

HIFA discussion on CHW 1/3

Empowering CHWs to accelerate progress towards Universal Health Coverage

LONG EDIT

Background to discussion: http://www.hifa.org/news/who-hsg-hifa-collaboration-empowering-community-health-workers-accelerate-progress-towards

WHO CHW Guideline (Full Version) https://www.who.int/hrh/resources/health-policy-system-support-hw-programmes/en/

WHO CHW guideline (Selected Highlights): https://www.who.int/hrh/resources/hw-programmes-selected-highlight/en/

We had 153 contributions from 40 members in 17 countries (Bangladesh, Egypt, Eritrea, Germany, India, Jordan, Kenya, Liberia, Nigeria, Pakistan, South Africa, Switzerland, Tanzania, Uganda, UK, USA, Zambia).

Special thanks to our top contributors: Joseph Ana, Nigeria (14 messages), Sunanda Kolli Reddy, India (10), and Amelia Plant, USA/Egypt (8). And to HIFA volunteer Sam Pakenham-Walsh for collation and synthesis. *Neil Pakenham-Walsh*, *HIFA coordinator*, 12 August 2019

Contents

CoverageCoverage meaning CHVVs to accelerate progress towards Universal Health	
Background information on Guideline	3
1. What are your thoughts on the Guideline? What questions do you have about it?	4
1.1 General	5
Empowering CHWs	5
Strengthening primary health care	5
History of CHWs	6
Lack of emphasis on other primary health workers	6

	CHWs in Nigeria	7
	CHWs in Zambia	8
	CHWs in Eritrea	9
	CHWs in United States	9
СН	. Recommendation 1 suggests certain criteria to use and not to use for selection of Ws. How do these criteria relate to current practice in your country/experience? Are the eria implementable in your country/experience?	
2	2.1 General comments	9
2	2.2 Recommendation 1A: Selection criteria	10
	Minimum educational level	10
	Membership of and acceptance by the target community	13
	Selection criteria in Nigeria	14
	2.3 Recommendation 1B: Age	14
	2.4 Recommendation 1C	14
don	Recommendations 2, 3 and 4 make suggestions on length of pre-service training, competend mains and modalities. How do these suggestions relate to current practice in your untry/experience? Are they implementable in your country/experience?	
	CHW Training in Kenya	15
3	3.2 Recommendation 2	15
	CHW Training in Nigeria	16
3	3.3 Recommendation 3: Competencies in curriculum for pre-service training	17
3	3.4 Recommendation 4. Modalities of pre-service training	18
3	3.5 Recommendation 5: Competency-based certification	19
Rec	commendation 6: Supportive supervision	21
Rec	commendation 7: Remuneration	22
Rec	commendation 8: Contracting agreements	23
Rec	commendation 9: Career ladder	23
Rec	commendation 10: Target population size	24
Rec	commendation 11: Community engagement	25
Rec	commendation 12: Types of CHWs	25
1	2.1 General comments	25
1	2.2 Disability and Rehabilitation	26
1	2.3 Care for older people and those with multimorbidity	27
1	2.4 CHWs and complementary and alternative medicine	27
Rec	commendation 13: Collection and use of data	28
Rec	commendation 14: Mobilization of community resources	28
Rec	commendation 15: Supply chain	28

Citations	28	
Profiles	31	

Background information on Guideline

Neil Pakenham-Walsh, UK: 'The guideline follows a health system approach. Specifically, it identifies the policy and system enablers required to optimize design and performance of CHW initiatives; within this overall structure, a gender and decent work lens was adopted, in particular in relation to recommendations where those aspects were most relevant. The 15 policy questions that guided the research and informed the recommendations can be structured into three broad categories:

SELECTION, EDUCATION AND CERTIFICATION

- 1. For CHWs being selected for pre-service training, what strategies for selection of applications for CHWs should be adopted over what other strategies?
- 2. For CHWs receiving pre-service training, should the duration of training be shorter versus longer?
- 3. For CHWs receiving pre-service training, should the curriculum address specific versus non-specific competencies?
- 4. For CHWs receiving pre-service training, should the curriculum use specific delivery modalities versus not?
- 5. For CHWs who have received pre-service training, should competency-based formal certification be used versus not used?

MANAGEMENT AND SUPERVISION

- 6. In the context of CHW programmes, what strategies of supportive supervision should be adopted over what other strategies?
- 7. In the context of CHW programmes, should practising CHWs be paid for their work versus not?
- 8. In the context of CHW programmes, should practising CHWs have a formal contract versus not?
- 9. In the context of CHW programmes, should practising CHWs have a career ladder opportunity or framework versus not?

INTEGRATION INTO AND SUPPORT BY HEALTH SYSTEM AND COMMUNITIES

- 10. In the context of CHW programmes, should there be a target population size versus not?
- 11. In the context of CHW programmes, should practising CHWs collect, collate, and use health data versus not?
- 12. In the context of CHW programmes, should practising CHWs work in a multi-cadre team versus in a single-cadre CHW system?
- 13. In the context of CHW programmes, are community engagement strategies effective in improving CHW programme performance and utilization?
- 14. In the context of CHW programmes, should practising CHWs mobilize wider community resources for health versus not?
- 15. In the context of practising CHW programmes, what strategies should be used for ensuring adequate availability of commodities and consumable supplies over what other strategies?

These questions have not been addressed through previous WHO guidelines and represent the core focus of this guideline. This guideline did not appraise critically the body of evidence on which specific health services CHWs can deliver to quality standards, and thus it contains no recommendations regarding these aspects. Published evidence and existing WHO guidelines encourage the delegation of certain tasks relating to prevention, diagnosis, treatment and care, for example for HIV, tuberculosis (TB), malaria, other communicable and noncommunicable diseases, a range of reproductive, maternal, newborn and child health services, hygiene and sanitation, ensuring clients' adherence to treatment, rehabilitation and services for people affected by disabilities,

and advocating and facilitating underserved groups' access to services (Figure 2 and Annex 2). Current (and future) disease-specific WHO guidelines remain the primary source of normative guidance on which specific preventive, promotive, diagnostic, curative and care services CHWs are effective in providing (Annex 3). In addition to the delivery of interventions at the individual and family levels, there is long-standing recognition of the potential for CHWs to play a social and political role at the community level, related to the action on social determinants of health for the transformation of living conditions and community organization. This dimension includes participatory identification with the community of health problems and a reorientation of the concept and the model of health care (26, 27). (One might note that all WHO guidelines are developed in a hugely more rigorous and systematic manner than they were less than 20 years ago. Prior to that, they were based largely on expert opinion. Since 2003 WHO guidelines emphasize systematic reviews of evidence.)

