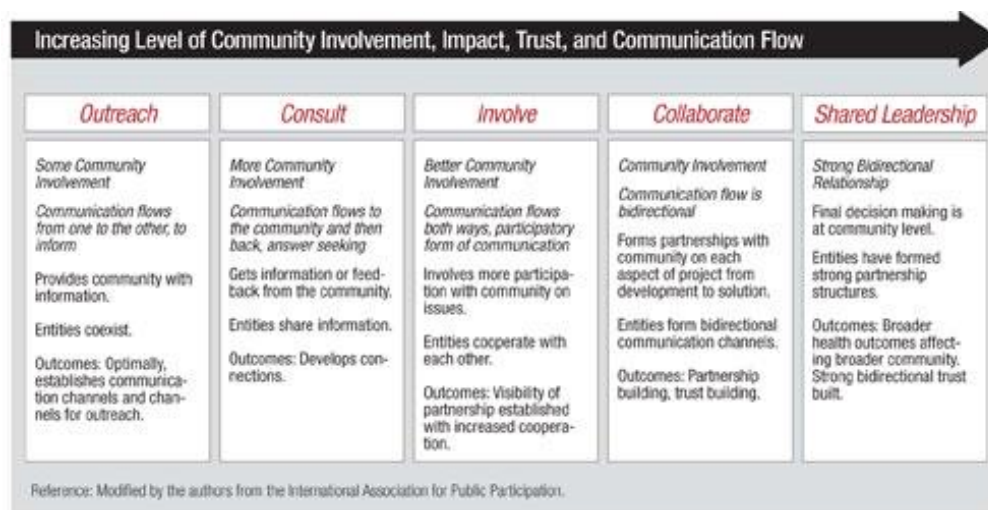


Figure 1.1. Community Engagement Continuum

For this review, we considered tier 1 and tier 2 papers only (i.e. programs that measured behavioral change and/or health outcome) and papers that were considered relevant and demonstrated substantive community involvement, i.e., either collaborated with the community or practiced shared leadership.

A sub-set of the ERT members agreed to participate in the more detailed second level review of the papers retained and to summarize them. The assignment of the second level review was by health areas; each health area was assigned to 1-2 reviewers who are expert in the assigned health area. Since only about half of the papers were reviewed by originally assigned reviewers, the second level reviewers reviewed all the papers not already reviewed using the same criteria. Reviewers at times added new papers because they were considered important by the reviewer but were not identified by the search strategy. Table x summarizes the number of papers reviewed and retained.

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Table 1. Number of papers reviewed and retained by health area

Technical Area	Number of papers from initial Literature searches	Number of papers added by the reviewer	Number of papers retained or final review
HTSP	14	0	1
Nutrition			
Newborn	44	4*	7*
Wash/ Pneumonia	18	0	10
Malaria	50	7	3
PMTCT	27	0	1
Immunization	24	0	7
Development			

Note: \* 2 papers are not published but the results of these studies were included in a recent meta-analysis

**Organization of the Key Findings, Recommendations, and Gaps:**

The findings and recommendation are presented by types of community engagement within health areas.

**Healthy Timing and Spacing of Pregnancy**

Two studies did appear to include a community element. Meekers (2000) described a program that involved community-wide social marketing and education campaign that included mass media promotion of a branded condom product, point of sale materials, and multiple distribution outlets in South Africa. Community involvement was difficult to fully gauge, but the intervention was initiated by an NGO (Society for Family Health) and involved 70 trained adolescents to serve as peer educators and behavior change advocates. The youth were involved in development of the social marketing tools in order to reflect the right campaign "voice." This study used a quasi-experimental control group design and demonstrated that the intervention increased young women’s awareness of risk of pregnancy (increased from 73% to 95%; no change in control), awareness that condoms are effective in pregnancy

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**Comment [B2]:** Since many studies addressed more than one health areas and types of community engagement are not unique to health areas, this is not the best organization as this will lead to repetitions. We will try to reorganize at a later time

and HIV/AIDs prevention, other contraceptives are effective in preventing pregnancy and increased the proportion of women used condoms (intervention: 57% to 73%; no change in control).

