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Community Health Worker Programs: A Review of Recent Literature

Introduction

Improving maternal, newborn and child health (MNCH) remains an important global health objective, particularly in developing countries with high rates of maternal and neonatal mortality. Scientific evidence for high-impact and low-cost MNCH interventions continues to accumulate but has yet to be adopted in the majority of these high risk settings.¹⁻² Implementing these interventions presents a challenge to the global health community primarily due to weak health systems and human resource constraints.³ Particularly in Africa, the health worker crisis affects coverage and quality of health services as nurses, midwives, and doctors are being asked to provide an ever-growing, complex package of services with minimal support.⁴

Since the 1978 Declaration of Alma-Ata, the World Health Organization (WHO) has promoted the wider use of community health workers (CHW) to provide select clinical interventions and to promote healthy behaviors at the community-level.⁵ The current push is to shift high impact interventions to lower cadres of skilled and unskilled workers to optimize the accessibility and efficiency of health services.⁶ Promoting engagement of health care workers at both at the community and facility level remains central to this initiative, as it contributes to higher quality of care, increased productivity and lower rates of attrition.⁷ An urgent need also exists in the African context to develop models of community health programs that link to the broader public health sector and incorporate performance measures and quality improvement methodology for maximum impact and sustainability.

In response to the health workforce crisis worldwide, USAID has set the goal of ‘increasing by at least 100,000 the number of functional (trained, equipped and supervised) community health workers and volunteers serving at primary care and community levels’ by 2013.⁸ As new programs emerge or existing programs scale up, assessing the functionality of CHW programs and volunteers becomes increasingly important. However, evaluating CHW programs often proves to be difficult particularly since defining characteristics, roles and responsibilities for community health workers can vary vastly depending on the context. To effectively evaluate CHW programs, identifying key characteristics attributed to program success or failure is essential.

The purpose of this paper is to review recently published literature on community health worker programs, primarily focusing on maternal and newborn child health, for the purposes of identifying key components to successful CHW programs, reviewing past successes and failures of CHW program implementation, and summarizing important lessons learned. This literature review will contribute to the development of a CHW Program Functionality Assessment Tool for USAID and other relevant stakeholders to assess USAID-supported CHW programs and to enumerate functional community health workers within these programs. These assessments will also assist USAID in action planning and allocating necessary resources to strengthen programs. Host governments can apply this tool to assess CHW programs quickly and efficiently based on criteria drawn from organizational best practices. In addition, this tool presents program managers with a framework for improvement, guiding the development of an

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action plan along with determining need for resources and technical assistance to assure successful and sustainable program implementation.

Methodology

A review of community health worker programs was conducted for the purposes of 1) identifying key components of successful CHW programs, 2) reviewing successes and failures from CHW program implementation, and 3) gathering information on lessons learned through past implementation; specifically focusing on factors for sustainability, external support and assuring quality of care provided in CHW programs.

This paper is based on research articles found through online databases (PubMed, Medline) as well as programmatic reports published by various implementing partners, donor agencies or ministries of health. Articles referenced in this review tend to fall into one of two categories: analysis and reviews of CHW programs characteristics and country-specific examples of CHW programs. Suggested criteria for inclusion were as follows: CHW programs from the past 5-8 years, addressing MNCH, preferably in the African context. While reviewing the literature, articles from the past 10-15 years, other contexts (Latin-America and South-East Asia), and addressing other clinical areas (primary health care, HIV/AIDS) were also included due to the relevance and utility of information presented.

The key words, *community health workers*, *lay health workers*, *community-based care*, *community volunteers*, *continuum of care*, and *community based maternal and child health interventions* were used to identify articles of interest. In total, 18 CHW programs were selected for review using the aforementioned modified criteria. In addition, 11 articles analyzing either specific characteristics of community health programs or describing the applicability of community health programs to address maternal and child health were included in this review. These articles generally draw from an array of programmatic reports and research studies conducted on the effectiveness of CHW volunteers. While included articles are not meant to be exhaustive or representative of all CHW programs, through this review, certain cross-cutting program characteristics were made evident to be vital to assuring the success of CHW programs.

Results

Table 1 summarizes general characteristics of the CHW programs included for review in this paper and highlights the specific characteristics attributed to the success of the program, as reported in the articles referenced, as well as areas identified for improvement.