Neil Pakenham-Walsh, UK: Recognising that in many cases the certainty of the evidence is low or very low, and considering that the most appropriate strategies may vary by context, the vast majority (14/18) of the recommendations are 'Conditional'.

For most recommendations a low or very low certainty of the evidence translated into conditional recommendations. For a few recommendations, the GDG made a strong recommendation despite the low or very low certainty of the evidence, taking into account other factors, including health workers' rights and equity and gender considerations. In the cases where strong recommendations were proposed despite a low or very low certainty of the evidence, the GDG took an explicit vote, the outcome of which is reported in the sections referring to the specific recommendations. In the cases when voting took place, a majority was defined as 80% or above of the voting members in attendance at the GDG meeting.' (Guideline, p27)

As Dr Tedros says in the Foreword, the Guideline makes 'pragmatic recommendations on how to improve and strengthen their selection, education, deployment, management, supervision, career advancement, community embeddedness and system support'. In line with guideline protocols introduced by WHO a few years ago, the Guideline includes a section on Guideline Use: 1. Plans for guideline dissemination and 2. Plans for guideline adaptation, implementation and evaluation.

With regards to the latter, the Guideline states:

In order to maximize the opportunities for the guideline to be implemented, it will need to be adapted and contextualized, including through a number of derivative products made available in relevant languages to promote uptake at country level. Beyond the adaptation, simplification and development of user-friendly summaries of messages, a range of accompanying activities will be considered and implemented, subject to resource availability. Some of these activities might be directly implemented and supported by WHO, others by or in collaboration with other agencies and partners involved in the Global Health Workforce Network CHW hub, or other institutions. A non-exhaustive and non-binding list of activities that will be considered includes...

[there follows an impressive list of activities including:

- development of a dedicated online portal;
- a one-stop shop suite of derivative products, including toolkits, to ensure the guideline is easily comprehensible and is taken up by stakeholders (this will include translation of the guideline into the WHO official languages), with the assets filtered through different lenses by audience (such as funders, implementers);
- · a series of webinars;
- regional workshops bringing together regional and country champions and stakeholders involved with CHWs to assess which countries would election of a few countries in which to prioritize policy dialogue and capacity-building activities, supported by drafting a regional and country implementation map;
- meetings of country stakeholders involved with CHWs to present the guideline and design a partner support plan (agree on roles and responsibilities and contributions);
- a workshop with government stakeholders (ministry of health, ministry of finance, development partners) for awareness raising and country mapping of existing CHW situation and policies, to create a baseline and, poten-tially, a roadmap for uptake of the recommendations, and to support the ministry of health in advocacy with the ministry of finance;
- a self-assessment tool based on the recommendations of the guideline that supports countries in developing baseline information related to CHWs, and that can be used to monitor and evaluate implementation of policies and programmes aligned with the recommendations.]

1. What are your thoughts on the Guideline? What questions do you have about it?

1.1 General

Empowering CHWs

Flata Mwale, Zambia: 'I personally feel if adopted by nations, the guidelines will serve both the objective of the health systems as well as well as act as a protective and empowerment document to the CHWs who in my opinion have been abused by the system as well as we the health providers. The lack of any document to protect their interests especially those in rural areas where supervision and monitoring of responsible cadres are still inadequate and have placed CHWs literally at the mercy of their immediate supervisors. The work they are doing in contributing to achieving global public health deserves recognition. Such a document may help also to bring in younger people who can support the sector and again be empowered through skills training and can be helpful in scaling up such as youth friendly health services too. This will also address the inequalities in access and utilization of health care for the underserved as our country continues to struggle in reaching many against an inadequate workforce.'

Amelia Plant, Tunisia: 'The overall goal of the guideline "is to assist national governments and national and international partners to improve the design, implementation, performance and evaluation of CHW programmes, contributing to the progressive realization of universal health coverage." Although it is not explicitly stated, one would hope that these improvements would also result in more equitable treatment of CHWs, ensuring that they are brought into the conversation as legitimate members of the health work force.'

Strengthening primary health care

Nicholas Cunningham, USA: 'Were primary health care for all accepted as the essential, most cost beneficial and humane way of keeping us healthy, especially in societies in demographic transition, community health workers will be needed to carry out, under supervision, the day to day basic curative and preventive activities. The reason for this is that there will never be enough trained nurses much less doctors willing to live & work in the rural areas, peri urban slums, and inner city barrios, where most of the most poor and needy reside. (And even if there were, those most-in-need communities couldn't afford to pay for such highly trained personnel).'

Sunanda Kolli Reddy, India: 'There is already too much of fragmentation of care even amongst the uniformed staff for primary care within the Government funded primary care. Those familiar with work in India know that Health is a state subject - with provincial or district health administration having directives from the state Government-, so when it comes to National programmes or Centre prioritised work such as Maternal and Child health, there is some confusion between the responsibilities and accountability of the different members involved (Auxilliary Nurse Midwives vis-a-vis ASHA Workers, our equivalent of accredited CHWs).'

Catherine Kane, Switzerland: 'It is interesting to note how community health workers are included as part of the interdisciplinary teams in the seven contexts studied within the report. With regard to whether the Guideline should mention community health centres, though, I think we should note that the CHW Guideline is normative guidance on health workers, rather than on community health writ large. There are complementary elements within the Guideline that recommend that CHWs be integrated with health systems and as part of interdisciplinary teams, and certainly the Guideline could support design of the CHW-related parts of centres. In such a brief report, I didn't find it too surprising that the Guideline was not called out specifically, though, as the study looks at a broader issue and a certain subset of contexts. For countries, the report could be useful in envisioning potential permutations of community health, as health needs and health worker teams evolve.'

Massimo Serventi, Uganda: 'Let's concentrate efforts and support (\$) to the current health workers, those with a uniform, with drugs to prescribe. Let's help them to deliver a service of PHC and not simply prescription of drugs. They are supposed to visit their communities, to talk with them, to assist children and mothers, to promote hygiene and good sanitation. Some do it despite the hardship and isolation they face. After all they 'belong' to the community not less than CHWs, moreover they are regularly paid by their governments through tax collection. They are sustainable and long lasting...not certainly the CHWs.'

These questions reminded me of Luis Tam and Muluken Melese's April 2019 piece in John's Hopkins' Global Health NOW Newsletter (https://www.globalhealthnow.org/2019-04/community-health-workers-and-vol...). They envision a primary health care model based on their work in rural Peru and Ethiopia, in which "government-paid, full-time CHWs providing comprehensive services to a given population, with a primary health center hub as the base of operations. Each CHW, in turn, would lead a team of part-time community health volunteers providing limited health education and referral services? such as maternal and newborn health, nutrition, hygiene, tuberculosis, malaria, and HIV/AIDS? to a small number of neighboring families."