Sebastian and colleagues (Sebastian, et al., 2010; Sebastian, et al., 2012) describe development and implementation of an intervention to promote birth spacing in the rural areas of Uttar Pradesh, India. In the earlier paper, Sebastian (2010), described a series of focus groups with community stakeholders (young women/wives, young men/husbands, and elder women/mother-in-laws) to determine beliefs and attitudes contributing to community practices in support of early marriage and short birth intervals, or inversely, attitudes and behaviors serving as barriers to modern contraceptive practices. Targeted messages were developed for all three populations, based on qualitative analysis of the interviews (using grounded theory). The messages were then tested on a small portion of the target population for comprehension, attractiveness, acceptability, self-identification or involvement, and acknowledgement of the behavior/action being promoted. Pregnant women residing in 48 villages were then registered for the study, with randomization occurring at the village level. In all 600 pregnant women (in months 4-7 of pregnancy, parity of 0 or 1) under the age of 25 were enrolled from the intervention and control communities. The educational intervention was delivered by community health workers as well as by wall paintings, posters, and booklets. Sebastian studies were similar in that community members actively participated in the development of educational materials (stakeholder focus groups) and pre-launch testing of materials with community members. The education materials advocated a delay in first birth by using family planning, the need for check up in the first week post-partum, the use of Lactational Amenorrhea Method (LAM), different spacing methods and appropriate intervals, and HIV/STI/AIDS prevention. Evaluation involved interviews at baseline and follow-up to determine both intervention exposure and to compare changes in knowledge. Significant increases were noted in the intervention groups versus control with respect to changes in knowledge for every targeted message. Further, significantly more women in the intervention community (61.4% vs 39.1%) reported having a discussion with their husband regarding the use of contraceptives for the purpose of birth spacing, and at 9 months postpartum, significantly more women in the intervention communities (62% vs 32%) reported contraceptive use.

The later publication by Sebastian and colleagues (2012) was similar to the earlier publication with respect to funding source (same USAID cooperative agreement), location, population focus, intervention, and study design (random assignment of 48 villages to control or intervention) but with a larger number

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of participants (n=959). It is not clear if some participants were also included in the earlier paper. Monitored outcomes at 4 months postpartum include changes in knowledge regarding contraceptive methods and healthy pregnancy spacing. Monitored outcomes at 9 months postpartum include changes in the same knowledge measure as well as pregnancy status, self-reported conversations with husband regarding birth spacing, self-reported discussions of family planning methods with husband, and self reported use of contraceptives. The intervention group demonstrated a much greater percentage of individuals with knowledge of modern contraception approaches and reasons for longer birth spacing. Study participants residing in the intervention community were also less likely be pregnant at 9 months postpartum (10.5% vs 16.4%) and to have discussed family planning methods with husband (62.5% vs 39.4%). They were also significantly more likely to report a modern contraceptive method (57.0% vs 30.1%).

In summary, the search process yielded only two well conducted study that successfully engaged community to promote birth spacing although the community engagement was limited.

## Nutrition

### Findings:

- Out of the 41 papers reviewed, eight papers were in the “collaborate” and “shared leadership” categories. These projects had some explicit community empowerment and/or social change objectives considered in their design.
- All of the projects in some way combined 1) community leadership either formally or informally, 2) the formation of groups in the community (or the use of existing groups) with 3) local decision making and action.
- Establishing a forum for community dialogue and discussion was critical.
- In the Marini, Mangoud and UNICEF papers— the power of tracking indicators at the community level and allowing the community to analyze their situations proved critical to collective action.
- Radio listeners groups or guided/facilitated discussions seem to held promise for collective decision making/action and social change.

**Comment [B3]:** Tier-2 papers only. I did not receive the tier-1 review yet

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- The only paper that compared approaches was Martinez-Salgado describing his work in Mexico. In this study the ability of mothers to improved young child feeding was compared: those who were reached in their home with recipes and demonstrations of locally adapted recipes, with mothers who were reached at home plus were in communities where a broad community audience was exposed to the recipes through community theater with demonstration and discussion. More mothers in the home visitation **plus community exposure and dialogue** used the recipes, and they did so with better adherence to the recipe than in the other group. (Although the outcome is individual behavior change a key driver was broad community awareness and acceptance of the recipes).