Table 1: Success factors and areas for improvement identified in the CHW programs included in this review

	Program	Country	Area of Focus	Characteristics Attributed to Success	Areas Identified for Improvement
1	Mother-Baby Friendly Health Units Initiative ⁹	Nicaragua	Breastfeeding practices	Strong ties between health care facilities and community based support groups; involvement of all levels of health care system for this initiative; strong MOH support; supportive legislation; strong buy-in by health care professionals; local and national publicity; involvement of universities; created network of volunteers that supported national spread; local counseling and surveillance; referral for complications	Integrating this initiative with general health care for women, children and adolescents; lack of incentives; challenging to continue monitoring and follow-up by MOH; increased involvement by community and service users in monitoring and evaluation (M&E) and follow-up
2	Community Health Worker Program through Baha'i Community ¹⁰	Kenya	Promote hygiene, breastfeeding, nutrition, immunizations and diarrhea	Sponsored by Baha'i community; generated intersectoral and interfaith collaboration in different communities which promoted acceptance by community members; CHWs provided several weeks training; volunteers work 10 hours a week; given follow-up training; religious motivation; low drop-out rates (5%); selected by Village Health Committees; ties to formal health system; respected and supported by community; project administrators provide support to volunteers through regular visits	None mentioned
3	Health Houses ¹¹⁻¹²	Iran	MNCH, family planning (FP), Infectious diseases, mental health, chronic diseases, symptomatic treatment, environmental and occupational health	CHW selected by community; receive training; supervision by doctors; gender consideration in selecting CHWs (culturally appropriate); active outreach; close monitoring of health of population served (collect data); curative and preventive services; referral for complications; results in manageable patient load for doctors; strong follow-up of patients and provision of care closer to patient homes	Improve communication between scientific and executive organizations to facilitate addressing local needs; improve health information systems to gather pertinent data for local decision-making; better integration of chronic care into program; community to play more active role; increase flexibility of program
4	Community-based Health Planning and Services (CHPS) Initiative ¹³⁻¹⁴	Ghana	Family planning, infectious diseases, immunization and referrals	Mobile health care worker; establishes village health committees with local leaders; committee selects CHWs, receives training and refresher training; CHWs receive appropriate supplies and motorcycle for transport; provide referrals when appropriate; home visits and active outreach; enter community only after discussing and receiving approval from community; local supervision	Difficulty moving from planning to implementing in certain districts; easier to set up 'Community Health Compound' (extension of health sector) than entering and mobilizing community; concern for sustainable funding delays action

	Program	Country	Area of Focus	Characteristics Attributed to Success	Areas Identified for Improvement
5	AMREF (African Medical and Research Foundation) ¹⁵	Kenya, Ethiopia, South Africa, Somalia, Sudan, Tanzania, and Uganda	HIV/AIDS	Design appropriate training and support to motivate and retain health workers; CHW do outreach; importance of recognition, supervision, and technical support; provide incentives; ensure integration with formal health system; consider local beliefs and traditional healers; training and documentation appropriate to CHW education; MOH support	Lack of proper training and motivation for CHW (recognition, appreciation, supervision and technical support); high rates of attrition; weak health systems, lacking resources; assuring integration with health system which ensures continuity and quality of care; low literacy contributes to difficulties with referral and recordkeeping
6	Family Health Program (Programa Saúde de Família – PSF) ¹⁶⁻¹⁷	Brazil	Infant and child health	Rapid increase of coverage and decline in infant mortality; short training period; created health teams (with physician, nurse, nurse’s assistant and 4+ CHW) for each health region; responsible for enrolling and monitoring health status of designated population; division of duties and specific roles for team members; strong MOH support base; national program but locally adapted; addressed local demands by involving community members; funding by MOH linked with coverage or population served; support by local government leaders; linkages between local and national governments; teams selected and trained by government	Financial constraints; overburdened CHWs; high physician turnover; community preference for traditional medicine; instability of local government; abrupt introduction into community contributed to resistance; lack of management and M&E by local government; limited number and capability of supervisors; weak national health system makes referrals difficult; new government administrations contribute to instability of program; priority given to higher levels of health care over basic primary care
7	Jereo Salama Isika ¹⁸	Madagascar	Reproductive health, child survival, nutrition, HIV/AIDS and sexually transmitted infections	<i>Encadreurs</i> (manager, selected by MOH from community leaders); <i>animateurs</i> (nominated by community); work with existing community groups; receive training; easy-to-use counseling cards as job aids; organize village theaters, health fairs, and immunization days for health promotion; recognized and supported by community; collaboration with LINKAGES (another community-based project) to cover greater population; even after dropping out, CHWs considered sources of health information in community; emphasis on specific, simple tasks or action-based messages; use of mass media; high numbers of volunteers (1% of target population); anticipated drop-outs and continued to train new CHWs	Lack of supervision; high attrition (50%) after 12-18 months; too complicated of an approach made implementation difficult nationwide; initially created project-specific groups instead of working with existing organizations