David Woods, South Africa: 'South Africa has a district health system for providing primary care. This includes district/ward based outreach teams made up of a profession nurse and 5 CHWs. Short courses for CHWs addressing topics such as Mother and Child Health have been developed using the innovative, self-directed education method devised for distance learning by nurses, midwives, medical and nursing students, and doctors. This method of group learning by health professionals has been used very successfully and well documented over the past 25 years. The courses are available as books or can be accessed on an open-source learning station using smart phones or personal computers (https://bettercare.co.za/learn). Recently this method has been adapted for CHW who meet with their lead professional nurse on a weekly basis to read the material together and then discuss, in their home language, what has been studied. An unpublished study with CHWs shows that this method is well accepted and improves confidence, knowledge and understanding. The lead nurse facilitates the process but does not teach the CHWs. No formal trainers are needed and therefore the cost of training is minimal. The range of CHW courses is slowly being expanded to cover all important topics such as immunisation. Within a district health model thousands of CHWs can be supported with continuing education without the need for additional resources.'

History of CHWs

Amelia Plant, Tunisia: 'CHWs, in one form or another, have been around for over half a century (and probably longer). China's first CHWs from the 1950s were called "barefoot doctors" (https://www.who.int/bulletin/volumes/86/12/08-021208/en/). CHWs were integral to the success of the Matlab, Bangladesh studies in the 1970s that helped to spread contraceptive use globally (https://www.icddrb.org/research/platforms/field-sites/more-on-matlab). There are numerous other examples as well. We cannot therefore contend that CHWs "just came 'recently' bought forward by foreign INGOs."

Lack of emphasis on other primary health workers

Sian Williams, UK: 'I do wonder where is the equivalent discussion, given the very welcome new attention to primary care and the value of CHWs, to family physicians and diagnosticians? For example I did a quick word search on Perry's papers and the word "diagnosis" appears just 3 times in all the papers. But when communities are dealing with NCDs as well as infection, diagnosis is really important, and needs trained professionals. Then treatment can follow protocols. This rapid response from Donald Li is relevant.

https://www.bmj.com/content/365/bmj.l2391/rapid-responses
What are colleagues expecting in terms of responsibilities for diagnosis in LMICs, particularly given likelihood and complexity of multiple morbidity? Secondly, what about responsibility for communicating the diagnosis, which is a major challenge, particularly for NCDs regarding longterm care, behaviour change and maybe treatment.'

Massimo Serventi, Uganda: 'CHWs will never be able to make right diagnose, unless they study medicine in university. The formal cadres in health-care, those in white uniform that work in rural dispensaries (and feel abandoned!!) can make diagnose. They must be regularly refreshed, motivated, supported(!). They, They and not the CHWs are the health providers recognized by the community. Unfortunately emphasis today is on CHWs, despite the fact that majority of governments in poor countries have no money neither intention to recruit them.'

Neil Pakenham-Walsh, UK: 'Perhaps it is helpful to keep our focus on understanding and progressively addressing the basic SEISMIC needs of *all* health professionals and paraprofessionals to maximise their ability to deliver the care for which they are trained. There can be nothing more demoralising and disempowering than to set high expectations and then expect these to be achieved with minimal support (http://www.hifa.org/about-hifa/hifa-universal-health-coverage-and-human-...). As I have suggested before on HIFA, health systems need to be health-worker-centred as well as people-centred.

CHWs in Nigeria

Joseph Ana, Nigeria: 'In Nigeria CHW are called Community Health Practitioners (CHP) comprising from the top: community health officers (CHO), then community health extension workers (CHEW) and finally junior community health extension workers (JCHEW). They all have selection and training criteria, their curricula, and certification after training in schools / colleges of Technology. They have job descriptions linked to their respective curriculum and when employed have their career paths. The JCHEWs progress to CHEWs and then to CHO. They are full time or part time depending on the employer but they are all salaried in employment and are pensionable. Today they are essential and invaluable for the running of the primary health care tier of health service across the country.

Tijani Musibau Akande, Nigeria: 'The training of CHO is taking place at University Teaching Hospitals leading to the award of Higher Diploma in Community health. Duration: 2 years. Candidate to the admitted for this training must be a CHEW with five years post qualification experience. Other cadres are being trained at Colleges of Health Technology for duration of 2 years for JCHEW and 3 years for CHEW. All Community health practitioners must be registered and licensed to practice by the Community Health practitioners Registration Board of Nigeria. Community health practitioner in Nigeria, have both Clinical based and Community based Functions. In the community, we spend substantial part of time on home visit, contact tracing and house to house immunization. We also supervise Traditional Birth Attendants in the Community. We have a formidable professional association: National Association of Community Health Practitioners of Nigeria (NACHPN). As the main primary health care service providers in Nigeria, our Association is opened and ready for collaboration with individuals, similar professional association in other countries, international organization and stakeholders etc, to better achieve our goal of health for all Nigerian.'

Owolabi Sunday Adebayo, Nigeria: 'CHEW in Nigeria is Community Health Extension Workers, the word 'Extension' means they have a wide range areas touching health to cover, and that what we have been doing, including Intersectoral collaboration with different ministries, agencies, communities, organizations to ensure health for all. CHEWs in Nigeria have gone beyond, the bulk of services to the hard to reach areas, the neglected, the

forgotten, about 75% of the rural population in Nigeria is served by the CHEWs. Recently, credence to their skills came to fore leading to stakeholders coming together to assign more task to the under the title - Task Shifting, Task Sharing. CHEWs are expected to supervise, train and monitor the activities of VHW, TBA and others. They spend 40% of their time in the clinic and 60% in the community doing home visit, referrals and other integrated services. CHEWs has the slogan of 'Community Health - Our Concern'.'

Joseph Ana, Nigeria: 'In Nigeria, the schools / Colleges of Technology are typically based in the state capital. On graduation the CHP is employed by the ministry of health (or more recently the new creations called 'state primary health care development agency' to a primary health centre) and posted to PHCs across the state more than 80% located in rural parts of the state.

I may clarify further by adding that the JCHEW and CHEW are the ones trained in the colleges, and that the CHO cadre are actually trained for Diploma certification in the university near the college of health technology. The CHO is also employed by the ministry of health and posted to PHC, some of whom will be based in the local government headquarter as the PHC Coordinator for the Local Government, coordinating all his/her colleagues activities and reporting to the ministry of health headquarters.

Furthermore the JCHEWs are specifically the cadre that mandatorily run the home visits and report to the CHEWs and CHOs in the PHC nearest to them.

