Pangaea
Global AIDS Foundation

Muhimbili University
of
Health and Allied
Sciences

COMMUNITY HEALTH WORKERS' TRAINING AND DEPLOYMENT IN TANZANIA:

A review of PEPFAR funded programs

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AIHA	American International Health Alliance
ART	Anti-Retroviral Therapy
BIPAI	Baylor International Pediatric AIDS Initiative
CA	Clinical Assistant
CBD	Community Based Distributor
CBET	Competency Based Education and Testing
CDC	Center for Disease Control
CHW	Community Health Worker
CHEW	Community Health Extension Worker
CoAG	Cooperative Agreement
EGPAF	Elizabeth Glazer Pediatric AIDS Foundation
EOC	Emergency Obstetric Care
FBO	Faith Based Organization
FHI	Family Health International
FHSSA	Foundation for Hospices in Sub-Saharan Africa
GGE	Greater Gombe Ecosystems
GIZ	German Gesellschaft für Internationale Zusammenarbeit (Society for International Cooperation)
HBC	Home Based Care
HIV	Human Immune deficiency Virus
ICAP	International Center for AIDS Care and Treatment Program
IEC	Information Education and Communication
IHI	Ifakara Health Training Institute
IMCI	Integrated Management of Child Illnesses
I-TECH	International Training and Education Center for Health
JHPIEGO	Johns Hopkins Program for International Education in Gynecology and Obstetrics
MATEC	Midwest AIDS Training and Education Center
MDG	Millennium Development Goals
MDH	Management and Development for Health
MNCH	Maternal, Newborn & Child Health
MOHSW	Ministry of Health and Social Welfare
MUHAS	Muhimbili University of Health and Allied Sciences
MVC	Most Vulnerable Children
NA	Nursing Assistant
NACP	National AIDS Control Programme
NACTE	National Council for Technical Education
NECTA	National Examinations Council of Tanzania
NGO	Non-Government Organization
NTA	National Technical Award
OVC	Orphans and Vulnerable Children
PASADA	Pastoral Activities and Services for people with AIDS Dar es Salaam Archdiocese
PATH	Program for Appropriate Technology in Health
PE	Peer Education

PEPFAR	President's Emergency Plan for AIDS Relief
PGAF	Pangaea Global AIDS Foundation
PHC	Primary Health Care
PHSDP	Primary Health Services Development Programme
PLHIV	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
PSI	Population Services International
PSW	Para-social Worker
STI	Sexually Transmitted Infections
T-MARC	Tanzania Marketing and Communications
TAYOA	Tanzania Youth Alliance
TBA	Traditional Birth Attendant
TCU	Tanzania Commission for Universities
TSH	Tanzanian Shillings
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
USG	United States Government
VCT	Voluntary Counseling and Testing
VHW	Village Health Worker
VETA	Vocational Educational and Training Authority
WDC	Ward Development Committee
WHO	World Health Organization
YHC	Youth Health Corps
ZACP	Zanzibar AIDS Control Program

TABLE OF CONTENTS

EXECUTIVE SUMMARY **1**

BACKGROUND **5**
MUHAS-PANGAEA GLOBAL AIDS FOUNDATION COLLABORATION 5

METHODOLOGY **6**
DEFINING COMMUNITY HEALTH WORKERS 6
DATA COLLECTION METHODS 6
PEPFAR Funded Organizations *6*
CHWs and Key Informants *6*
Document and Literature Review *7*
SELECTION OF SURVEY PARTICIPANTS 7
Eligibility of the PEPFAR Partner Organizations *7*
Selection of the CHWs *8*
Selection of the Key Informants *8*
DATA MANAGEMENT AN ANALYSIS 8
Management and Analysis of the PEPFAR Partner Organization Data *8*
Management and Analysis of the CHW and Key Informant Data *8*
STUDY LIMITATIONS 9

FINDINGS **10**
PEPFAR PARTNER ORGANIZATION INTERVIEWS 10
Goals and Objectives of the Training Programmes *10*
Information on Training Programs *10*
Qualifications and Selection of Trainees *10*
Curriculum, Syllabus and Training Materials *11*
Certification and Accreditation *11*
Placement after Training *12*
Deployment, Supervision, and Monitoring *13*
Remuneration *13*
CHW SURVEYS 14
Overview of CHWs *14*
Training and Supervision *14*
Service Provision *15*
Remuneration *15*
Suggestions by CHWs to Improve their Work *15*
KEY INFORMANTS 16
Description of Key Informants *16*
Categories of community health work *16*
Services rendered by CHWs *17*
Services preferred from CHWs *17*
Contribution to the remuneration of CHWs *17*
Perceived importance of CHWs to the community *17*
CATEGORIES OF CHW IN TANZANIA 18
Home Based Care provider (HBC) *18*
Community Based Distributors (CBD) *19*
Para-Social Workers (PSW) for Orphans and Vulnerable Children *19*

Peer Educators *20*
Peer or Lay Counselors *20*
Community Maternal, Newborn and Child Health Care Providers (MNCH) *20*
Life Skills education *21*
Traditional Birth Attendants (TBA) *21*
Other Curricula under Development *21*
DISCUSSION **23**
GAPS IN CURRENT CHW TRAINING PROGRAMS 23
Gaps in Existing Home Based Care Curriculum *23*
Supervision *23*
Maternal, Newborn and Child Health *23*
Sustainability *24*
INTEGRATION OF CHWS INTO THE TANZANIAN HEALTH CARE SYSTEM 24
ACCREDITATION OF CHW TRAINING PROGRAMS 24
RETAINING CHWS 25
VOLUNTEERISM AND COMMUNITY HEALTH WORKERS 25
CONCLUSION **27**
RECOMMENDATIONS **28**
REFERENCES **32**

EXECUTIVE SUMMARY

One of the over-arching goals of the Tanzanian health system - as defined by the Primary Health Services Development Plan and the National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania - is to develop a cadre (or defined cadres) of Community Health Workers (CHWs) that are well-trained and equipped to address basic HIV/AIDS needs at the community level for improved quality in health outcomes for prevention, care and treatment[1,2].

Research has shown that the role of CHWs can be optimized to serve as a valuable addition to human resources for health, helping to achieve universal coverage of HIV services[3,4,5.] To attain this goal, establishing clearly defined categories of the CHW cadre(s); with comparable scopes of work and training curricula are important steps towards instituting national coverage of community-based delivery systems for HIV/AIDS. Subsequently, the engagement of government is required to develop a harmonized curriculum and a nationally recognized, accredited program for this cadre of health providers, ultimately allowing multiple partners to leverage, train and deploy CHWs.

In 2010, US Centers for Disease Control and Prevention (CDC) in Tanzania (CDC-Tanzania) engaged the Muhimbili University of Health and Allied Sciences - Pangaea Global AIDS Foundation (MUHAS-PGAF) collaboration (hereafter referred to as the Project) to support the process of harmonizing CHW categories and programs funded by the President's Emergency Plan for AIDS Relief (PEPFAR). Towards that end, the Project in consultation with CDC/PEPFAR developed the following objectives:

1. To examine CHW training programs and their curricula under the different USG PEPFAR funded HIV programs, and categorize their content and breadth with a view to defining distinct cadres of CHW taking into account consumer perspectives.
2. To determine areas of commonalities and distinctive differences among the different curricula with a view to identify categories tied to CHW cadres for subsequent validation under the National Council for Technical Education (NACTE), using their recommended validation criteria.
3. To develop a policy advocacy strategy and plan for accreditation of CHW training within the broader context of Health Systems Strengthening efforts in Tanzania.

This report focuses on objectives 1 and 2, with initial recommendations for objective 3, and further work to follow on objective 3 based on the information synthesized here.

Utilizing a working definition for CHWs as members of a community who are chosen by, and accountable to, the community to provide preventative and basic health care services to their community[6], we designed and administered semi-structured questionnaires to PEPFAR-funded partner organizations involved in the training and deployment of CHWs. In addition, we conducted in-depth qualitative interviews with CHWs and community leaders in the Kigoma, Kilimanjaro, Rufiji, Coast, Tanga and Dodoma regions. Eighty PEPFAR partner organizations (funded through CDC and USAID) were contacted from a list provided by CDC-Tanzania in order to assess eligibility, defined as having current non-facility based CHW programs. Of those, 31 were assessed as eligible and invited to respond to questionnaires about their program and curricula, and to provide their training materials for review; 28 partners participated. From these organizations, we also interviewed 21 current CHWs mostly through telephone interviews, and 8 community leaders from the same regions.

The Project's analysis compared the different programs' curricula, and identified eight distinct categories of CHWs being trained and deployed by PEPFAR partner agencies or their sub-contractors, the first seven of which were specifically engaged in some form of HIV-related work. These included the following:

1. Home Based Care (HBC) providers
2. Community-based distributors/educators (CBD) (family planning and HIV education)
3. Para-social Workers (PSW) for Orphans and Vulnerable Children/Most Vulnerable Children (sometimes called OVC or MVC Counselors)
4. Peer HIV educators
5. Peer counselors (sometimes called Lay Counselors)
6. Community maternal, newborn and child health care providers (MNCH)
7. Life Skills Trainers
8. Traditional Birth Attendants (TBAs)

The first three of these categories: HBC, CBD and PSW used curricula which had already been standardized by the Ministry of Health and Social Welfare (MOHSW), with standardized curriculum, materials and training duration. Trainers were required to have completed training in teaching the standardized curricula and in the case of HBC trainers they were required by law to be trained and supplied by the National AIDS Control Programme (NACP) although funding for the training was provided by the partner organization, which sponsored the training and would deploy the HBCs. Despite this governmental standardization the data showed that there was some variance in the training of HBCs and CBDs in particular, with additional modules being taught or differing durations of training.