#### **Recommendations/Implications**

- Public health programs should establish explicit goals for community engagement and the indicators by which engagement/ownership will be measured.
- Placing monitoring in the hands of the community with user friendly tools allows communities to be creative about solving problems. Programs should plan for this local effort and program with some flexibility to respond to community initiatives.
- Creating venues and activities where community members can discuss new information presented—such as through a radio program—or the results of a monthly monitoring of children’s growth or number of bednets allow for the community to engage with the issues before them and to exert either full or shared leadership.

#### **Gaps**

- A good definition (with indicators, monitoring and evaluation information) of the role of social change in changing individual behaviors, the rapidity of that change and its sustainability. Right now these are two separate worlds: that of empowerment and collective action and that of individual behavior change.

#### **Newborn**

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37 papers were identified by the search strategy and 11 through call for evidence. We reviewed all these papers. None of them provided a direct measure of community empowerment. The majority of the papers described some level of community involvement (training of TBAS, VHW, group education sessions). Only 3 studies described a higher level of community engagement. In the process of review, we added 4 papers (2 published, 2 unpublished but included in a recently published met analysis) because they were considered relevant by the reviewer but were not identified by the search strategy or call for evidence.

Seven studies (5 published) evaluated formation of women’s group by a female facilitator who organized women's group meetings every month and supported groups through an action-learning cycle in which they identified local perinatal problems and formulated strategies to address them (1-4). The primary outcome was neonatal mortality rate. The first study in Nepal in a poor rural population showed 30% significantly lower neonatal mortality through this low cost, potentially sustainable and scalable, participatory intervention. A second study in rural Jharkhand and Orissa of India showed a 32% reduction in neonatal mortality. A recent published study from Malawi showed a 41% reduction in NMR. In contrast, a study in urban India showed that it was feasible to facilitate urban community groups but there was no evidence of behavior change or population-level effects on health care or mortality (4). A study in Bangladesh showed no effect on NMR. The results from the other two studies are not yet published. A recent meta-analysis that included results of all 7 trials showed substantial heterogeneity between the trial findings and investigated how much of this could be due to the differing participation rates in women’s groups in the different trials. The paper concluded that women’s groups have reduced maternal and newborn deaths in the four trials in which participation rates have been greater than 30%, but not in the three trials that did not achieve this.

## **Recommendation**

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This analysis suggests that for participatory women's groups to have a significant effect on neonatal mortality, detailed attention to program design and contextual factors, enhanced population coverage, and increased enrolment of newly pregnant women might be needed.

Participatory interventions with women's groups work by providing a forum for communities to develop a common understanding of maternal and neonatal problems, as well as locally acceptable and sustainable strategies to address these.

There is a need for further research into the role of participatory interventions with women's groups to improve the quality of health services, health, and nutrition beyond the perinatal period, as well as the role of groups in influencing non-health issues, such as women's decision-making power. In cities with multiple sources of health care, but inequitable access to services, community mobilization should be integrated with attempts to deliver services for the poorest and most vulnerable, and with initiatives to improve quality of care in both public and private sectors.

**Pneumonia/diarrhea:**

Total 18 papers were identified by the search and 10 retained after review.

*Brenner, Jennifer L. et al* Study (2011) studied the Health Child Uganda program and realized that community engagement and community health worker selection, training, and supervision cannot be underestimated or compromised in order to achieve positive health outcomes. The engagement of volunteer community health workers, recruited from the villages, to support the child health promotion activities was critical. The CHW work with parish team to develop and implement action plans and with local council and communities to create and village action plans which led to collective healthy practices. The study used multiple evaluations methods: 1) household survey with baseline and post-intervention assessments for comparison; 2) retrospective review of CHW registry; 3) retrospective review of CHW monthly births and death report and 4) focus group discussions.