By coincidence most CHPs are from the state where they are trained and located, but their posting does not specify that they be posted to their village of origin. Except in a few cases like in Cross River State where as the Commissioner for Health, I was introduced to and I engaged a Non Governmental Organisation called Tulsi Chandrai to come to the state in 2006: I had visited their operations in another state (Kaduna state) and was very impressed by their methodology - Tulsi Chandrai PHC model was to work with a community who nominate their indigene (s) and are screened by Tulsi for training in the college in that state, and on completion of training return to their village of origin to serve as CHW.I was impressed because it helped to solve the problems that arose from posting CHP to rural areas that they are not from and are not familiar with, and which mostly do not have any recreation facility of school or market or road, etc. The indigene usually is already accustomed to living in their village and are also can speak the language / dialect and know the customs, etc.'

CHWs in Zambia

Flata Mwale, Zambia: 'Implementation in Zambia will require a well thought out multi-sectoral approach just like most developing countries where resources are limited to ensure sustainability. I feel with a great community involvement including business sector and a "Value for evidence" led system the guidelines will address the current human resource gap we are experiencing. The busineses running within these communities can be a great source of support for this program and must be involved from program designing stage. For the most times that we have ignored the beneficiaries as part of the process of implementation, we have failed to sustain most programs and therefore I strongly feel community involvement through health information on all programs must be key to create a sense of ownership. Giving the community the power to have a say in this whole process will be crucial. Research continues to reveal that community involvement yields great results and Zambia must go this way. My only question on this now for HIFA-Zambia is where are we in adopting the guidelines?'

CHWs in Eritrea

Toumzghi Sengal, Eritrea: In Eritrea we were training and equipping Comprehensive CHWs in very remote hard to access (transport wise) villages. Train them in CIMCI [Community Integrated Management of Childhood Illness], malaria control, sanitation and disease prevention and they will help. If there is a trained TBA who can advise a pregnant mother the advantages of delivering in a heath facility she has done a lot of help.

CHWs in United States

Alison Nicholls, UK: '(In response to Hector Carrasco) I am puzzled and concerned by this contribution. The Companion Care Program reports 53,000 homeless in a population of LA County of only 10.6 million. That is 1 in 200 of the LA County defined as homeless. The Court Statistics referred to by the Companion Care Program give 39,000 of the 53,000 as unsheltered, that suggests that 1 in 271 of the total population sleeping rough. The other 14,000 were sheltered. The UK population is about 65 million, we have less than 5000 rough sleepers in the UK but 320,000 defined as homeless. That is 1 in 203 defined as homeless but only 1 in 13.000 is a rough sleeper (unsheltered). These are rather shocking statistics for LA County even given the better climate than the UK. Does the whole US have such a large 'unsheltered' population with all the associated health care access concerns?'

Q2. Recommendation 1 suggests certain criteria to use and not to use for selection of CHWs. How do these criteria relate to current practice in your country/experience? Are these criteria implementable in your country/experience?

2.1 General comments

Neil Pakenham-Walsh, UK: 'WHO suggests using the following criteria for selecting CHWs for pre-service training: minimum educational level that is appropriate to the task(s) under consideration; membership of and acceptance by the target community; gender equity appropriate to the context (considering affirmative action to preferentially select women to empower them and, where culturally relevant, to ensure acceptability of services by the population or target group); personal attributes, capacities, values, and life and professional experiences of the candidates (e.g. cognitive abilities, integrity, motivation, interpersonal skills, demonstrated commitment to community service, and a public service ethos).'

Sunanda Kolli Reddy, India: 'My experience of working with the Community Health workers in outreach programs of Institutions during the early years of my career as a Developmental Pediatrician and the family-centric work with Community based rehabilitation workers (CRW) that I am associated with now as a part of NGO service made me understand that stringent selection criteria do not necessarily translate into quality work in the overall picture when it comes to Community based work. The Major difference between the two forms of Community workers is that in the latter the recruitment is of persons belonging to the community chosen for work. The other important aspect is that the Health and Rehabilitation needs of people (children with Disabilities in our programme) are met in their own environment, involving family members and using the resources and support services in the community. Much of what applies to CHWs in the context of UHC applies to CRWs in our resource-constrained settings. An explanation is in order for those not familiar with CBR workers/CRWs. The need for a new cadre of worker in the rehabilitation field was advocated by WHO in 1981 because of shortage of highly trained professionals to address the problem of disabilities in rural areas (besides the fact that professionals are used to working in technology oriented settings). In our own programme we felt there was a significant value in

training Community workers to provide basic home based services (mainly therapy) on a daily basis. However, the level of education in the community was not high (a school leaving certificate in most cases). Hence, our preselection criteria included a grid which looked at 3 categories, viz. ESSENTIAL (basic cognitive skills, language proficiency, high school education, an understanding of local community, and an interest/ willingness to learn), DESIRABLE (pleasant/cheerful personality, good communication skills, graduation, being a resident of the area or a place close by) and OPTIONAL (previous work experience, helping a friend or a family member with disability).'

Stephen Okeyo, Kenya: 'Given the selection criteria and the context within which CHWs are expected to work my thought is that pre-service training need to be general covering foundation competencies that can be agreed by consensus at country level. I further propose that in-service training can then focus on priority and common conditions that are encountered. In an earlier submission I had for example mentioned conditions of older persons whose design should include a shift from facility based to home and community based.'

Stephen Okeyo, Kenya: 'These WHO recommendations on selection criteria are implementable, and actually already being implemented to some extent.'

2.2 Recommendation 1A: Selection criteria

Recommendation 1A WHO **suggests** using the following criteria for selecting CHWs for pre-service training:

- minimum educational level that is appropriate to the task(s) under consideration;
- membership of and acceptance by the target community;
- gender equity appropriate to the context (considering affirmative action to preferentially select women to empower them and, where culturally relevant, to ensure acceptability of services by the population or target group);
- personal attributes, capacities, values, and life and professional experiences of the candidates (e.g. cognitive abilities, integrity, motivation, interpersonal skills, demonstrated commitment to community service, and a public service ethos).

Certainty of the evidence - very low. Strength of the recommendation - conditional.

Minimum educational level

Anbreen Slama-Chaudhry, Switzerland: 'Literacy level should not be a strict criteria. We discovered few days before exam session that one of the trainees could not read / write and we had to organize a helping person to sit the exam with her. This CHW attended and participated in every session, was receiving same handout without us noticing she could not read. She passed exam and is an asset to the team.'