Training programs, curricula and materials in the remaining categories, were found to vary greatly in content, methodology, assessment of trainees, and length, depending on the partner organization sponsoring the training and the category of community health worker. In addition, programs were found to utilize a range of criteria to select community health workers. Training programs reported a duration range from 3 to 24 days; trainings were conducted by the partner organization; and the number of trainees ranged from 16 to 200 (with the majority of programs having between 25 to 30 trainees per training).

In general, partner organizations worked closely with local governments and community based organizations or local NGOs to train, deploy, supervise and monitor community health workers. Deployment of CHWs was often controlled at the regional or district level, while supervision and reporting occurred close to the point of service delivery. Each organization had its own chain of command and CHWs reported to their designated supervisor within it; involvement of village government in the supervision of CHWs varied by organization.

While all CHWs in the programs reviewed worked on a voluntary basis, most programs offered some cash remuneration to support and reward their service. Current cash remuneration packages varied from a monthly stipend of 10,000 to 74,000 Tshs, while the same respondents recommended a monthly pay considered to be reasonable for full-time CHW work ranging from 50,000 to 300,000 TShs, depending upon the type of CHW. The source of funding for remunerations varied by agency, but most provided for the remunerations as a budget line item from PEPFAR donors. Other remunerations, such as transportation costs, meal allowances, supplies to report services (pens, pencils, notebooks), or items such as bicycles directly facilitated the work of the volunteer. Practical accessories such as raincoats, umbrellas, transport bags, soap and flashlights constituted additional forms of remuneration. There was no

evidence of correspondence between cash and non-cash forms of remuneration, in other words those receiving lower amounts or no cash remuneration were not necessarily given non-cash remuneration instead. Remuneration was solely at the discretion of the organization sponsoring the CHW program.

The survey identified several gaps in the CHW training and deployment system, as summarized in the full report. In categorizing the different CHW programs it was determined that three of the CHW categories already have curricula standardized by the MOHSW: HBC, CBD, and PSW, and therefore any further harmonization or revision of curricula which may be desired by PEPFAR or PEPFAR partners will need to be undertaken in collaboration with the MOHSW and would involve some policy revision and implementation on the part of MOHSW.

We consider accreditation of training programs an important step in validating training programs, ensuring standardization of curricula and a measure of quality assurance for the training programs and trainees. Currently none of the CHW training programs in Tanzania meet the accreditation criteria of any of Tanzania's external curricula accreditation bodies such as NACTE or VETA. The only accreditation available to the CHW programs is accreditation by the MOHSW, such as what is now provided by the standardized curricula within the HBC, CBD and PSW categories.

The majority of CHWs in programs reviewed were home based care providers, engaged not only in HIV/AIDS care but also in wider-community education about HIV including prevention. There were significant gaps in the standardized and approved HBC curriculum, which severely impacted delivery of quality HIV/AIDS services. For example, the training lacked modules in basic anatomy, ART adherence and PMTCT, and was not well integrated with other community cadres. In general, there was less than ideal coordination among existing program silos at the government or partner organization level, and no national tracking of CHWs; therefore communities suffered from a lack of integration for community health services for HIV and reproductive or maternal and child health. In addition, while it was expected that dispensary level clinical officers were the main supervisors of the CHWs, the existing modules for training facility-based clinical officers did not include supervision of CHWs.

A critical finding was that current CHW programs followed a model of permanent volunteerism and were not officially recognized as a professional cadre with a clear career development path, This undermined their respect at the health facility level. Therefore, retention was considered a challenge, leaving CHW programs subject to donor priorities and funding availability, which threatened the sustainability of these programs. Furthermore there was no existing mechanism for accrediting CHW training programs in Tanzania, which was considered a shortfall as far as quality assurance was concerned. It is therefore concluded that while Tanzania has strong high level policies in place for the development of an effective CHW cadre in particular the "Primary Health Services Development Plan" and the "National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania", which include having a dispensary clinic and two CHWs in every village; the Government needs to prioritize the implementation of these policies. In particular they need to prioritize strengthening the links between the villages and health care facilities by providing clearly articulated policies and training for the supervision of CHWs at the health facility level, as well as strengthening the referral system between the village and the health care facilities if the policies outlined by the aforementioned documents are to be realised. From the described efforts, the following policy recommendations have been developed where PEPFAR can provide support to the Ministry of Health and Social Welfare to improve community health services by initiating the following:

1. **Create a mechanism for combining the existing Home Based Care (HBC), Community Based Distributor (CBD), and Community, Maternal, Newborn, Child Health (MNCH) categories into one new cadre to be called Community Health Extension Worker (CHEW) cadre. The Para-social Worker, Peer Educator and Peer Counselor categories can remain as they are, providing valuable added HIV/AIDS related support.**

2. **Develop a combined HBC/CBD/MNCH curriculum using existing modules to create one comprehensive curriculum, which addresses issues of HIV/AIDS, primary health care and sexual and reproductive health to support this CHEW cadre.**

3. **Create a mechanism whereby CHWs are paid a standard wage consistent with the government minimum wage scales and develop a clearly defined career ladder for this cadre.**

4. **Review all the maternal, newborn and child health programs operating in Tanzania to assess the feasibility of incorporating the different MNCH curricula into the new CHEW cadre and the desirability of extending the care they provide to safe and sterile home birth.**

5. **Strengthen supportive supervision of CHWs at the facility level by including supervision skills training in the training modules for clinical officers and nurses working at dispensary and health center levels and clearly outlining supervisory roles and responsibilities in their scopes of work.**

6. **In order to enhance recognition and career development of the CHEWs, the minimum education level for CHEW training should be Form 4. Other cadres could remain open to individuals who have not achieved this level of education.**

BACKGROUND

In countries severely affected by HIV/AIDS, shortages of health workers present a major obstacle to scaling up HIV services. Within Tanzania, and in the context of HIV/AIDS, there has been a focus placed on increasing the number of health care workers in the various cadres, and supporting the development of the role of the Community Health Worker (CHW) in order to address the existing human resource gap in HIV/AIDS prevention, care and treatment programs. With the current national human resource gap estimated at 65%[6], with a large percentage of this gap existing at the dispensary and village level in rural areas, "task shifting" of primary care functions from professional health workers to community health workers is considered to be a means to improving the health of millions quickly and at reasonable cost[7]. In order to meet the demand for such services at the community level, a number of partners have developed different packages for training HIV-focused CHWs under the PEPFAR program. There are also other donor agencies and NGOs, which have been supporting the development of the role of the CHWs but with efforts largely unlinked to the PEPFAR funded programs.

With increased focus on developing and implementing a human resources for health strategy in Tanzania[1], there is a need to better understand the format and scope of CHW training programs, as well as their deployment and support. Identifying all CHW training programs in the country and assessing the opportunities for moving to a standard categorization and approach to training CHW cadres is an important step in supporting the Government of Tanzania in its efforts to increase the capacity of the health care system to deliver effective HIV/AIDS care, treatment and prevention services.

MUHAS-Pangaea Global AIDS Foundation Collaboration

The MUHAS-PGAF collaboration has been active since 2008 when it received CDC/PEPFAR funding to establish the pilot Youth Health Corps (YHC) program that developed a CHW curriculum eligible for NACTE accreditation, for young Tanzanians. The MUHAS-PGAF collaboration was then awarded a CDC/PEPFAR cooperative agreement (CoAG) to review the content of the PEPFAR funded CHW training curricula, in order to develop categories of training materials and homogeneous categories of CHWs across the different partner organizations. These efforts were undertaken to assist PEPFAR and the Tanzanian government in its efforts to increase the capacity of the health care system to deliver HIV/AIDS care, treatment and prevention services at the grassroots level. Towards this end, MUHAS and Pangaea in consultation with CDC/PEPFAR developed the following objectives:

1. To examine CHW training programs and their curricula under the different USG PEPFAR funded programs, and categorize their content and breadth with a view to defining distinct cadres of CHW taking into account consumer perspectives.
2. To determine areas of commonalities and distinctive differences among the different curricula with a view to identify categories tied to CHW cadres for subsequent validation under the NACTE using recommended validation criteria.
3. To develop a policy advocacy strategy and plan for accreditation of CHW training within the broader context of Health Systems Strengthening efforts in Tanzania.

This report focuses on objectives 1 and 2, with work on objective 3 to follow from the information synthesized in this report.

METHODOLOGY

Defining Community Health Workers

A working definition for CHWs was adopted from the literature and modified to fit the Tanzanian situation as follows: Community Health Workers (CHWs) are members of a community who are chosen by, and accountable to, the community to provide preventative and basic health care services to their community. CHW is an umbrella term (also called Village Health Workers (VHW) in some contexts), which encompasses many sub-categories of CHWs, including:

1. Home Based Care (HBC) providers
2. Community-based distributors/educators (CBD) (family planning and HIV Education)
3. Para-social Workers (PSW) for Orphans and Vulnerable Children/Most Vulnerable Children (sometimes called OVC or MVC Counselors)
4. Peer HIV educators
5. Peer counselors (sometimes called Lay Counselors)
6. Community maternal, newborn and child health care providers (MNCH)
7. Life Skills Trainers
8. Traditional Birth Attendants (TBAs)

CHWs are given a limited amount of training intended to equip them with the skills to provide essential, safe, and highly effective basic health services to the population, usually living far from health facilities[6]. CHWs are not meant to work in health facilities, but the clinical officer at the lowest health facility (dispensary) is expected to supervise them. CHWs are not paid salaries but work for NGOs, FBOs and communities, which pay them limited amounts of allowances or in-kind contributions from the communities in which they work. A more detailed description of the CHW categories is presented below in the Findings section.

Data collection methods

To aid in this assessment, data were collected from PEPFAR funded partner organizations, community health workers, and key informants through the design and administration of semi-structured questionnaires. Qualitative interviews were conducted with CHWs and community leaders in the Kigoma, Kilimanjaro, Rufiji, Coast, Tanga and Dodoma regions.