	Program	Country	Area of Focus	Characteristics Attributed to Success	Areas Identified for Improvement
8	Community Health Worker Program ¹⁹	Haiti	HIV/AIDS, primary health care (PHC), referral, health promotion, prevention and treatment of childhood illnesses	CHW selected by communities usually from vulnerable populations trying to be reached; received training and payment; active community outreach; reaching vulnerable populations; provided both psychological and medical support; kept confidentiality, worked with both HIV patients and families; acted as bridge to medical center; increased care-seeking behavior and trust in medical care which supported case-finding; collaborated with other support groups and religious faiths	Need more payment; patients at times mistreated CHWs (“treated them like slaves” or servants); need for standardized training (include both medical and psychosocial); psychosocial training for health care worker to complement CHW work; refresher training; set supervision criteria; CHW selection by committee of health care workers (nurse, physician and CHW)
9	Community Health Worker Programs ²⁰	Mali	Child survival and health promotion	In line with MOH child survival strategy; received short training and guidelines; CHWs provided with bicycle for transportation; conducted routine home visits; provided preventative and curative services; distributed “household basic health kits” and bed nets	Heavy workload; lack of supervision/support; inadequate training; 20% of houses not visited in catchment area; improve documentation of visits; adapt tools, strategies and job aids to educational level of population; need to improve supply availability (for health kits); involve community in CHW selection and monitoring
10	COBES ²¹	Uganda	Primary health care	Places medical, nursing, dental, pharmacy and radiology students in rural health settings for 4-6 week rotations; students encouraged to provide health education and interact with community; increases service coverage	Inconsistent funding for program; shortage of drugs and equipment at facilities
11	PROJAHNMO Project ²²⁻²³	Bangladesh	Maternal and newborn care	Worked through CHWs, traditional birth attendants (TBA), and community mobilization; received training and essential equipment, supervision by project managers and government officials; monitoring and evaluation system in place; home care model accepted by families and communities; reached wide population; CHWs successfully referred cases to clinics; highlighted importance of successful communication system for alerting CHWs to deliveries; importance of identifying and targeting high risk mothers and newborns; CHW used IMNCI algorithm for assessments; offered antibiotics for home treatment	High coverage, however low attendance at deliveries; challenging to increase post-natal visits; high attrition rates; monsoons made home visits difficult

	Program	Country	Area of Focus	Characteristics Attributed to Success	Areas Identified for Improvement
12	CARE India Program ²⁴	India	Maternal and newborn care; Health education and promotion	Partnership of NGO, CARE India, with Indian national and local governments; received training; distinct categories of CHW with specific roles (Auxiliary Nurse Midwives, Anganwadi workers and Change Agents); conducted home visits; health promotion	Need to increase coverage by CHW; improve competency in new technical areas; heavy workload; supervision and management; need for field assessment of CHW; assist in organizing job priorities; need to evaluate CHW programs rigorously, looking at mortality as an outcome
13	Female Community Health Volunteer (FCHV) Programme ²⁵⁻²⁶	Nepal	Maternal, newborn and child health	Established by the government; volunteer 5-6 hours per week; receive training and refresher training; receive incentives (transport stipends for training and micro-credit funds); FCHV Day to recognize volunteers; identification badge and signs; local government and NGO would also provide gifts to volunteers; motivation tied in with religious beliefs; importance of recognition and support by community; belief in career advancement also a motivational factor; use of participatory learning	Security issues contributed to challenges with supervision; difficulty engaging community members and changing behaviors; provide additional, appropriate incentives; create means through which CHW can voice expectations and demands; adding tasks or responsibilities could conflict with 'volunteer' aspect of program
14	Health Promotion Temple Project ²⁷	Thailand	Health education, promotion and prevention, PHC, water and sanitation, nutrition, referral	Collaboration between MOH, Buddhist monks, and temples (religious motivation); supportive legislation; health promotion conducted through temples; provided incentives for volunteers (free medical care for family members); program focus changed as needs changed	None mentioned
15	Health Extension Workers Program ²⁸	Ethiopia	Environmental health & hygiene, immunizations, HIV/AIDS and other infectious diseases, MNCH	Support from MOH, supportive legislation; volunteers work under supervision of health extension worker (HEW); regular reporting by HEW at regional level; performance agreement contract between HEW and regional states; referrals to health centers; nationwide program; pre-service and refresher training; low attrition	Inadequate space for training; lack of books or references for volunteers; often CHW not selected from community; selection criteria need modification (should speak language of community); inadequate orientation; poor planning of training; training offered in English (not local language); lack of practical training (too theoretical)