Sunanda Kolli Reddy, India:

- Communities are not homogeneous. Neither is the nature of community health needs.
- The factors that influence health in the community are several Often, the
 determinants at play are not very different from those propounded by DahlgrenWhitehead. https://esrc.ukri.org/about-us/50-years-of-esrc/50-achievements/the-dahl... (Pediatricians may also relate to the Bronfenbrenner model of Child
 Development https://www.firstdiscoverers.co.uk/child-development-theories-urie-bronf...)

- CHWs, even when residing in the community, have a limited understanding of health care when not a part of the system and require training, a continued guidance and hand holding support in special projects because of their low levels of literacy.
- The level of native intelligence is high, they learn quickly on the job, are self-motivated to perform with small incentives (which include acknowledgement of their contribution and respect for their work), in addition to a decent remuneration. It would be a pity to lose the traditional health workers such as the dais or traditional birth attendants (TBA) on the grounds of education level or not having a recognised certificate. Many of them demonstrate a commitment to community service and possess good interpersonal skills. There is a strong need to have modular training to retain them in the System.
- Changes over time in the world around the CHWs are not to be ignored. The younger generation of CHWs do care about certification and career prospects. They adapt to technology well and can perform better under technology-guided supervision. However, they are quick to make career moves in quest of better financial prospects and this results often in poor experiential learning as well as loss to the community. Acceptance by target Community also takes a while and a public service ethos can be developed only if there are senior professionals working alongside or mentoring the junior cadres. Personally, I believe that on-the-job training adds value to the work, irrespective of the curriculum of pre-service training.
- CHWs may be seen as Community Health aides who are a part of the health team in the Primary care setting and not as replacing other health professionals in the Health Centre. While being valuable human resources for health in all Developing countries, they must not be seen as alternative health work force substituting for the Nurses, therapists, and doctors. They must be empowered with skills and knowledge to bridge the divide between marginalized, hard- to- reach Communities and inaccessible Health Centres. Hence, the training should be appropriate to the tasks under consideration and certification should also reflect the scope of the training.'

Nicholas Cunningham, USA: 'Because training cannot overcome character deficits, CHW selection must include community input, so as to ensure that they are inherently caring, linguistically and socially acceptable and have the kind of ties to the community that will keep them there for long enough to settle in, learn their trade and faithfully serve their people. Other selection criteria like trainability, capacity to overcome superstition and habit, and ability to accept supervision and literacy should be the purview of health professionals.'

Happy Annet Walusaga, Uganda: 'As long as we don't integrate the CHW in the health care system, we continue to incur higher and unnecessary costs of treatment of ailments which would be otherwise prevented at community level. There needs to be a minimum level of education though for the CHW.'

Marion Subah, Liberia: 'During the days long ago when it was promoted that CHWs should use the five essential drugs to prevent mortality at the community level and when all said CHW needed to be literate so they would not give the wrong medication of the five, the famous Dr. Mrs Arole explain to me in working with illiterate women in the CRHP, that she did not know of anywhere in the world where women use more flavoring and spices, etc. in cooking than India, however the illiterate women as these women she worked with were, they never mixed them up and put the wrong spices in a dish. This was just like what she had seen in all the many years of working with them. She had not seen these illiterate women given the wrong medicine to any child. Instead with the appropriate training and supervision use by CRHP, these women had even taken what they learned and applied

them in such extraordinary ways that proved to be more effective and were making unimaginable progress in improve health and transforming their communities.'

Marion Subah, Liberia: 'The burden is on us, highly educated and experts to work together, including with those of us in education and training, to come up with creative ways to trained and supervise illiterate CHWs, a means of getting correct and appropriate data and getting them to use their data for decision making as was done by Dr. Mrs Arole and others at Jamkhed, India. I know there are ways, because I have worked with Traditional midwives for over 30 years and have seen what those illiterate women can do that I would not exchange for literate ones because we the experts cannot come up with appropriate methods to teach and supervise them and obtained the right data that can be used to make appropriate decision. So I would like to challenge us not to have literacy as a criteria for exclusion but rather to be creative and come up with appropriate methods of working with them and benefitting from their expertise in community health as we are all teachers and learners as Jane Valla and my peers in "Dialogue Education" would say or be like the US Ambassador to Liberia says and meet these communities where they are and work with them to where they would like to and should be.'

Amelia Plant, Tunisia: 'As the guideline rightly points out, "While a higher level of prior education may be associated with improved knowledge and performance, attrition (due to better and more diverse work opportunities) might be higher among more educated CHWs" (pg 34). There is a level of intimacy and trust required for CHWs to be effective, especially as they often work out of people's homes. Of course competency is important, but trust and education level are not necessarily correlated.'

Amelia Plant, Tunisia: 'However, how much education is required to complete the "task(s) under consideration"? It varies, but is usually centered around finishing some basic education, such as primary or secondary. I have noticed in the research that CHWs work well with a defined set of services that they master. There seems to be a tipping point at which CHWs are too overloaded with health conditions to check on, and they become less able to reach people with the same frequency or efficiency. Are there any specific studies that have been done looking at this relationship? Or has anyone had experience with this at the national or sub-national level? And what happens when CHWs are recruited for certain tasks and then other responsibilities are added on? How has that changed the performance of CHWs in those instances, or the planning for selection/training in the future?'

Stephen Okeyo, Kenya: 'Educational requirements include being literate and a secondary school leaver. Acceptability by the community is well emphasized, and culturally women are generally the majority. The personal attributes are generally perceived to contribute to acceptability by the community, but these are often NOT broken down to the specific elements. This is an area where research could generate better evidence for decision making, especially in understanding performance, motivation, drop out etc.'

Sunanda Kolli Reddy, India: 'The less educated of the workers are often the best for practical work with mothers and children but the graduates are better at documentation of work. We continue with the practice of pairing the less educated older women (with better managerial skills) for work with the young graduates as they complement each other with their knowledge and skills.'

Rebecca Furth: 'I have seen CHWs with little education in India, Tanzania and Zambia learn skills and provide excellent quality services. I think the question is not can CHWs, with variable levels of education, be trained and perform, but how do we maintain the dynamism

and diversity of CHWs as programs formalize? For example, in creating national salaried cadres of CHWs, countries such as Tanzania, Zambia and others have found that to be paid through the civil service, CHWs have to meet civil service education requirements (frequently grade 10, 12 and a certain number of O levels) and this leaves out many of the existing CHWs trained to provide MNCH, HIV or other services. The same is true in the US, as states move to create formal certification programs, they grapple with how to ensure that valuable and existing trained workers are not "left behind" because they do not meet newly established criteria for certification. Many states have dealt with this by putting in place systems to "grandfather" in existing workers, enabling them to become certified by taking into account experience over certain minimum education requirements, for example, while simultaneously establishing new education and training requirements for new CHWs.'