PEPFAR Funded Organizations

A semi-structured questionnaire was developed and administered in English to the PEPFAR funded partner organizations that were training CHWs in Tanzania mainland and/or Zanzibar (see Appendix A for questionnaire, and section below for selection criteria and eligibility). The instrument included questions regarding: program profile and capacity; trainee qualifications; training methods and materials; CHW deployment; remuneration; certification and accreditation. The questionnaire was emailed or delivered by hand to participating program representatives to be filled in and returned to the Project.

CHWs and Key Informants

Interviews with CHWs and key informants supplemented the agency interviews. A semi-structured interview guide was developed for contacting community health workers trained by PEPFAR-funded partners in different parts of Tanzania (see Appendix B). The purpose of the

CHW interview was to determine if the training and resources the CHW received were sufficient for the needs of the community, or if there were gaps in the training or resources that the CHW needed in order to meet the communities' health needs. The CHWs questionnaire was prepared in English and translated into Kiswahili (language spoken most widely by Tanzanians).

The Key Informant interview guide was also developed and used to contact community leaders (either a religious, government or political leader in the community) (see Appendix C), to determine if members of the community were aware of the presence of CHWs in their communities and to assess the extent to which their services were utilized.

Both the CHWs and Key Informant Interview guide were administered through phone calls and all responses were recorded on the guide. This approach was pilot tested so as to ensure efficacy. Accordingly, the team went through the responses after the first person was interviewed and concluded that the approach would be more cost-effective and appropriate for data collection than face to face interviews involving costly travel to remote areas where they live and work.

Document and Literature Review

Materials related to the CHW training program were collected from each partner for further review. The types of documents collected for our purpose included:

1. Training materials in use by the trainees
2. Handbooks or cue cards in use by the practicing CHW
3. Guidelines for trainers or facilitators
4. Training Curricula which could be used by both the trainer and the trainees
5. Information sheets, pamphlets, brochures and books which describe the partners' goals and activities

Upon completion of the partner survey, CHW and key informant interview analyses the team conducted a review of available literature on other CHW programs in Tanzania and other countries in Southern and Eastern Africa, and the impact of volunteerism on CHWs and their communities. In accordance with a grounded theory approach, the literature review occurred toward the end of data collection and data analysis to minimize researcher bias[8].

Selection of Survey Participants

Eligibility of the PEPFAR Partner Organizations

PEPFAR supported partners were reviewed for eligibility if they were listed as receiving support through either CDC or USAID for CHW training programs, or if they reported training CHWs according to their reporting to PEPFAR. The Project was provided with an initial list of eighty USAID and CDC Funded partner organization by CDC Tanzania. Of that list, CDC informed the Project that twenty-two of the partner organizations were ineligible, because they were no longer training CHWs or had not yet begun developing curricula. Of the remaining fifty-eight partner organizations when contacted: nine said they were not training CHWs or were no longer training them; another eight were training only facility-based workers; seven organizations' programs had been completed; and one partner organizations' program had not yet begun. This left thirty-three eligible partner organizations, 28 of which responded to the survey. Of those who did not respond, three were collaborating on the same project and therefore counted as one, two were non-responsive and one declined to participate.

Selection of the CHWs
When the PEFPAR supported partners and/or their subcontracted partners were contacted, they were requested to provide a list with telephone contacts of the CHWs they had trained and were currently practicing. The Project requested a selection of up to 10 consisting of both males and females with telephone numbers. From this list a further 2-5 respondents were selected for the interview, both males and females. This selection was based on their location so as to ensure geographical representation. The Project then arranged to conduct telephone interviews, which took approximately 20 minutes for each interview.

Selection of the Key Informants
It was determined that community leaders should be selected as the key informants from villages utilizing the services of CHWs as they would be the easiest to access by an outside party, and would have a higher likelihood of being informed of CHW activities in their village. When the interview with the CHW was completed, he/she was asked to provide the name and telephone contact of a community leader in his/her immediate neighborhood who the team could contact, either a religious leader, government leader (village or hamlet head) or a political leader. This community leader was called and interviewed on the same or different day regarding his/her awareness of the work of the CHW and whether he/ she had utilized the services they provided.

Data Management and Analysis

Management and Analysis of the PEPFAR Partner Organization Data
The information collected was entered via the partner organization data into electronic spreadsheets to summarize and facilitate comparison across partners. The Project then was able to group the curricula and programs into two broad categories: standardized by the MOHSW and non-standardized. The different curricula were then read, and the training modules entered into electronic spreadsheets to facilitate analysis. The standardized categories were then analyzed for gaps in the curricula, particularly with regards to HIV/AIDS prevention, care and treatment. After consulting with NACTE and the Vocational Educational and Training Authority (VETA) the curricula was also analyzed on whether or not it met NACTE or VETA accreditation criteria. The Project also analyzed if the different training programs had any content or length variances despite the existing standardization.

The non-standardized curricula were analyzed for differences and similarities in order to further group them into homogenous categories. Once the team established the categories of non-standardized CHW the feasibility of harmonization curricula within these categories and the accreditation potentials were analyzed.

Management and Analysis of the CHW and Key Informant Data
CHWs and key informants interview responses were also computerized and analyzed to identify the common themes in the data. These data were analyzed for similarities, differences and gaps in the training and curricula. They also provided us with more detailed insight into the experience of CHWs working in Tanzania and the communities they serve. In particular the gaps between the HIV-related or other health services that were needed in the villages and how the CHWs were being trained to address them, or not.

Study Limitations

Information generated through the questionnaires and interviews is likely to have the inherent weaknesses of any self-reported information. The nature of questions that participants asked after they were interviewed suggests that CHW responses may have been shaped by their desires for more training, more payment, and career opportunities. For instance, participants were very eager to know what would follow as a result of the study. MUHAS-PGAF did not give any promises but informed them that the team shall submit their recommendations to the relevant authorities for consideration.

This project did not review training materials from stakeholders other than CDC and USAID PEPFAR funded organizations that are involved with CHW training in Tanzania. Therefore the questionnaires and partner selection reflect the HIV/AIDS focus of PEPFAR funded programs and did not encompass other non-HIV or non-PEPFAR CHW training programs in the country. However, the team believes that the information collected will be useful in influencing policy since it represents a significant portion of the CHW training pool in Tanzania.

FINDINGS

PEPFAR Partner Organization Interviews

Details on the participating partner organizations that responded fully and their programs can be found in Appendix D. Results from the analysis are reported in Appendix A, Table 1.

Goals and Objectives of the Training Programmes

Each CHW training programme had specific goals and objectives in line with the larger mission of the organization (See Appendix A; Table 1). Some organizations stated in their goals that they seek to empower and meaningfully engage particular populations as CHWs, such as people living with HIV (PLHIV) or youth. Other organizations targeted particular consumers with services, such as OVC/MVC or HIV positive mothers and exposed infants. Yet a few others seek to expand access to both HIV services and family planning/reproductive health services. However, most programs shared the common aim to build capacity at the local level to better reach individuals, families and communities with HIV prevention and care services by imparting knowledge and skills to CHWs.

Information on Training Programs

The reviewed CHW training programs varied greatly in content, approach, and assessment, depending on the host organization and the category of community health worker (See Appendix A; Table 2.) Almost all of the programs profiled included practical or field related training sessions in addition to lessons in topic-specific knowledge. Methods used to offer field related training included role-plays, simulations, and presentations. The training programs all conducted assessment of trainees, ranging from written pre and post-tests to class presentations or oral discussions. Some programs employed a combination of written, oral and observational assessment utilizing a checklist to track observations. A few partner organizations engaged in daily assessment at the end of each training day. Others took a different approach and only assessed formally at the beginning and end of the training programme. Organizations took a variety of measures if trainees did not successfully complete the training program. Some programmes required the trainees to repeat the training, some droped the trainee, and most offered the trainee increased support and supervision until they improved their abilities, without making them repeat the course. In the majority of CHW programs, trainers were trained using guidelines developed alongside the training materials. Furthermore, all the HBC trainers were medical doctors and other clinical personnel, who had been qualified by NACP.

Qualifications and Selection of Trainees

Programmes utilized a range of criteria to select individuals to train as community health workers (See Appendix A; Table 3). All prospective trainees must reside within the targeted geographical location and many programmes prefered that community health workers come from the area that they served. Other selection requirements included age, education, training background and previous work experience. For age requirements, most programmes looked for adult trainees over the age of 18, with some specifying trainees over the age of 25 or under 50. All programmes required that trainees have the ability to read and write, while some required more education, depending on the type of work expected. Some peer educator programs required previous training in facilitation or life skills, while some peer counsellor and MNCH programs required training in home based care or community based distribution. A few programmes required trainees to have relevant background work experience, such as working

with children, or connections to PLHIV networks. All programs seek both male and female trainees and one in particular required an equal gender balance. Other selection criteria were qualitative in nature. Programmes often required a spirit of volunteerism, strong communication and facilitation skills, and acceptability to community members, personal resiliency and ability to maintain confidentiality and earn trust.

Additional criteria for selecting participants for CHW training varied depending on the category of community health worker and the goals of a particular organization (See Appendix A; Table 4). For example organizations utilizing and training peer counsellors required that trainees were living with HIV, had disclosed their HIV status to family and friends, were willing to publically discuss their experiences with HIV, and practiced adherence to HIV care. Organizations, training peer educators, selected trainees based on a number of criteria including: past experience, working knowledge of local traditions, and a high level of comfort discussing sexual issues. Many organizations had village government or village health committees select trainees deemed appropriate candidates for community health workers. One group went one step further by establishing a selection panel consisting of WDC leaders, Organization staff and the District HBC Coordinator. The Short-listed participants, or list of agreed upon "finalists" were given oral and written interviews and must provide invitation letters from WDC leadership, signed by all parties.