In intervention villages there was a statistically significant reduction in the combined prevalence of the three most common illnesses and of diarrhea specially; these reductions apparently were greater in intervention than in control areas. Clinically significant reduction in prevalence of under nutrition and fever/malaria were also seen, Mosquito nets and measles immunization increased and attendance at

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ante-natal care also improved after the intervention. In FGD, most participants felt the CHW had direct and positive effects on child health and survival, expressed gratitude for the education provided, and expressed confidence in their own ability to improve child health. Improved health care seeking practices, sanitation, hygiene, ITNs use and nutrition were noted. Overall, the intervention improved child health outcomes and decreased mortality.

Pneumonia/diarrhea: Collective, community-based, planning, implementation and monitoring of interventions seemed to work positively with regards to the achievement of health outcomes. *Hubbard, B. et al. Study, 2011* studied CARE's Peru's Urban Environmental Health Models project built on earlier experiences from implementing the Protocol for Assessing Community Excellence in Environmental Health (PACE EH) in the same community. The NGO worked with the communities on the selection of technological solutions to improve water supply, sanitation and personal hygiene and development of action plans. By promoting health awareness and emphasizing the importance of making environmental and behaviour changes, the methodology encourages communities to take direct control of their water provision and sanitation related services. The intervention also encouraged community participation in training and data collection activities to strengthen the inclusion of local data perspectives. It also has a supply side intervention, working on infra-structure. The community maintained a consensus on priorities through large-scale political changes, helping to keep those priorities on the municipal agenda and attracting further resources to keep the process for eventually implementing the condominal water and sanitation interventions moving. With regards to health, cases of diarrhea reported to the local clinic had improved, and additional resources were devoted to the health clinic. Local organizations also received greater recognition by the authorities and the number of cases of diarrhea for children under 5 y-old decreased in the service area. According to the authors, the 37% and 46% reduction of diarrhea cases in the two intervention areas

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need to be understood in a larger picture since it is a result of multiple factors not only this particular intervention. There is no direct attribution in this case.

- Pneumonia/diarrhea *Halloway et al Study, 2009* also studied the involvement of community members and government authorities in the development and implementation of community-based interventions for pneumonia care seeking behaviours in Nepal. The intervention was successfully implemented using local structures and local people and in difficult circumstance's (during the Maoist movement in Nepal) and yet had a moderate impact. After intervention implementation (mid-2003), health facilities increased attendance rose by 13% in under-fives with severe Acute Respiratory Infection (ARI) and fell by 9% in under-fives with mild ARI. Used of prescribed antibiotics increased in under-fives with severe ARI by 21% but only 1% in under-fives with mild ARI. Non-prescribed antibiotics dropped by 5% and consultation with female CHW and use of safe home remedies increased by 6.7%. It seems that it has a potential to affect large scale changes in behaviour but it merits further replication and research.
- Pneumonia/diarrhea: According to Shefner-Rogers (2013)<sup>1</sup>, the programs focus on the WHAT, that is, the specific practices, biomedical interventions. Treatments, and/or technological innovations, without enough attention to the HOW, that is, the communication strategy or approach. In addition, interventions tend to focus on individual and household level behavior change while there is evidence that multi-level, concurrent communication interventions are more effective at changing behavior and social norms than communication interventions aimed at one level of the social ecological model. The author also highlights that the majority of intervention approaches were best suited to small-scale, short term or temporary behavior changes.

### Recommendations

- Engage communities from the planning through program implementation, monitoring and evaluating activities. The likelihood of promote change is higher if community members are effective involved in the intervention.