Joseph Ana, Nigeria: 'More light could have been thrown on how illiterate CHW get to learn the basic knowledge that underpinned the health information that they pass on to the community in their health promotion and prevention roles and if they have to engage in even the most basic treatment roles how do they learn the necessary skills. How would illiterate persons who want to be CHW enter the world that WHO guideline describes: selection, training, certification, practice, etc.'

Daniel Stern, Uganda: 'I believe there is a trade-off, i.e. the illiterate CHW whose extraordinary healthcare skills to a great extent depend upon her ability, as an illiterate person, affords him or her to enter other worlds, seamlessly, and would be in danger of losing this magnificent facility, were required literacy foisted upon them in an unnatural way. I had the pleasure of hosting a leader of the lk people at my home in Kampala. The lk are hunter gatherers in the extreme north east of Uganda. His people are illiterate, yet he had university degrees that enabled him to deal with government officials such that his people would not be unnecessarily abused, even by well meaning government. And yet he could still move comfortably between the two or more worlds he lived in. I believe we must be more sensitive in respecting the spiritual side of healing. If you will read Harvard's Dr. Atul Gawande' book, Complications about his surgical residency he touches on this subject delicately, in the last chapter. The Red Leg. The Ugandan traditional midwives I spent time with would deliver breach births effortlessly, without an ultrasound, for they SEE, by virtue of their spiritual gifts. Dr. Joseph Ana recently mentioned in this same forum how "interprofessional disharmony (which seems to be an oxymoron) was a huge problem that undermined the strengthening of quality care, which I would suggest was part of the downside of literacy.'

Daniel Stern, Uganda: 'The situation is not any different in Uganda where CHWs with low levels of education make a contribution in improving health in their communities. Whereas certification of CHWs requiring high levels of education is welcome, we need not forget those who may not meet the requirements yet have a wealth of knowledge and experience in offering primary health care and public health services in their communities.'

Daniel Stern, Uganda: 'We need to think about the un-remembered and often despised traditional midwives who probably still play a key role in the safe delivery of as much as two thirds of babies born outside the healthcare system,- a system that has for too long neglected to provide sufficient support in proportion to the CHW's contribution to country's primary healthcare needs.'

Membership of and acceptance by the target community

Sunanda Kolli Reddy, India: 'A distinct feature that must differentiate a CHW from all other uniformed personnel: He or She must belong to the community settings in the neighborhood

of the Primary Healthcare facility i.e. be a resident of the catchment areas or the geographical vicinity of the centres serving the target population.'

Selection criteria in Nigeria

Joseph Ana, Nigeria: 'Nigeria already has clear criteria for the selection of community health practitioners (CHP) equivalent to community extension health workers, which the training schools and colleges use to admit students for pre service training to become registered in the CHW cadre by their regulatory body, the community health practitioners regulatory body (CHPRB): the cadre comprises Junior Community Health Extension Workers (JCHEWs) who receive certificates; Community Health Extension Workers (CHEWs) receive certificates and Community Health Officers (CHO) who receive diplomas. The training institutions also have curriculum for each of the cadre and during training the students take their practicals in the practicum sites (they shadow established staff). Nigeria also has guidelines called Standing Order for these CHW to use in the primary care clinics when they graduate. It is interesting to notice that in some countries Traditional Birth Attendants have been added to the cadre of CHWs, but not yet in most states of Nigeria. For now the opportunity offered by TBAs remain only partially tapped in Nigeria. For the question 'Are these criteria implementable in your country/experience?' The answer is that the criteria in the WHO guideline are implementable in Nigeria because already there is a structured modus for selection. But it must be stated that the criteria are implemented in difficult circumstances, due to the weakness of the health system in general. With a dearth of healthcare providers (physicians, nurses, midwifes), JCHEWs, CHEWs and CHOs are critical to reaching patients including women and children in mostly rural, hard-to-reach areas. Nigeria has produced a Task Shifting Policy as an addition to the effort to deal with the dearth of the usual providers. To meet the selection criteria, fully, Nigeria would need to include the 'gender equity' criterion as that is not a specific criteria for now.'

Joseph Ana, Nigeria: 'The Tulsi Chandrai Foundation model was very impressive because it engages a community, encourages the community to nominate its youths to be trained as CHWs and to donate a building where the CHW will work from and live in one of the rooms in the building after training, TCF and government equip the facility and pay the CHW and other staff.'

2.3 Recommendation 1B: Age

Recommendation 1B

WHO **suggests** not using the following criterion for selecting CHWs for pre-service training:
• age (except in relation to requirements of national education and labour policies).
Certainty of the evidence – very low. Strength of the recommendation – conditional.

Stephen Okeyo, Kenya: 'Age does NOT feature at all in the selection criteria, but in practice within our cultural context age has an influence on social communication and may influence performance especially with regards to young persons discussing reproductive issue with older persons and vice versa. This is also an area where social research can generate more evidence.'

2.4 Recommendation 1C

Recommendation 1C

WHO **recommends not** using the following criterion for selecting CHWs for pre-service training:
• marital status.

Certainty of the evidence – very low. Strength of the recommendation – strong.

Stephen Okeyo, Kenya: 'Marital status is NOT used as a criteria but in practice society/communities have perceptions, often misperceptions about being or not married, and this has implication for social communication. This may be confounded by age. Either way it has implication for acceptability and performance and in need of more evidence.'

Q3. Recommendations 2, 3 and 4 make suggestions on length of preservice training, competency domains and modalities. How do these suggestions relate to current practice in your country/experience? Are they implementable in your country/experience?

CHW Training in Kenya

Stephen Okeyo, Kenya: 'A distinction is made between Community Health Extension Workers (CHEWs) and Community Health volunteers, both of which are often referred to as Community Health workers (CHWs). The CHEWs function as link between formal health system and community system and supervise the CHVs

Competencies of CHEWs

- 1. Plan and mobilise resources to support health plans at community level
- 2. Manage/supervise/lead CHVs at community level
- 3. Communicate/coordinate stakeholders at community level
- 4. Supervise data collection, entry and dissemination
- 5. Monitor and evaluate programs at community level

Training runs over a period of 6 months, implemented in a 3 phased approach, over a total of 30 days comprising 40 hours per week. It has a sandwich of 80 hours of community practice between the first two phases. Thus training involves 240 theoretical session contact hours and 160 hours of community partnership practice. Learning comprise knowledge, skills and attitudes and behaviour. CHWs advocate, facilitate and organize access to health and social services at community level. They serve as liaisons between household members and their health care providers. They visit patients in their home, and accompany them to clinical appointments. CHWs have frequent contact and conduct follow up with patients. The goal is to demonstrate improved care, improved health and lower costs. Training of CHVs takes six weeks.'