Curriculum, Syllabus and Training Materials

The duration of a training programme, the materials used, and the number of trainees varied depending on the category of community health worker and the host organization (See Appendix A; Table 5). Training programs reported a range from 3 to 24 days, depending on the category; all organizations utilized curriculum and syllabus in their trainings. While some organizations offered training programs on an as needed basis, or as funding was available, most offered them yearly. The number of trainees per event varieied by program, ranging from 16 trainees to 200, depending upon capacity of training facility and category of training being performed. All but one of the programs had between 16 and 50 trainees per training, with the outlier, which trained PSWs, with 200 trainees per training. Aside from two organizations, all training programs conducted refresher courses. The duration of volunteer work prior to receiving the refresher course ranged from one month to 5 years, depending upon organization. Most programs offered refresher courses every 6 months or every 2 years. All training programs provided a training guide for the trainers. All of the programs had a supervisor in place at the partner organization and the majority provided a supervision guide to the supervisors. Only three of the twenty-eight participating programmes lacked a supervision guide.

Certification and Accreditation

Seventeen of the partner organizations offered certificates upon successful completion of the course. (See Appendix A; Table 6) Nearly half of the organizations reported that their programs are accredited, however from their responses it is clear they were referring to the organizations or institutions offering the training being accredited, not the curricula itself, such as IntraHealth's curricula having been approved/accredited by the Institute of Social Work. In some instances it also refered to the curricula having been approved by an official government body, such as PSI's trainings having been approved by MOHSW only. However, NECTA, NACTE, VETA and TCU are the official curricula accreditation bodies in Tanzania, and none of the curricula reviewed in this project met their criteria for accreditation. NECTA accredits pre-, primary and secondary schools and Teachers Training Colleges; NACTE accredits all types of technical education at all levels except universities, VETA accredits non-health technical education while TCU accredits university education.

Placement after Training

As the figures below illustrate, organizations placed community health workers throughout Tanzania upon completion of their training programmes, usually in, or near, the same communities where they live. (See Appendix A; Table 7).

Figure 1: PEPFAR Funded CBD Placement

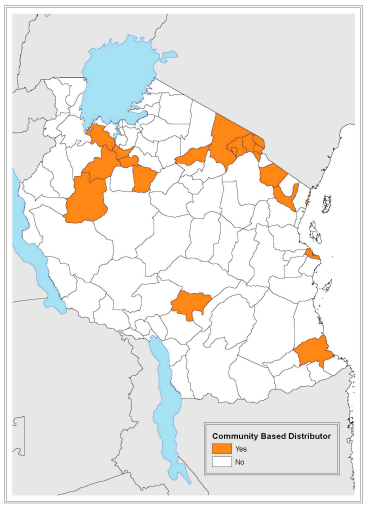


Figure 2: PEPFAR Funded HBC Placement

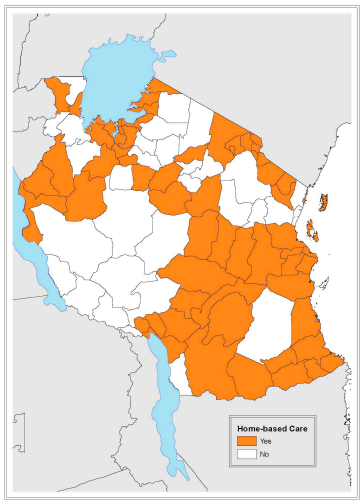


Figure 3: PEPFAR Funded PSW Placement

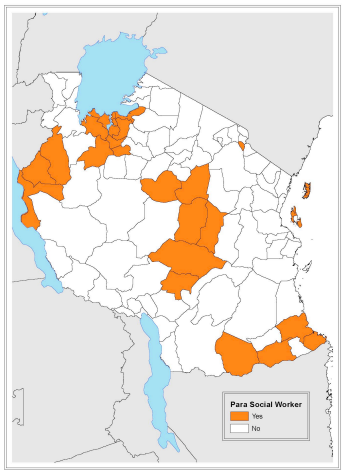


Figure 4: PEPFAR Funded Peer Educator Placement

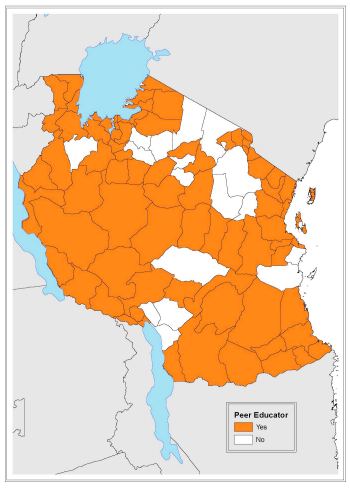


Figure 5: PEPFAR Funded MNCH Placement

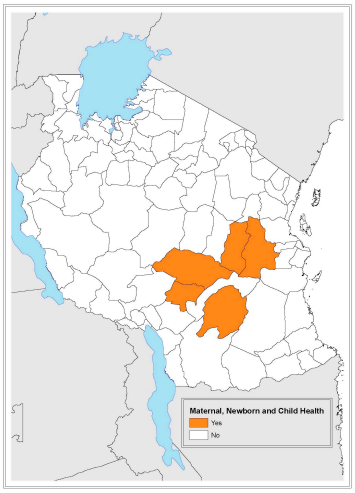
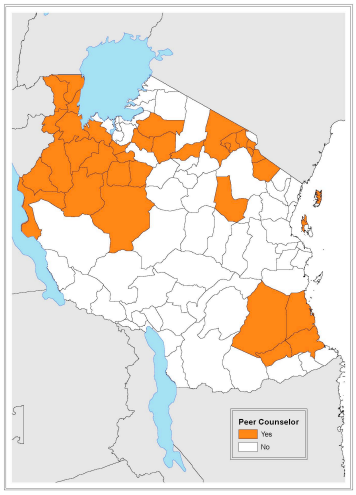


Figure 6: PEPFAR Funded Peer Counselor Placement



Deployment, Supervision, and Monitoring

Organizations worked closely with local governments and non-governmental partners to deploy, supervise and monitor community health workers (See Appendix A; Table 8). Deployment of community health workers was often controlled at the regional or district level, while supervision and reporting occured close to the point of service delivery. Each organization had its own chain of command and community health workers reported to their designated supervisor within it. Depending on the category of community health worker, they might have reported to the local health facility or clinical officer (in the case of home based care or community-based distributors) or a project coordinator in the village. Involvement of village government in the supervision of community health workers varied by organization, with some organizations having engaged local government as the primary source of supervision, such as collaborating with village government to assemble a referral network for peer education support groups. With other organizations, village government involvement was more informal, with linkages established as appropriate through daily activities. In Zanzibar there was no village government but the District Health Management Teams were responsible for HBC services in the districts.

Remuneration

While all organizations profiled engaged community health workers on a volunteer basis, most offered remuneration to the CHW to support and rewarded their service (See Appendix A, Table 9). Remunerations directly facilitated the work of the volunteer, for example, transportation costs, meal allowances, or supplies to report services (pens, pencils, notebooks). Some organizations provided bicycles, as many community health workers in rural areas cover great distances to reach clients in need of services, particularly those engaged in home based care or community based distribution. Practical accessories such as raincoats, umbrellas, transport bags, soap and flashlights constituted additional forms of remuneration. Three of the organizations stood out, with one offering no incentive items or transportation to volunteers; and

the other two offering community health workers a flat monthly stipend of 20,000 Tsh per month. Depending on the resources of the organization, monthly value of remunerations for community health workers ranged from 20,000- 50,000 Tsh. The source of funding for remunerations varied by agency, but most provided for the remunerations as a budget line item. Some district councils supported the remunerations for community health workers through the NACP, while local churches offered support through faith-based organizations.

CHW Surveys

Overview of CHWs

Overall there were 21 community health workers (CHWs) from US PEPFAR-funded partners in Tanzania who were interviewed using the semi-structured interview from five regions of Tanzania: Tanga, Kilimanjaro, Coast, Kigoma, and Dodoma. Male and female CHWs were equally represented in the survey. The majority were between 30 and 49 years old. Standard VII was the most frequent level of education, with one CHW having obtained a certificate in social work. CHWs perceived acceptability to the community as the most important consideration for CHW selection, followed by literacy. Duration of work as a CHW ranged from 1 year to 6 years, with the majority having spent between 2 and 4 years as a CHW. (See Appendix B; Tables 1-6)

Training and Supervision

CHWs were trained in 8 different categories of community health work. Home Based Care and Para-social Work were the most frequently reported CHW categories, with 10 of the 21 CHWs trained in both specialties. About half of the CHWs had been trained as more than one category. The duration of training programs varied between 7 and 32 days, with 10 days and 21 days the most frequently reported durations. Given that the reported duration of trainings did not match with the training in each category, these data suggest that organizations offered longer or shorter trainings for the same category of CHW, irrespective of standardized training lengths. About half reported receiving a refresher course once, with some never having received a refresher course and others having received more than one. Only a third (7) of the CHWs received textbooks to aid in their work following completion of their training. (See Appendix B; Tables 7-10). Concerns were raised by some CHWs who are forced by circumstances to provide certain services without prior training. This concern was expressed by one CBD as shown below:

"…we also deal with administration of drugs that may not have side effects as well as use thermometers to take temperatures. We are doing all of these although we have not received specific training. It is not all CHWs who can do that without being trained. Most of us are doing so from personal innovation and we find that it is helping a lot since one can visit the patient at home and find him in very bad situation. With the thermometer the CHW can measure the temperature and administer tablets for pain relief or reduce temperature before taking the patient to the Health Facility"

Male CBD from Ikwiriri, Rufiji

All CHWs reported having a designated supervisor but the level of supervision ranged greatly. Four of the 21 CHWs reported never having received a site visit by a supervisor, while very few reported daily visits. Four CHWs reported monthly visits, matched by four who reported weekly visits. Most CHWs reported their activities monthly while the rest reported more frequently. Dispensaries were the most frequently mentioned health facilities to which CHWs are affiliated though some were also affiliated with hospitals or health centers. (See Appendix B; Tables 11-13.)