	Program	Country	Area of Focus	Characteristics Attributed to Success	Areas Identified for Improvement
16	Community Health Worker Programs ²⁹	South Africa	Review of variety of program (HIV/AIDS, TB, health education, child care)	Highlighted importance of two-way referral system between CHW and formal health care system; ongoing M&E of program including documentation of contact with clients and analyzing program as a whole; training; supervision through monthly meetings; recruitment through various agencies; CHW should have strong knowledge of community and layout; consider traditional beliefs during design; involve locally respected leaders; recommend stipend; ensure ongoing funding; identify 'champions'; use past experiences and evidence for design; develop a management structure for program	Lack of a clear CHW policy; differing names, roles and responsibilities; variety of training (at times ineffective); varying levels of program effectiveness; inconsistencies in programs (e.g., in payment); disorganized recruitment; lack of career advancement; lack of mentoring/supervision and support; lack of evaluation of competence; need to standardize training
17	Community Based Distribution Agents (CBDAs) ³⁰	Malawi	Family planning	Use of social structures: CBDA selected by chiefs of communities; provided outreach to rural areas; raised awareness and normalized contraception use (health talks); referred patients; able to communicate clearly with patients and overcome difficulties of patients with health care workers; incentives included self-satisfaction in helping communities; refresher trainings and bicycles; close partnership between NGO and government facilities; support by policy, government and donors; bringing services to doorstep was identified as crucial as well as capability of CBDAs to address patient barriers to access; use of male motivators to increase male acceptance of contraceptives	Need for additional incentives: suggestions include community support, recognition by local leaders and community members, promotions, performance-based awards, funding for community activities; need for various types of training and associated costs (for example to integrate HIV/AIDS work); specialization of CBDAs in FP only; maintaining donor and government commitment (including funding); drug shortages
18	Community Health Workers: Health promoters, traditional birth attendants, and traditional healers ³¹	Peru	Health education, strengthening referral system, outreach to hard to reach population	Integrates traditional and Western medicine; culturally appropriate interventions; volunteers selected from the community who speak local Quechua language; lower drop-out rates for TBAs (3%) and traditional healers (~17%); underwent training and refresher training; recognition from patients and community; specific roles and tasks for each type of CHW; often received gifts from community members; culturally sensitive to gender roles (CHWs generally male)	Higher drop-out rates of health promoters (24%) could be due to lack of refresher training or support; poor communication and referral to health care professionals by TBAs and traditional healers

Conclusion

Through this review of community health worker programs and additional articles analyzing CHW program characteristics, the following key components were identified as central to the design and implementation of functional and sustainable CHW programs:³²⁻³⁹

- Defined job description with specific tasks or responsibilities for volunteers
- Recognition and involvement by local and national government
- Community involvement (especially in recruitment and selection, by making use of existing social structures, consider cultural appropriateness, address needs of community, etc.)
- Resource availability (funding, equipment, supplies, job aids, etc.)
- Monitoring and evaluation of programs
- Linkages with formal health care system
- Training (including refresher trainings)
- Supervision and feedback
- Incentives or motivational component
- Advancement opportunities

Common challenges and weakening characteristics that influence the functionality and sustainability of CHW programs were also identified through this review of the literature.³²⁻³⁹

- Poor initial planning (disconnect between program developers, program managers and volunteers, failure to consider true costs of program – training, supervision, etc.)
- Unrealistic expectations or undefined job descriptions
- Lack of community involvement in design, recruitment and implementation
- Inadequate training (too complex, not tailored to volunteers' educational level, lack of refresher training, etc.)
- Difficult to scale up due to tailoring required for CHW programs
- Lack of resources or inconsistency of resources (funding, supplies, etc.)
- Problems with sustainability
- Lack of incentives (monetary or others)
- Poor supervision and support (by MOH, supervisors, local community)

These factors, combined with a weak management and organizational structure, contribute to high rates of attrition, absenteeism, low work morale, and poor quality of work for community health volunteers.³³ Such factors should be taken into consideration when assessing the functionality and sustainability of CHW programs. Evaluating CHW programs using these criteria can provide insight into the functionality of the program, as well as help program managers identify key areas for improvement.

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