3.2 Recommendation 2

Recommendation 2

WHO **suggests** using the following criteria for determining the length of pre-service training for CHWs:

- scope of work, and anticipated responsibilities and role;
- competencies required to ensure high-quality service delivery;
- pre-existing knowledge and skills (whether acquired through prior training or relevant experience);
- social, economic and geographical circumstances of trainees;
- institutional capacity to provide the training;
- expected conditions of practice.

Certainty of the evidence – low. Strength of the recommendation – conditional.

Neil Pakenham-Walsh, UK: 'This recommendation is (like the majority of recommendations) 'conditional', ie context-dependent. As the Guideline states, 'The most appropriate duration of training should be established in a national or subnational context on the basis of local

needs and circumstances.' The Guideline notes that: 'Currently the length of CHW training is not standardized, with its duration ranging from a few hours to several years'. It does not propose any minimum or maximum lengths of pre-service training, with the implication that there may be contexts in which a few hours or several years, or anything in between, may be appropriate. Interestingly and perhaps surprisingly, the 'systematic review of reviews found that... training duration had no consistent effect on the effectiveness of the intervention'. Perhaps it is quality of training that matters, as well as other factors such as supportive supervision and the existence or otherwise of in-service training?'

Amelia Plant, Tunisia: 'Most non-governmental organizations seem to train "their" CHWs for anywhere from a week to a few months, with additional in-service training components. This practice is underscored in the WHO guideline as well, which stated that "training duration had no consistent effect on the effectiveness of the intervention." Although WHO found no effect on "effectiveness" from training duration, I wonder if a longer training better prepares a CHW to ascend the career ladder in places like Nigeria, where those options are available. You also mentioned that you supervise traditional birth attendants. How does that relationship work at the village level, and within the overall health system?'

CHW Training in Nigeria

Joseph Ana, Nigeria: 'In Nigeria, therefore, the CHW training curriculum and duration is designed to produce CHW capable of running the PHCs, with Task shifting implementation. The curriculum is focussed mainly on community diagnosis and treatment of minor ailment and diseases, assisting mid-level health workers in providing care at the clinics and community outreach. The Junior community health extension workers (JCHEW). They receive about two years training in the school/college of Health Technology than the next higher cadre, the CHEWs and have a smaller scope of practice. JCHEWs spend 90% of their work time in the communities and 10% in the health facility. Currently, PHCs are typically headed by community health extension workers (CHEWs). They are trained schools/college of Health Technology for 2-3 years and qualify with a diploma in community health care. They spend 60% of their time at the health facility and 40% in the community. JCHEWs are supervised by CHEWs. Community health officers (CHOs) receive initial training same as CHEWs but also add an additional year of training at a Teaching Hospital. CHOs are also based at the primary health care facility, provide a range of services and supervise CHEWs and JCHEWs.'

Joseph Ana, Nigeria: 'In Nigeria the CHW / CHP are trained to play 'polyvalent' role in the primary health care tier of the health system.

The Nigeria National Task Shifting and Sharing Policy 2014 to address the challenges regarding HRH shortage, mal-distribution and clinical competence. The policy was designed to accelerate efforts to meet the MDGs but is now directed at meeting Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs).

Human Resource in Health (HRH) of Nigeria is an issue of great concern because It is far below the absolute minimum requirement of 2.28 per 1,000 mentioned in the 2006 World Health Report.

The most recent information on numbers and density of health workers is available in the "Nigeria Health Workers Profile published in 2013. There are huge discrepancies between total numbers in the Registries kept by the regulatory councils and those deemed to be "in good standing", the latter is far more likely, reflecting a the weakness of the councils and the

numbers of the various cadres in active practise in Nigeria, with a population of about 193 million..

Nationally, as of December 2012, 20,284 medical doctors were in good standing, and the density per 100,000 populations, ranged from 50.5 in Federal Capital Territory to 1.9 in Yobe State, and the 8.9 medical doctors per 100,000 in Sokoto state.

The number of Nurses and Midwives who are in good standing was not available from the Nursing and Midwifery Council (NMC). But Information from the States revealed densities of nurses and midwives per 100,000 population ranged from 5.9 in Zamfara State to as high as 96.5 in Imo State, and 24.7 in Niger State.(Note that Yobe state is in Boko Haram insurgency area since 2009).

According to the National Primary Health Care Development Agency (NPHCDA) for the Midwives Service Scheme (MSS) in2009 there were 36,737 CHWs and 5,604 skilled practitioner (doctors, nurses and midwives). The breakdown of CHW shows that 28% were Health Assistants, 11% Junior CHEWs, 27% CHEWs, and 4% CHOs. Nurses and midwives less than 8%. Doctors were even fewer.

For service delivery, 90% of deliveries at the PHCs were conducted by CHEWs. An assessment of the knowledge and skills of the CHEWs showed that 70.3% of them had some basic theoretical knowledge of midwifery, but only 31% could correctly assess foetal well-being. 56% knew about the routine tests to be done during ANC, indicating gaps in their level of skills.

To make things worse, there is massive external migration of medical doctors and nurses (Brain Drain) that reached its peak between 2002 and 2007, reduced slightly in 2012 but again on the increase since 2015. The loss to brain drain represents about 38% of the annual training output of medical doctors in 2012, a little over 3000 per annum. The difference of the number of doctors in the register and the number in good standing was attributed to backlogs with the updating of theregistries, due to frequent dissolution of thecouncil which affects its effectiveness.

Therefore, the duration and curriculum for training CHWs focuses on key priority areas such as Family and Reproductive Health, Maternal and Child Health services (RMNCH), as well as HIV, TB, Malaria, other Communicable diseases and neglected tropical diseases, and Non-Communicable Diseases. Some of the details include:

Family Health: Ante-natal care, delivery and new-born care, post-natal care, Family planning, Child health – integrated Management of Childhood Illnesses (IMCI), growth monitoring and essential nutrition, immunization, Adolescent reproductive health; Communicable diseases: Tuberculosis (TB) and leprosy, HIV/AIDS and sexually transmitted infections, Epidemic diseases (including malaria surveillance), rabies; Basic curative care: Treatment of major minor and chronic conditions; Hygiene and Water-borne diseases; environmental health; Health education: Health education and communication; etc.'

3.3 Recommendation 3: Competencies in curriculum for pre-service training

Recommendation 3

WHO **suggests** including the following competency domains for the curriculum for pre-service training of CHWs, if their expected role includes such functions.