Service Provision

Given the voluntary nature of community health work, CHWs dedicated varying amounts of time to CHW work, as they have to balance their work with other competing responsibilities. Three CHWs reported to be working daily, while most worked twice a week. Some worked as little as twice a month. On days that they worked, CHWs put in anywhere from 1 hour to 11 hours. Most worked between 2 to 9 hours in a day depending upon how many days in a week they worked. The varying length of CHW work is due, in part, to different responsibilities associated with the different categories of CHWs. For example, OVC counselors and HBC providers often traveled great distances to meet with clients, adding hours to their workdays. Despite the many challenges faced, the majority reported they were very satisfied with their work. (See Appendix B; Tables 14 and 15)

CHWs relied on each other for support and information. Almost all reported consulting a fellow CHW or being consulted by a fellow CHW regarding their work such as assisting each other with home visits searching for opportunities for further training or higher remunerations. Consultations are frequent, with most consulting each other two or three times per week. (See Appendix B; Tables 16 and 17)

Mobile phones played a central role in service delivery. Almost all CHWs stated that they used mobile phones for work although the phones and air-time vouchers were not provided for. However, only 4 mobile phone users reported that they had been trained on how to use the phones in a work context. Of the four, the duration of training on mobile phone use ranged from 30 minutes to one week. Mobile phones were primarily used to communicate with patients/clients and other CHWs. A little less than half of the CHWs reported using mobile phones to communicate with supervisors. (See Appendix B; Tables 18 and 19.)

Remuneration

CHWs reported that they receive a range of remuneration for their volunteer work. After completing CHW training, many received materials to help support their work, such as a raincoat, gumboots, a bicycle or an umbrella. About a quarter of participants received T-shirts (5/21) or a bag (5/21), among other incentive items. The majority of CHWs received a cash stipend, ranging from 17,000 Tsh per month to 74,000 Tsh per month. The most common stipend was either 20,000 TShs or 50,000 TShs. Most CHWs reported they do not receive non-cash forms of remuneration, although two reported that they receive food assistance and one reported that he/she received clothing. One reported that she received a bicycle but not a repair kit so the bicycle now lies unused. See Appendix B; Tables 20-23.)

"the amount of money that we are given is too meager, so we need alternative ways to generate our income"

Male peer counselor from Chalinze, Coast Region

Suggestions by CHWs to Improve their Work

CHWs offered a number of valuable suggestions about how to improve training, how to expand their roles in the community, and how to better compensate volunteers for their work. The majority reported that they were moderately satisfied with their training and with their current work. A little over half reported that a longer period of training was needed. A third of respondents reported that they needed a refresher course while two CHWs suggested that

CHWs could provide more counseling and distribution of health commodities and two suggested that CHWs could offer more training for community related life skills.

"We need training in life skills because OVCs need to be trained in these skills so they can be independent especially those aged 15 and above. In this way they will be able to help themselves as well as their younger ones. This is different from what is happening now when many have no direction and very frequently they depend on donations/assistance or later on they fall into harsh life and end up as street children or petty thieves when they are still children"

Male PSW from Kondoa, Dodoma

"The community should be more educated in relation to TBA so as to improve health status of villagers ... This would reduce mortality of mothers and children, which is a big problem at this place... Men should also be aware of their responsibility…even taking women to the clinics whenever necessary...."

Female Peer Counselor in Utete,Coast Region

All CHWs recommended that CHWs should receive a higher stipend or allowance, suggesting anywhere from 50,000 TShs a month to 300,000 TShs if they were to work full-time. A third thought 100,000 TShs a month was a reasonable stipend. In terms of non-monetary remuneration, most suggested motorbike transport and a little over half requested airtime. In terms of provisions to complete work related duties, a little over half requested that they should be allowed to keep some essential drugs to distribute to patients as well as nutritious foods to supply to their patients who are in need. See Appendix B; Tables 24-31.)

"We realize that we need to give support such as bed sheets and even nutritious food but we have nothing to offer and our living situation does not allow for that. We are sometimes compelled to use what little money we have to help the situation. We advise patients to use ARVs but sometimes they don't use them and send them back as they don't have ability to buy food. They say that it is useless to use ARVs without food and that they better not use them."

Male peer counselor from Chalinze, Coast Region

Key Informants

Description of Key Informants

Key informants from six PEPFAR partners were interviewed so as to understand what the community know and think in relation to CHWs and their training. (See Appendix C; Table 1) The age of key informants ranged from 37 to 49 years and the majority had completed Form Four level education (high school) Most of them reported that they have CHWs in their areas.

Categories of community health work

Key informants reported various types of community health workers who were working in their areas. (See Appendix C; Table 2) These were Home Based Care (HBC), Community-based Distributors (CBD), Peer Educators (PE), Lay Counselors (LC), Traditional Birth Attendants (TBAs), Life Skills Educators (LSE), and counselors for most vulnerable children/orphans and vulnerable children's (PSWs). It was noted from the key informants that some of the CHWs had received training in more than one category of CHW, e.g. HBCs who had additional CBD training.

Services rendered by CHWs

Half of the key informants had directly received services from CHWs (mainly PEs, HBC, and CBD) available in their areas. (See Appendix C; Table 3) Such services included VCT, blood donation, and HIV-related education. Moreover, all of them reported that they ever had a relative or a friend who received services from CHWs (mainly PEs, HBC, and CBD) available in their areas. The services that a relative or a friend received included VCT, receiving ARVs, counseling and psychosocial support, drugs, and counseling of MVC/OVC.

Services preferred from CHWs

Key informants identified services that CHWs were not offering but they would offer if they were trained. Such services included TBA related education, HBC, life skills, food, nutrition, OVC services, and CBD. (See Appendix C; Table 4)

"We need life skill education, pharmaceuticals and HIV testing. This will help us to administer drugs confidently and more easily when we have permission to do so, especially after counseling them in different places and not necessarily at the clinic."

Male key informant from Ikwiriri, Rufiji,

Contribution to the remuneration of CHWs

The majority of key informants were of the opinion that people in their respective areas were willing to contribute for services rendered by CHWs. (See Appendix C; Table 5) However, their shared sentiment was that people had to be educated on the importance of contributing for the service. Those few who reported that people were not willing to contribute argued that community members were too poor or incapable of contributing though they knew the importance of it.

Perceived importance of CHWs to the community

Regarding the importance of CHWs in health services in the community, all key informants reported that CHWs were very important. (See Appendix C; Table 6). The reasons advanced on the importance of CHWs to their communities included that they provided education related to HIV by reaching people; they educated the community about the HIV epidemic, prevention, ARVs and care of patients; they gave education on HIV testing as well as information regarding HIV and its effects; they saved lives by educating people about HIV; and they contributed to the care of MVCs/OVCs and made them feel that they are part of the community.

"These PSWs are very important for OVCs because it makes them see themselves as having parents as well and that they are also part of the community. OVCs become very comforted by them (the PSWs) that they have people who can help solve their problems..."

Female key informant from Kondoa, Dodoma

"HBCs are very important because without them we would not have been so educated about AIDS. We would also not have known how to care for our relatives with AIDS. They have therefore helped to reduce new infections in the village of Machi as well as reduced stigma to a great extent. Also they have helped to explain to those under treatment how to take their medications correctly and properly."

Male key informant from Machi, Tanga

Categories of CHW in Tanzania

Based on the review of CHW curricula and organizational interview data, the following eight categories of CHW were identified, six of which were being trained by PEPFAR-partners (Table 1):

1. Home Based Care providers (HBC)
2. Community-based distributors/educators (CBD)
3. Para-social Workers (PSW) for Orphans and Vulnerable Children/Most Vulnerable Children (sometimes called OVC/MVC counselors)
4. Peer educators
5. Peer counselors (sometimes called Lay Counselors)
6. Community maternal, newborn and child health care providers (MNCH)
7. Life Skills Trainers
8. Traditional Birth Attendants (TBAs)

Table 1 PEPFAR Funded Partners According to Category

	HBC	CBD	PSW	PE	PC	MNCH
Pathfinder	X	X				
FHI-ROADS	X	X	X	X		
FHI-UJANA				X		
Mildmay	X	X				
Balm in Gilead	X		X			
Tanzania Interfaith	X		X	X		
ZACP	X		X			
AIHA	X					
MDH	X					
Africare Kaya	X					
FHSSA	X					
Pasada	X					
Axios	X					
Tunanjali/CRS/Africare/FHI	X		X			
Greater Gombe Ecosystem	X					
Intrahealth			X			
National AIDS Control Programme (NACP)*	X					
EngenderHealth				X		
PSI				X		X
TAYOA				X		
Fintrac				X		
T-MARC				X		
BIPAI				X		
EGPAF					X	
ICAP (MARPS and Peer Counselors)				X	X	
PATH				X		
JHPIEGO						X
HBC: Home-based Care provider; CBD: Community-based Distributor; PSW: Para-social worker; PE: Peer Educator; PC: Peer Counselor; MNCH: Maternal, Newborn and Child Health						

*National AIDS Control Program (NACP) provides the standardized curricula and all the training for HBCs and as such is not involved in deployment or remuneration.

Home Based Care provider (HBC)

Home-based care (sometimes referred to as community home based care) was the largest category of CHW currently trained and deployed in Tanzania. It was defined as any form of care given to chronically ill people in their homes, specifically those with HIV/AIDS. Such care

included physical, psychological, social and spiritual activities. From various studies, it was clear that most people would rather be cared for at home and that effective home care improved the quality of life for chronically ill people and their family caregivers. A well-functioning HBC program provided a continuum of care for persons with chronic illnesses from a health care facility to the home environment. Therefore, HBC must be linked and integrated into the existing district health care delivery systems and plans. Inputs from families, communities and the health care systems are essential for any results-based HBC program. Since most terminally ill patients prefer to die at home, there is need to bring hope to all of them in more friendly and familiar environments than those of hospitals[9].

HBC was the largest category of CHWs in Tanzania. All organizations training HBC were required to use the standardized 21-day MOHSW/NACP developed guidelines, NACP curricula and trainers. The curriculum included modules in: HIV/AIDS; provision of HBC for common illnesses experienced by PLHIV and other chronic illnesses; palliative care; pediatric care; orphan support; supportive counseling; confidentiality; nutrition; and reporting.