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<sup>1</sup> Shefner-Rogers, C., 2013, Applied Communication for Development Strategies for Newborn Care and the Prevention and Control of Childhood Pneumonia and Diarrhroa: A Litetaure Review of the Evidence of Impact on Child Survival, UNICEF, New Youk/HQ

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- Share information/knowledge and foster dialogue with communities instead of simply delivering health messages that may not resonate among community members.
- Establish safe places (health forums; committees; groups; councils) where community members can express their views/perspectives and highlight the local barriers for the adoption of safe and protective behaviours/practices.
- Apply to Socio-Ecological Model (SEM) when designing the intervention. Change are more effective when they draw on a socio-ecological framework of change – aiming at effecting change at multiple levels (i.e. from individuals, households, communities to organizations, and the broader society (policy/legislation) and creating an enabling environment for change.
- Likelihood of change is greater when multiple communication interventions and/or tactics are used. Find out the social network(s) at community level and map the communication channels. Synergies across interventions and tactics is essential to facilitating change as well.
- Understand the communication/behavior change theories and frameworks that are appropriate for individual, interpersonal, community, and social/policy level interventions (i.e., the levels of the social ecological model) and how these theories and frameworks are translated into program interventions.
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### **Gaps**

More research is urgent needed not only to measure the contribution of meaningful community engagement that leads to positive health outcomes but also to what extent the engagement of communities are affective in changing social norms, power relations, accountabilities structures, etc.

### **Malaria**

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Fifty papers were identified through literature search and call for action. Seven additional papers were identified through following up references. All these papers were reviewed. Only 3 studies documented approaches using a higher level of community participation with community problem-solving or leadership of the initiative shared between local and outside stakeholders. Geounupakul (5) described a fairly intensive effort (with a quasi-experimental design), using an explicitly Friarian empowerment approach in a Burmese refugee community in Thailand, where local women formed women's group with neighboring women to develop their own malaria action plans. The paper documented significantly increased levels for behaviors of using insecticide-treated nets, self-esteem, and self-confidence expectations, in the intervention village compared with the control village. Houeto (6) described a quasi-experimental trial in Benin in which community members developed broad plans (a Health Promotion concept including community participation and empowerment, contextualism, intersectorality, multistrategy, equity, and sustainability) to control child malaria including malaria prevention and treatment elements (including a one-off ITN distribution); the study documented that the prevalence of fever (malaria) was significantly reduced after the intervention ( $p = 0.008$ ) and care seeking significantly increased after the intervention ( $\chi^2 = 48.07$ ,  $p = 0.000000$ ). All these contributed to a statistically significant improved care-seeking and reduction of children deaths due to malaria ( $p = 0.001$ ) in the village. Rojas(7) described a multi-level program effort of community problem solving, vector control and other malaria disease control efforts in Columbia; and it showed reduction of malaria incidence by 45.36%, length of sick leave from 7.52 to 3.7 days and mortality declines (no fatal cases in the 3-year period, compared to 5-8 deaths a year previously).

#### Recommendations

Health Promotion strategies are likely to contribute to sustainable malaria programs' implementation that reduce malaria incidence and deaths in children under five.

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### **Immunization**

24 papers were identified by the search strategy; 7 papers were retained. The seven most relevant studies with substantive community engagement can be divided into the following categories: 1) involved community in terms of training community health educators or support groups to mobilize the community (5 papers); 2) improving communication between village based health workers and district and facility level providers (1 paper); and 3) organize community groups to improve service quality.

In four of the seven most relevant studies demonstrating a higher level of community engagement, the community volunteers and groups' main role was to educate and mobilize children for vaccination services. In the 1995 study by Abgoatwalla, this was part of a broader effort, with shared community leadership. Abgoatwalla measured the effectiveness of an experimental primary health care program in urban slums in Pakistan, where female community health workers were trained to provide both basic education and preventive health services including vaccinations. In the intervention group, active members of the community were placed in charge of administering the project, and the results demonstrate this group showed measurable increases in knowledge about vaccination as compared to the control group. However, changes to immunization coverage were not included in the paper, nor was qualitative data on participation levels among community members over time, both local leaders and the female community health workers. By contrast, the 2009 study by Andersson measured significantly higher DPT and measles vaccination coverage in intervention sites v. the control after conducting a series of three structured discussions among separate groups of men and women on local immunization coverage, the costs and benefits of vaccination, and local action planning to improve coverage. This was achieved without relying on improved health services.