Fourteen out of twenty-seven partners offered Home based care programs (See Table 1.) Furthermore, three of the organizations offered additional training modules for HBC trainees, which taught additional skills or expand on skills in the standard curricula for periods ranging between 1-4 days. These additional skills included psychosocial support, TB/HIV co-infection, counseling, and nutrition and reporting.

It emerged during the course of our CHW interviews that some of them reported to have been trained as HBCs but were also working as CBDs and received a couple of days extra family planning training in order to meet this need in their communities. However, this extra CBD or family planning training was not reported by the corresponding partner organizations, indicating that there were definite community needs that were not being met by current programming and the partners' local branches were attempting to fill those gaps as much as they could by modifying their training programs.

Community Based Distributors (CBD)

Community Based distributors (CBD) was a CHW category that provided nonclinical family planning services to communities. CBD programs used community organizations, structures and institutions to promote the use of safe and simple contraceptive technologies, usually oral contraceptives and condoms. The programs also included education on prevention strategies for HIV/AIDS and other sexually transmitted diseases[10].

This category currently has a MOHSW approved standardized curricula of 14 days which includes modules on: human reproductive anatomy; provision of family planning; safe motherhood (education only) and child survival; STI/HIV/AIDS; IEC and counseling; gender issues; managing CBD skills and equipment. Pathfinder and FHI-ROADS trained and deployed this category. PSI was also listed as sponsoring CBD training, although they subcontracted this task to Pathfinder. German Society for International Cooperation (GIZ), a non-PEPFAR program funded by the German government, also offered CBD training in four regions. The majority of those who train and deploy CBDs recruited HBC providers as their trainees, thereby giving them additional responsibilities and stipend.

Para-Social Workers (PSW) for Orphans and Vulnerable Children

Intrahealth had developed a program for Para-social workers in collaboration with the Tanzanian Institute of Social Work, MOHSW, AIHA, Twinning Center and MATEC. This MOHSW approved program is standardized for different training lengths between 4-9 days and

served as a basic course in social work skills specifically as it related to orphans and vulnerable children. The different length trainings have been developed to provide a national standard for programs while still retaining flexibility for programs that have established varying lengths of training, and was used by the six groups/programs currently doing PEPFAR-funded work with OVC/MVC: ZACP, Intrahealth, Balm in Gilead, Tanzania Interfaith Partnership, Tunajali, and FHI-ROADS. Training objectives of the program included: understanding approaches to serve OVC affected and infected by HIV/AIDS and how to provide care and support; understanding psychosocial problems and solutions with regards to OVC; identifying and addressing a range of psychosocial challenges related to HIV for OVC; understanding available resources and systems of care at the local, district and national level for OVC; and developing skills in documentation, monitoring and reporting.

This curriculum was developed in collaboration with communities and organizations that are end users and clearly outlines modules and learning outcomes consistent with Competency Based Education and Testing (CBET) methods of assessment and training. This curriculum could therefore be a good candidate for short course accreditation when NACTE starts to accept short course accreditations.

Peer Educators

A peer is a person who belongs to the same social group as another person or group. The social group may be based on age, sex, sexual orientation, occupation, socio-economic and/or health status, etc. Peer education, therefore, refered to an approach in which community members are supported to promote health-enhancing change among their peers[11]. The intention is that familiar people, giving locally-relevant and meaningful suggestions, in appropriate local language and taking account of the local context, will be most likely to be able to promote health-enhancing behavior change. Eleven out of twenty seven of the interviewed partners offered Peer education (see Table 1 above.) The topics addressed by the different organizations included: gender sensitization in males, parent/child communication, youth empowerment, HIV education, healthy relationships, malaria prevention and safe water. HIV/AIDS education and prevention is a component of all the listed peer educator trainings. A variety of methodologies were used to deliver peer education and these ranged from songs and skits to cue cards, community forums and participatory workshops.

Peer or Lay Counselors

Peer or lay counselors was one of the existing categories that constitute members of the community who are trained to provide a specific service or to perform certain limited activities. Lay counselors provided a supportive service that complements the work provided by other trained professionals[12]. Specifically, lay counselors provided support to individuals experiencing emotional problems. In the Tanzanian context two PEPFAR funded organizations (EGPAF and ICAP) offered Lay Counselor services for PLHIV. Both organizations recruited PLHIV at the HIV care and treatment centers who have disclosed their HIV status, and are adherent with stable health status. They served as a bridge between the facility and the community by guiding newly diagnosed PLHIV though their services and treatment procedures, while also providing counseling and promoting adherence and positive living.

Community Maternal, Newborn and Child Health Care Providers (MNCH)

This was an emerging category whose goal is to decrease maternal and child mortality rates in Tanzania and to help Tanzania meet MDGs 4 & 5. MNCH workers were HBC providers who were given additional training in maternal and child health, primarily in antenatal and postnatal care, and they encouraged women to give birth in a health facility. This training was currently being offered by PSI to individuals who already have been trained in HBC or CBD. This was

currently the only category, other than TBAs who were working at the village level with pregnant women to help reduce maternal, newborn and child morbidity and mortality. Tanzania currently has no community midwife category of community health worker assisting rural Tanzanian women with safe and sterile delivery at home.

Life Skills education

The World Health Organization (WHO) has defined life skills as "abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life". Life skills include psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathize with others, and cope with managing their lives in a healthy and productive manner[13]. Life skills are distinctly different from physical or perceptual motor skills, such as practical or health skills, as well as from livelihood skills, such as crafts, money management and entrepreneurial skills[14].

None of the organizations reviewed offered life skills education as a separate training; although it was a component of some of the Peer Educator training MUHAS-PGAF reviewed. Furthermore, requests for this training arose in a majority of our CHW interviews. They suggested inclusion of skills that are used to handle problems and questions commonly encountered in daily life.

Traditional Birth Attendants (TBA)

While none of the PEPFAR funded programs are training TBAs it emerged during the CHW interviews that three of the 21 CHWs were also TBAs. Predominantly illiterate, the TBAs were trained in birth attendance using traditional tribal knowledge to assist women in the villages in giving birth when they are unable or unwilling to deliver in a health facility. This category is controversial within the international medical community and public health sphere. Some argue that TBAs contribute towards high levels of maternal mortality and should be discouraged from practice; others have had success training TBAs in basic medical skills to become Trained TBAs (TTBAs,) providing them with safe motherhood kits to promote clean and sterile delivery at the village level[15,16]. The debate on the effectiveness or lack thereof of TBAs was of little long-term relevance in Tanzania as few, if any, new TBAs were being trained today. As tribal inter-marriage has become common, the offspring of these intermarriages do not belong to any traditional tribe and therefore were not eligible for transmission of tribal knowledge; therefore the TBA category is dying out as the existing practitioners retire or pass away. Nonetheless the issue of home birth in Tanzania and the lack of training for TBAs is an important one in light of the fact that while 94% of women in Tanzania access antenatal services from a skilled provider, only 43% of births are attended by a skilled birth attendant (doctor, nurse, or midwife)[17].

Other Curricula under Development

Beside the curricula that were currently being used to train CHWs in Home Based Care (HBC), Community-based Distributors (CBD), Peer Educators (PE), Lay Counselors (LC), Traditional Birth Attendants (TBAs), Life Skills Educators (LSE), and counselors for most vulnerable children/orphans and vulnerable children (MVC/OVC) there were additional curricula in development that include:

<u>Youth Health Corps (YHC)</u>

The YHC curriculum was developed in 2009 by the MUHAS-PGAF collaboration. It is a six month competence based curriculum for training CHWs that includes: life skills; ethics; health

education & promotion; health rights; community involvement; gender and health; home-based care (including human body, HIV, PMTCT, common diseases and palliative care); referral system; and information management. This training met all criteria for NTA Level Four accreditation by NACTE. Youth Health Corps was initially designed to minimize HIV infection among at-risk youth in their home communities. However sufficient funding was not received to undergo an evidence-based pilot of the program so while the curricula and training materials are available and can be utilized the program is not active.

Ifakara Health Institute (IHI)

IHI is currently undertaking a pilot study of a nine month to one year CHW training which they hope will be eligible for level 4 & 5 accreditation by NACTE. As they are currently in the middle of their pilot and intend to publish their results they would not give us access to their training materials for reference or inclusion in this review.

Jhpiego

Jhpiego is working in collaboration with the MOHSW to implement an integrated facility and community program on maternal, newborn and child health in Tanzania. The program is in the process of finalizing its community MNCH worker training materials. This category is intended to be trained for a period of three weeks in maternal, newborn and child care, including modules in: infection prevention and control; behavioral change communication and interpersonal communication; counseling; antenatal care; postpartum care; care of newborn and child; community based family planning; and monitoring and evaluation.

DISCUSSION

Gaps in Current CHW Training Programs

Gaps in Existing Home Based Care Curriculum

The current standardized training guidelines and curriculum developed by NACP in 1999 were not developed according to learning outcomes, nor did they collaborate with local communities to assess their needs with regards to community health care. They were developed to address an emergency need to have some sort of standardization criteria in place as multiple international donor-funded programs for training CHWs began appearing in Tanzania. This measure was undertaken as a response to the spread of HIV/AIDS and the additional strain that was placed on the existing health care system. As a result there are many gaps in the current training that affect the HBC's ability to meet the health needs of the communities they serve and which severely impact their ability to deliver quality HIV/AIDS services. Of particular note is the lack of training in ARV adherence; PMTCT; basic anatomy, diagnosing common opportunistic infections; nutrition, maternal and child health; psychosocial skills; reporting and referrals. For example, no modules exist in ARV adherence in the current HBC curricula. And while basic nursing and care of patients with most common opportunistic infections is part of the curriculum, the time spent is minimal given the breadth of the subjects and no training in basic anatomy is offered. This undermines the ability of trainees to absorb the information presented in these areas. Furthermore, some of the partners offered separate non-standardized follow-up modules for HBCs in nutrition, psychosocial skills and reporting/referrals, indicating that while these subjects may be included in the standard HBC curriculum, the training offered is insufficient.

Many short training programs have been introduced in Tanzania since the HBC curriculum was developed which were usually taught to those who have completed the HBC or CBD training. These programs are seeking to address the gaps that are present in the current curriculum.

Supervision

A review of the curriculum of the Clinical Officers during the time the YHC curriculum was being developed revealed that there is no existing module in the facility-based worker's training on how to supervise CHWs.[18]Furthermore the scopes of work currently written for the clinical officers and nurses at the dispensary and health facility level do not outline roles and responsibilities with regards to supervising CHWs. Therefore, any supervision currently being provided to HBCs and CBDs is fractured and not consistent across programs; it is primarily inspection oriented, not supportive, and does not provide the CHW with much needed guidance and support to ensure their commitment, motivation and quality services at the village level.

Maternal, Newborn and Child Health

Despite the fact that 94% of women in Tanzania access antenatal services from a skilled provider, only 43% of births are attended by a skilled birth attendant (doctor, nurse, or midwife)[19] some discussion of the implications of this on CHWs has occurred in the UNICEF report on CHWs in Tanzania[20]. The HBC and CBD categories receive no training in issues relating to MNCH or PMTCT, and the MNCH category we encountered in this survey is only trained to provide antenatal and postnatal care, but not to provide home-based clean and sterile delivery assistance. There are some non-PEPFAR partners training CHWs such as TBAs and others in Safe Motherhood programs. However, as far as the Project was able to determine, given the limited scope of this study, these programs are few and small in scale. This appears to highlight

a significant gap in Tanzania's health care system at the grassroots level where only TBAs provide assistance with home birth. Although, it is possible that there are more programs providing Safe Motherhood or MNCH interventions by non-PEPFAR funded partners that the team did not capture. If not already underway, a more thorough review of this issue would be recommended.

Sustainability

Donor-funded NGOs and FBOs sponsor the majority of CHW training programs in Tanzania today, predominantly offering disease specific training. Due to the small amount of coordination between these vertical programs they do not perform in an integrated manner. When funding for a program ends, the CHW program is disbanded if it isn't taken over by a local NGO, leaving communities with unsustainable health services that are entirely dependent upon external funding and program priorities. Although analysis of partners' transition or sustainability plans lies beyond the scope of this assessment, and there was reference to transitioning programs to local NGOs from the few partners' whose programs had ended, without a defined structure at the government level for coordinating CHW programs, long-term sustainability of these programs is a concern.

Furthermore, there is no system for tracking the number of CHWs being trained in Tanzania. Some individual NGO and FBOs keep records of whom they have trained but this information is not shared at the national level or across programs. For example, the National AIDS Control Program (NACP) claims to have trained 9000 home based care providers to date, but it is unclear what has happened to them. CDC has contracted I-TECH to tailor their TrainSmart program to track facility-based worker training programs in Tanzania. I-TECH is currently working to adapt the program for use in tracking CHWs as well.

Integration of CHWs into the Tanzanian Health Care System

While CHWs are mentioned in several health strategy documents, this cadre is not a recognized health cadre in the Government Health Policy or Scheme of Service. There is a lack of understanding of the purpose of this cadre amongst policy makers, planners and implementers. Therefore their role and responsibilities are not clearly outlined at the supervisory or health facility level, leaving supervisory staff at the local facilities with little understanding as to this cadre's role and little respect for them. Furthermore if the communities have not been sufficiently engaged in initiating the CHW program or in the process of selecting their CHWs, the CHWs did not feel sufficiently empowered to do their work[20].

In order for the CHW cadre to be trusted and respected by those working within the health care system, how their roles and responsibilities differ from those of existing health professions, in particular the nurse assistants, clinical assistants and nurse-midwife cadres must be clearly delineated. Furthermore, as long as this cadre remains volunteer-based, it will be difficult to demand the consistent level of skill and commitment that will be required if they will become a recognized health cadre with a defined career path and pay.

Accreditation of CHW Training Programs

While accreditation of CHW training programs exists in some African nations such as Malawi, Zambia, and South Africa. There is no similarly existing mechanism for accrediting CHW training programs in Tanzania. The National Accreditation Council for Technical Education (NACTE) does not currently accredit programs below National Technical Awards (NTA) Level

Four (of less than one year). Furthermore, three of the requirements for accreditation are 1) there must be a mechanism in place to be able to track who has been trained, and identify those who have not; 2) the curriculum must be developed according to CBET standards in collaboration with the community where it is to be implemented so that it addresses local needs; and 3) there must be opportunities for career development. None of the reviewed curricula meet these criteria. Vocational Education Training Authority VETA accredits short vocational courses, specifically NTA Levels 1-3, but only when they are offered at one of their training centers and do not have any mechanism for offering trainings in the health field. At the time of writing this report, NACTE was in the process of revising its criteria and had plans to develop criteria for shorter courses; however, there is no estimate as to when this might be operational[21]. Many of the interviewed organizations said their curricula was accredited, indicating some confusion between the accreditation of the institution or program offering CHW training and accreditation of the curricula itself (See Appendix A; Table 7). Organizations such as the MOHSW, NACP and the Institute of Social Work can approve short training programs and have done so, but cannot approve training institutions or curricula. Only the independent accreditation bodies, that is, NECTA (for teacher training institutions), VETA, NACTE and TCU can make those decisions. It may be that the only avenue open at this time to increase recognition and improve the legal status of CHWs would be to attain MOHSW approval for the CHW curriculum and cadre. This option requires making a case to the MOHSW covering the all-important aspects of establishing a new cadre, its level of competence, training and placement/deployment of the CHWs cadre in the health care provision system.

Retaining CHWs

One of the primary factors in retaining CHWs is compensation. Other factors include: increased respect in their community, acquisition of skills, and increased status in the community. However, it is a disincentive for them to continue working if they are asked to perform tasks beyond their skill or training level, or are asked to do too much given their volunteer status. Inadequate supervision, unclear roles and responsibilities, insufficient supplies to do their jobs effectively (e.g. thermometers, bleach, etc.) and lack of respect at the health facility level are also important reasons for CHW attrition.

The level of community involvement is another important factor in retaining CHWs. If the person is part of the community they are serving and if there is transparency and community involvement in CHW selection, the motivation to succeed is higher and retention is more likely[22].

Volunteerism and Community Health Workers

Research on volunteerism and community health workers (CHW) from a variety of cultural and economic contexts supports a move towards formalized employment, with the prospect of career development[4,22,23]. CHWs in Sub-Saharan Africa and Tanzania in particular, have taken on increasing responsibilities in response to the HIV/AIDS epidemic, contributing significantly to home based care and helping to connect vulnerable populations to services. However, CHWs come from the communities that they serve and often face similar economic constraints and challenges as their clients[24]. Volunteers seek to help those in need and contribute to improved health. They also value the opportunity to engage in a leadership position and receive increased respect in their communities[3]. CHWs enter their positions motivated and committed to service, yet evidence suggests that over time, programs experience volunteer attrition[4,,25]. The physical and emotional drain of responsibilities combined with the lack of adequate financial compensation and institutional support contributes to the decline in numbers[26].

In the interest of maximizing the resource of community health workers and ensuring the sustainability of the health service delivery model, ample literature argues for paid community health worker positions[5,8,24]. One study looking at the costs and impacts of alternative strategies to improve CHW performance in Tanzania found that increasing the amount of stipends paid improves program productivity and decreases the cost of each client visit, as CHWs see more clients when their income increases[11]. A USAID study on community based distributors in Tanzania found that volunteers perform best in their first few years of work, suggesting fatigue over time and highlighting the importance of a defined career path to offer the opportunity for advancement[27]. Increased monetary compensation, combined with more extensive training, ongoing education and stronger supervision can help the community health workforce achieve its full potential, filling a critical human resources gap[8,28].

Experiences from neighboring countries further support paid community health worker positions. South Africa, Malawi, and Ethiopia have all formalized the role of community health workers, recording a positive impact on HIV/AIDS related health outcomes[5,8,29]. In South Africa, CHWs receive a monthly salary of R1,000 (US$143) and accredited training through non-governmental institutions[5]. CHWs are not considered government employees and receive remuneration through civil society organizations, although government formalized the position in 2004 through the National South African CHW Policy[5]. Malawi has fully integrated the position of health surveillance assistant, similar to a community health worker, into the national health delivery system. Health Surveillance Assistants are paid government workers, filling an essential role in responding to the epidemic at the local level[8]. In Ethiopia, paid Health Extension Workers have helped to achieve substantial scale up of ART and HIV counseling and testing, moving from 900 patients on ART in 2005 to more than 150,000 patients on ART by 2008[29].

CONCLUSION

The Tanzanian Ministry of Health and Social Welfare estimates that there is a current health care human resource gap of 65%[6]. A large percentage of this health human resource gap is in the nurse, midwife and basic medical care cadres in the rural areas and at the dispensary and village levels[28]. While there is an urgent need to address this gap, there are severe constraints on Tanzania's ability to increase the training of doctors, nurses and midwives sufficiently to meet this gap[6]. Training sufficient numbers of community health workers is an efficient and cost effective way to address this gap in the rural areas where it is most needed and to shift some of the less skilled tasks away from doctors, nurses and midwives thus freeing them for more specialized procedures which require more training[8].

Fortunately, Tanzania has strong high-level policies in place for the development of a CHW cadre, in particular the "Primary Health Services Development Plan" and the "National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania", which include having a dispensary clinic and two CHWs in every village, and there is a historical precedent for such a move. However, these policies need to be followed through with implementation, including clear directives for policy implementation through all levels of government, and clear directives on how CHW activities in Tanzania are to be coordinated both at the government and partner organization level. Most of the current donor-funded vertical programs are strong and have made positive contributions to the health of Tanzanians. Efforts should be made to coordinate these programs effectively while retaining their strengths and character so that communities receive integrated quality health services, including, HIV, TB, Malaria, and maternal, newborn and child health.