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The Ali 2005 study was designed to determine whether sensitizing key community leaders in Ethiopia to child health issues and subsequently disseminating health messages in these communities could have an impact on child mortality. Community facilitators selected by local administrators and women’s associations were trained on key household and community practices associated with good childcare. Facilitators were selected among community health agents, TBAs and “mothers of 30s” (locally identified, experienced mothers) with the assumption that those trained would disseminate health messages using their existing social networks. The study found that introducing Community-IMCI using community facilitators was successful in reducing child mortality by approximately one-third in the intervention sites. The results demonstrate the importance of implementing community engagement approaches in parallel with specific clinical interventions.

Another 2005 study by Paxman assessed an adapted public private partnership model whereby the Indian government utilized three NGOs to implement its reproductive and child health strategy in selected villages in four northern states. The program established village level health committees, recruited and trained community health volunteers and expanded the number of sites through which government services were provide. Using three strategies, including demand generation, improved access to services and local capacity building, the NGOs were able to increase coverage of key services and increase child immunization coverage rates by 67%.

Utilizing a pre- and post-test design, a study carried out by Uddin in 2010 assessed the impact on immunization coverage following the introduction of a package of immunization specific interventions targeting an urban slum in Dhaka, Bangladesh. The package included both demand and supply-side interventions, including: extending service hours; providing refresher training for providers; introducing a screening tool to identify immunization needs for use by clinic attendants; and support groups for social mobilization. The proportion of fully immunized

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children was significantly higher at endline, increasing from 43 to 99% of children under two years of age. In addition, dropouts decreased from 33 to 1%. The findings suggest that the package of interventions was very effective in increasing immunization coverage in urban slums; however, further research is needed to identify the components of the package that made the biggest contributions to coverage. While the impact of the community support groups was not directly assessed, they did appear to be effective in mobilizing the community and improving immunization coverage. The community groups conducted door-to-door canvassing that has been shown to be an effective approach to improving immunization coverage in other settings. The intervention relied upon the existing service delivery system, including NGOs that are accountable to the public health system for EPI activities in the slums. This suggests the package would be scalable.

In the 1992 study by Limtragool, research was conducted to measure the effect on immunization coverage after steps were taken to improve communication and planning among community and facility or district health planners. In the intervention area communication between village health workers and sub-district health officers was facilitated over a six month period, after which significant improvements in immunization coverage was measured in children under one and under five years of age as compared to the control area. The paper noted increases in health worker knowledge and joint village and sub-district health officer coordination likely contributed to the increases in coverage, although the contributing factors could not be statistically linked. The proportion of mothers visited by health workers and mothers' knowledge of infectious diseases and immunization were significantly correlated with immunization status, of which the first of these factors was the most important predictor.

In one study, community led actions to hold the health system accountable to its mandate were tracked and assessed. The Bjorkman 2009 paper presents a randomized field experiment on community-based monitoring of public primary health care providers in Uganda, where local

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NGOs mobilized communities to be more involved in the accountability of state health service provision. Information on communities and treatment facilities were compiled into report cards, and the cards were used as a tool to encourage community participation in a quality improvement review of treatment services. Large increases in utilization of immunization services and improvements to health outcomes were documented. In particular, there were significant positive differences between households in the treatment and control community for all five vaccines. This study has important implications for improving governance and public service delivery through community participation.

Among these papers, the Ali 2005 study makes a clear case that while many clinical interventions and strategies to improve child health have been evaluated, the effect on mortality that accrues from enhancing a community's engagement on the issue and improving household behavior to reduce childhood illness is less clear. This disparity is important for developing countries in particular, where most deaths in children under five years of age are not medically attended.

The majority (14 out of 22) studies were carried out in Asian country settings. Six studies were based in Africa and two were carried out in South America.

#### **PMTCT**

Twenty-seven (27) articles were identified through a key word search as potentially addressing or describing HIV prevention (including PMTCT) through community mobilization approaches. The team reviewed all these papers, many more than once. None of the articles provided a direct measure of community empowerment. We used community engagement, based on the CDC community engagement continuum with or without behavior change as a proxy for community empowerment.

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The vast majority of the papers described some level of involvement of the community, either through outreach in community or school settings or involvement of peer educators.

**Surprisingly only ONE peer-reviewed article directly examined an association or causal link between community empowerment or engagement in the most liberal interpretation of the process and improved PMTCT.**

The article by Muyinda (2003) (8) was deemed relevant to this review as it used a community based process to address HIV prevention among adolescent girls. This article described a pilot project that revived a traditional community counseling resource in Uganda. The *senga* (or “aunts”) have traditionally provided advice to young women on matters relating to relationships and sexuality. The researchers documented that *senga* who received a week-long HIV and health education training, were effective in increasing knowledge about HIV and AIDS and family planning among adolescent girls in addition to decreasing symptomatic STIs compared to control communities. This article describes a program model that is sophisticated on the community empowerment scale, encompassing aspects of outreach, consultation, community involvement and collaboration in the project development. The study, however, was not designed to look at impact in the area of PMTCT specifically. Thus this article unfortunately cannot provide evidence as to whether or not an effective community communication tradition can decrease the modern problem of vertical HIV transmission.

#### DISCUSSION OF EVIDENCE FINDINGS

The evidence review process resulted in a disappointing view of the role of community engagement and empowerment strategies on improving infant health outcomes through the prevention of maternal to child transmission of HIV. Only one article from South Africa remotely met the evidence inclusion criteria. It demonstrated that a community based intervention can have an impact. However, the power of this result is limited because the community aspect of this program was essentially the replication of “clinical-style” services delivered in a community outreach setting (the lowest level of community engagement). Likewise, the study was not designed to be able to document impact on preventing HIV transmission to infants beyond providing counseling to mothers.

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The paucity of findings in this category is surprising given the number of community-based interventions that present at international conferences and are described in country program portfolios on this same topic. There were no articles in the literature review describing impacts of positive mothers clubs, community counseling services, or community activity kits (such as Soul City’s materials or the Malawi BRIDGE Hope Kit PMTCT supplement, which are only two examples among several).

The limited number of articles in this category speaks to a number of obstacles that the public health community confronts in its ability to document the impact of interventions that are based in complex community environments. Community based interventions are challenged to set up pre-/post-monitoring systems that show an impact and refer to a comparable control community to document causality. Similarly it is hard in a true community setting outside of an “operations research” environment to report impact on outcomes that require biomedical markers. The struggle to find an appropriate denominator in a community setting adds another challenges to assessing the true scale of impact that a community based approach can have. This challenge is especially apparent for relatively “rare” events such as PMTCT which are more uniquely observed in a village or community setting, but for which patterns emerge on a larger aggregated scale.

The fundamental limitation of this work comes from the very nature of what it is – programming designed to engage and respond to community priorities and needs. These needs are informed by the perceived importance of competing factors. The majority of public health programs are “direct-to-consumer.” The good ones are based on existing data, theories, and past experience. Politics, funding levels, project cycles and personalities all influence their implementation. The best programs conduct performance monitoring to satisfy stakeholders that progress is being made as intended – but often the program implementers do not have the framework, training nor skills to compile documentation to meet the rigors of a peer-reviewed publication process. Time is another resource that is often in short supply for documentation, especially when juxtaposed against project funding cycles. Once all the data is compiled at the end of a program, there is often limited time and financial support to fully publish all the results beyond an “end of project” report.

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While these barriers to reporting impact are real, they cannot be used as an excuse for not better documenting the vibrancy and effective results that community empowerment programs inspire. The same creativity that inspires dynamic and exciting community engagement programs must be channeled into finding credible and innovative ways to document program effects. Program managers and donors also need to commit precious financial and human resources to prioritize this documentation. This evidence review is a wake up call to the public health community. There is a saying, “if you don’t document, it didn’t happen” – but yet, it did! It is now incumbent on communities to share their evidence. Their stories must be told.