For implementation to be effective, the supervisory and referral links between the CHWs and the health care facilities must be strengthened, particularly with regards to the HBC, CBD, and MNCH categories. This can be accomplished through clarification of roles and responsibilities; supportive supervision; improved supply chain management; and increased recognition of this cadre within the health care system. Additionally, the following factors must also be taken into account to ensure success:

1. The CHW cadre and training for HBCs, CBDs and MNCHs must be revised, with input from the end users so that communities' needs are addressed effectively;
2. The selection of CHWs by their community must be a competitive and transparent process to ensure fairness and community engagement;
3. A clearly defined career path, which meets government minimum-wage standards, must be developed and implemented; it is not possible to depend on a permanent volunteer labor force to assist with strengthening the health care system.

Through evidence-based research the project team developed a set of policy recommendations (see below) to address these issues. These need to be implemented using resources available through the district councils, public-private partnerships, donor funding and other creative financing mechanisms.

RECOMMENDATIONS

Any harmonization or accreditation of CHW curricula desired by PEPFAR or PEPFAR partners will need to be undertaken in close collaboration with the MOHSW as three of the existing CHW categories' curricula are already standardized nationally. Therefore until the MOHSW engages in the task of CHW harmonization, curricula revision and establishing legal and professional recognition for this cadre, PEPFAR will be limited in how much it can integrate or harmonize its programs. As a result the majority of our recommendations below which address implementation gaps of national policy as well as revision of standardized curricula and categories of CHW need to be undertaken by the MOHSW.

PEPFAR can and should provide valuable assistance, support and encouragement in this process. Furthermore, as the largest funder of CHW programs in Tanzania, PEPFAR can work with current and future funded-programs in collaboration with the MOHSW to begin rolling out recommendations 3 and 6.

It is therefore recommended that PEPFAR collaborate with the MOHSW to initiate the following:

1. **Create a mechanism for combining the existing Home Based Care (HBC), Community Based Distributor (CBD), and Community, Maternal, Newborn, Child Health (MNCH) categories into one new cadre to be called Community Health Extension Worker (CHEW) cadre. The Para-social Worker, Peer Educator and Peer Counselor categories can remain as they are, providing valuable added HIV/AIDS related support.** Currently there are insufficient numbers of trained CBDs, HBCs, and MNCHs for each community, resulting in task shifting within these categories; in particular, CBDs performing HBC tasks and vice versa. When community members need medical attention they ask either the CBD or the HBC, regardless of whether or not they have been properly trained to meet this need. Additionally HBC providers are often called upon to give family planning advice, which is not part of their training. Furthermore, research has shown that each of these jobs as they exist now are not full-time positions; CBDs particularly are best utilized when they offer multiple services[27]. Therefore, it would be more efficient and cost effective to combine these into one comprehensive CHEW cadre.

   Female CHEWs should all be trained in MNCH curriculum modules to ensure that all pregnant women in Tanzania have the opportunity to receive antenatal and postnatal care, and so that CHEWs are trained to respond to basic common issues that arrive to provide appropriate referrals to facilities when necessary.

   The Project is recommending that only the HBC, CBD, and MNCH categories should be combined. The Para-social worker curriculum is already standardized and should not be harmonized because it fills an important community, which could be a valuable supplement to the less specialized CHEW training. Similarly peer educators and counselors also fill an important community need and should not be further harmonized. Furthermore, in the case of peer educators, standardization is not possible given the range of topics addressed (PLHIV, youth education, gender sensitization, HIV education, safe water, etc.) While the CHEW will also work with the community on HIV/AIDS education, the peer educator category is ideally suited to respond to the education needs and gaps at the grassroots level and each brings something of unique value to the community it serves. For example, it is not possible for all CHEWs or even HBCs to be HIV positive and PLHIV can provide a

uniquely convincing perspective to newly diagnosed patients on their treatment plan, nutrition and HIV adherence.

Although some barriers exist in this combined approach, these can be overcome. Potential examples include:

a. FBOs who do not wish to offer family planning services may resist training and deploying a CHEW with CBD skills. However, such FBOs could be encouraged to deploy already trained CHWs solely as HBCs if that is what their institutional mandate requires;

b. Many of the MNCH training programs are funded through sexual and reproductive health funding streams, rather than HIV/AIDS. Therefore the concerns that partners may raise about integrating this category with the others should be taken into account so that those of unique aspects of existing programs is not lost;

c. CHEWs currently lack legal and professional status. Existing health policy will need to be revised to recognize this cadre and define the government's commitment to this cadre's role in improving health at the community level and a government act will need to be passed spelling out the role of this cadre at the village level. These hurdles will not be easy to overcome without intense advocacy to raise community awareness and participation [20].

A combined single cadre would also be an attractive candidate for accreditation once NACTE has revised its accreditation criteria, particularly if the new curriculum was developed according to learning outcomes in collaboration with a random selection of the communities which will be utilizing these services.

2. **Develop a combined HBC/CBD/MNCH curriculum using existing modules to create one comprehensive curriculum, which addresses issues of HIV/AIDS, primary health care and sexual and reproductive health to support this CHEW cadre.** This curriculum would harmonize the existing HBC, CBD, and MNCH curricula as well as address existing gaps by including additional training in anatomy, common diseases (such as malaria and TB,) management of acute and chronic disease, ARV adherence, PMTCT, IMCI, stigma, discrimination, and ethics, as well as expanded training in nutrition, counseling and psycho-social services, and utilization of reporting and recording tools. The curriculum would be comprised of core modules, taught to all CHEWs with additional modules of training in specific areas. Although the length of training would potentially be determined by NACTE's new short-course accreditation criteria. A three to six month period of training would be recommended as ideal, including a pre-test for existing HBCs and CBDs so that they do not have to repeat modules in which they already have knowledge.

Pre-existing models that could be easily adapted are the Youth Health Corp curriculum developed by PGAF and MUHAS or the curriculum developed by the Ifakara Health Institute. It is not recommended that the training last longer than six months, as there is an urgent need to scale up village health care quickly, and to train a large number of CHEWs affordably and in a short period of time. Furthermore as the MOHSW has restarted the two-year program training of an additional professional cadre of health worker – clinical assistants (CA) and nurse assistants (NA), the CHEW profession must be distinctly different in role and length of training from the CAs and NAs in order to justify establishing it as a separate professional cadre.

3. **Create a mechanism whereby CHWs are paid a standard wage consistent with the government minimum wage scales and develop a clearly defined career ladder for this cadre.** This will enhance this cadre's recognition within the MOHSW and provide them with a clear career path and potential for professional development. The CHW findings were overwhelming on this point. Evidence has also shown that permanent volunteerism is not a recommended model for extensive health human resource expansion[30]. Possible financing mechanisms include but are not limited to: public-private partnerships (including NGOs and FBOs); district councils, and national insurance schemes. Evidence of abuse in other settings indicates that a pay for services model is not recommended in this context[23].

   One instance where volunteerism could be appropriate for CHEWs is in the context of internships prior to employment. This would be a defined period of closely supervised volunteering in their village after training and prior to paid deployment in order to gain experience on how to do a good job even before formal employment takes place.

   As the largest CHW program donor in Tanzania, the PEPFAR-funded programs are an obvious initiation point for implementing this recommendation. Therefore, PEPFAR should work with MOHSW to establish a valuable precedence whereby current and future funded-programs pay a standard wage to all CHWs using the government minimum wage scales.

4. **Review all the maternal, newborn and child health programs operating in Tanzania to assess the feasibility of incorporating the different MNCH curricula into the new CHEW cadre and the desirability of extending the care they provide to safe and sterile home birth.** A detailed review of all the current maternal, newborn and child health programs and Safe Motherhood programs in Tanzania should be undertaken, as most of these programs are not currently funded under PEPFAR and therefore were beyond the scope of our study. It will be important for the MOHSW as well as the midwife and obstetric associations to gain a clear understanding of the current landscape of MNCH CHW programs being offered in Tanzania and to analyze the evidence on effectiveness and applicability of community level skilled birth attendant programs, such as TTBAs, community midwives, or other safe motherhood interventions.

5. **Strengthen supportive supervision of CHWs at the facility level by including supervision skills training in the training modules for clinical officers and nurses working at dispensary and health center levels and clearly outlining supervisory roles and responsibilities in their scopes of work.** Currently low-level facility based health workers are not trained in how to supervise CHWs, and roles and responsibilities with regards to CHW supervision are not outlined in their scopes of work resulting in weak linkages between CHWs and the health facilities. Therefore, the Project recommends a training module be included in all relevant facility based workers' training on supervising CHEWs, that a mechanism be put in place at the facility level to support this supervision and that supervisory roles and responsibilities are included in their scopes of work. Additionally the use of mobile phones should be encouraged in supervision and consultations between the CHEWs and facility. There is mounting evidence that when used properly, and with appropriate training as to their use in this context, mobile phones can have a significant impact on health outcomes.

6. **In order to enhance recognition and career development of the CHEWs, the minimum education level for CHEW training should be Form 4. Other cadres could remain open to individuals who have not achieved this level of education.** This criteria ensures that

candidates for CHEW training have sufficient basic education to comprehend some of the more complex concepts presented in the curriculum, and that they can fulfill the reporting requirements. Furthermore, this is also consistent with the current minimum education required for government employment. A potential barrier is that the minimum education criteria may frustrate the existing HBC providers and the CBDs who do not have the required minimum education. The team's findings show that these are quite substantial in numbers (nearly 62% of those interviewed). However, this barrier can be overcome by letting the existing CHWs continue to serve in their communities with additional training to address knowledge gaps, but not allowing new recruitments of less than Form 4 education.

PEPFAR-funded partner organizations should adopt this minimum standard to their future HBC and CBD trainings and PEPFAR should encourage this standard for all future funded CHW training activities for these two categories.

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