### **Child Development**

Reviewers felt that child development was one of the two main outcomes for the whole summit (along with child survival). Only 6 papers were cited as addressing development which raised serious questions about the adequacy of the search itself for both the community engagement ERT and for the others. There were papers addressing child development which though they involved community workers and group work with parents, were not included in the search (Rahman et al. Child Care Health and Development 2008 and a review by Maulik and Darmstadt in J Perinatology 2009 and probably more). Of the six papers which were reviewed: Bryanton (2010 Cochrane review) did not demonstrate behavior change or enhancement of child development. The Coelho(2005) article was in Portuguese, but the abstract was in English. According to the abstract it appeared that the main finding did not increase knowledge about behavior change and its impact on morality or morbidity, but it would be worthwhile for a more thorough review of the article by a reviewer competent in Portuguese. Nahar (2012) compared groups of hospitalized children who received nutritional supplements with and without psychosocial stimulation compared to routine follow up care in two groups and showed increase in mental development and weight (measured by blinded tester) but not in overall nutritional status or in community engagement either generally or of parents of children in the study. Jack et al (2012) showed a decrease in anemia (known biologically to affect cognitive development) but did not measure cognitive development. There was no mention of community engagement. Yun and Yusuf (1991) was difficult to assess because there was only an incompletely printed copy available on the website and reviewers could not obtain another complete copy. In addition, the paper was a summary of a complex intervention which did have a number of community engagement components though it was not a truly

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community participatory model. In addition, the evaluations noted seemed to have been of isolated aspects of the intervention, such as the preschool component which was said to have increased IQ compared to group not in preschool (Yusuf et al 1987 – could not be accessed). It would probably warrant a more careful look as associated publications.

Bhandari et al (2004) reported on a cluster randomized trial in India which training community members as health and nutrition workers in 8 communities to work with mothers and communities to advise on complementary feeding practices. There were monthly meetings with community representatives who then held neighborhood meetings. Health workers locally were also engaged in delivering messages. Community worker involved mothers in problem solving so this probably met our criteria for community involvement and possibly some elements of collaboration. The well designed study found an increase in height but not in weight in the intervention group with a concomitant increase in nutrients at 18 months.

Recommendations would be to ensure that the systematic review has indeed reached all paper in low and middle income countries with child development as an outcome.

- i. to widen the search to ensure that all studies from developing countries addressing optimizing child development as an outcome (using a wider range of databases) to ensure that remaining studies are included. (defined to include growth and cognitive development and disability are captured)
- ii. To ensure that papers with child development (defined to include growth and cognitive development and disability are captured)
- iii. To check to see that the previous reviews did not miss studies where child development was an outcome (why did only 6 show up?).

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## References

1. Tripathy P, Nair N, Barnett S, Mahapatra R, Borghi J, Rath S, et al. Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial. *Lancet* 2010;375(9721):1182-92.
2. Azad K, Barnett S, Banerjee B, Shaha S, Khan K, Rego AR, et al. Effect of scaling up women's groups on birth outcomes in three rural districts in Bangladesh: a cluster-randomised controlled trial. *Lancet* 2010;375(9721):1193-202.
3. Manandhar DS, Osrin D, Shrestha BP, Mesko N, Morrison J, Tumbahangphe KM, et al. Effect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster-randomised controlled trial. *Lancet* 2004;364(9438):970-9.
4. More NS, Bapat U, Das S, Alcock G, Patil S, Porel M, et al. Community mobilization in Mumbai slums to improve perinatal care and outcomes: a cluster randomized controlled trial. *PLoS Med* 2012;9(7):e1001257.
5. Geounuppakul M, Butraporn P, Kunstadter P, Leemingsawat S, Pacheun O. An empowerment program to enhance women's ability to prevent and control malaria in the community, Chiang Mai Province, Thailand. *Southeast Asian J Trop Med Public Health* 2007;38(3):546-59.
6. Houeto D, Deccache A. Child malaria in sub-saharan Africa: effective control and prevention require a health promotion approach. *Int Q Community Health Educ* 2007;28(1):51-62.
7. Rojas W, Botero S, Garcia HI. An integrated malaria control program with community participation on the Pacific Coast of Colombia. *Cad Saude Publica* 2001;17 Suppl:103-13.
8. Muyinda, H., Nakuya, J., Pool, R., & Whitworth, J. (2003). Harnessing the senga institution of adolescent sex education for the control of HIV and STDs in rural Uganda. *AIDS Care*, 15, 159-167

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