Core:

- promotive and preventive services, identification of family health and social needs and risk;
- integration within the wider health care system in relation to the range of tasks to be performed in accordance with CHW role, including referral, collaborative relation with other health workers in primary care teams, patient tracing, community disease surveillance, monitoring, and data collection, analysis and use;
- social and environmental determinants of health;
- providing psychosocial support;
- interpersonal skills related to confidentiality, communication, community engagement and mobilization:
- personal safety.

Additional:

 diagnostic, treatment and care in alignment with expected role(s) and applicable regulations on scope of practice.

Certainty of the evidence – moderate. Strength of the recommendation – conditional.

Neil Pakenham-Walsh: The Guideline addresses these questions: For CHWs receiving preservice training, should the curriculum address specific versus nonspecific competencies? For CHWs receiving pre-service training, should the curriculum use specific delivery modalities versus not?' The Guideline here is unequivocal: 'The scope and roles of CHWs vary substantially across countries and CHWs, hence it is not possible to standardize the scope of pre-service education and contents of curricula.... The most appropriate contents of CHW training should be established at the country level (either in a national or subnational context) on the basis of local needs and circumstances.'

Neil Pakenham-Walsh, UK: 'This Recommendation, like most of the other recommendations, is conditional, emphasising the heterogeneity of most aspects of CHWs and CHW programmes, and the limitations of standardisation. The Recommendation goes further by stating 'it is not possible to standardize the scope of pre-service education and contents of curricula'. This is in stark contrast to some of the HIFA discussions we have had in previous years, where many (not all) HIFA members have advocated for standardisation of the CHW curriculum.'

Amelia Plant, Tunisia: 'It is now becoming more common for CHWs to provide both depo provera (DMPA-IM) and sayana press (DMPA-SC). This is an example of how the "competency domains" can be quickly expanded as new treatments and/or knowledge becomes available. This WHO summary brief and other such statements should be living documents, quickly incorporating new pilots and shifting recommendations so that all governments and NGOs that work with CHWs are well-informed about the kinds of tasks that CHWs may take on.'

3.4 Recommendation 4. Modalities of pre-service training

Recommendation 4

WHO **suggests** using the following modalities for delivering pre-service training to CHWs:

- balance of theory-focused knowledge and practice-focused skills, with priority emphasis on supervised practical experience;
- balance of face-to-face and e-learning, with priority emphasis on face-to-face learning, supplemented by e-learning on aspects on which it is relevant;
- prioritization of training in or near the community wherever possible;
- delivery of training and provision of learning materials in language that can optimize the trainees' acquisition of expertise and skills;
- ensuring a positive training environment:
- consideration of interprofessional training approaches where relevant and feasible.

Certainty of the evidence - very low. Strength of the recommendation - conditional.

Sunanda Kolli Reddy, India: 'Given the heterogeneity of the building blocks of Health Systems (especially Governance and finances), I feel a standard curriculum can at best be planned for a country. As for India, inequity poses a big challenge in pre-service selection on several counts, the level of education being one of them. We have marked regional differences in terms of Health indices, disease patterns, access to services and our National programs could do well to recognise those in implementing interventions for prevention, health promotion, referrals, curative service support, rehabilitation, or other. The GDG [Guideline Development Group] recommendation for flexibility in curriculum or training process is justified even if the current evidence does not fully support it. There is no definitive evidence to the contrary either. The best practices are so varied in different situations even if we are to go by the NGO implemented projects. Most of the time, NGO programs with CHWs are designed to fill some gaps in the System rather than to integrate CHWs into the System. The applicability on a wider scale is not easy even when the Public-Private/NGO-Community partnerships manage to meet the local needs or program objectives with some grassroots convergence. I am herewith sharing an evidence-based policy brief from a project (ANCHUL) by IIPH Delhi, (PHFI) where the team adopted principles of Implementation research to identify optimal approaches for a particular setting with the principal objective to develop intervention targeted towards ASHA workers (CHW) for improved processes to optimize or enhance their work performance. It is possible we have some key findings here that one might want to refer to again while discussing a couple of other WHO recommended guidelines. https://phfi.org/wpcontent/uploads/2019/06/anchul 4 page policy brief- ... '

Marion Subah, Liberia: 'As It is important that we as NGOs work with the MOHs to make sure the Ministries policies and guidelines do not conflict with ours and that we are implementing in alignment with the MOH, in Liberia we are now working with the MOH on policies and guidelines at what could be consider urban community health promoters and the guidance in the tool kit, especially on selection, training, supervision, etc. is very good as we discuss integration of large scale programs and institutionalization of Programs with paid CHWs according to the WHO recommendations.'

3.5 Recommendation 5: Competency-based certification

Recommendation 5

WHO **suggests** using competency-based formal certification for CHWs who have successfully completed pre-service training.

Certainty of the evidence – very low. Strength of the recommendation – conditional.

Joseph Ana, Nigeria: 'In Nigeria the CHW/CHP are trained in the schools and colleges of health technology owned by each of the 36 states, but because they are all regulated by one national body (community health practitioners regulatory board- CHPRB), and the curriculum is handed down by the Board to each school/college, their certificates are interchangeable in practice should the CHW move from one state to another.'

Rebecca Furth, USA: 'I don't know of many countries outside of the US, Canada and parts of Brazil that actually have formal CHW certification programs at this point. I pulled this resource from CHW Central on CHW Certification in the US which might interest you: https://www.chwcentral.org/community-health-worker-training-and-certification-programs-united-states-findings-national-survey). In the US, certification is on a state-by-state basis and for a CHW to work in another state, they would need to get certified for that state (much as lawyers need to take the bar for the state in which they operate). But transferability of certification raises an important question with regard to CHWs – is a CHW transferable and, if so, under what conditions? If one of the core criteria for the definition of a CHW is that they be from and reside in the community they serve, then it should not be possible for them to be

re-located as a matter of standard practice. Of course people move and may want to continue working, so how would we manage/assess this?'

Rebecca Furth, USA: 'In many countries, CHWs undergo a national training and, therefore, certification, were it to exist, would likely be national. In my view, CHWs should be able to continue operating as CHWs if they and their families move to new communities and if they can demonstrate a degree of integration into those new communities. What we want to avoid, however, is CHWs being deployed by health systems to communities where they have no deep connection – much like doctors and nurses are often deployed – that would, in my view, go against one of the core attributes of a CHW.'

Rebecca Furth, USA: Of interest to you and others may also be the new National Association of Community Health Workers (NACHW) in the US. NACHW launched just this past April and is the first national community health worker association that I know of, though there is also the Community Health Worker Network of Canada https://www.chwnetwork.ca/, which has some similar aims to NACHW in the US. I have heard of some state associations of ASHA workers in India, but am not sure how active they are. I am sure one of our colleagues in India can jump in and add some detail on this. As these national associations and networks grow, they are likely to play a larger role in working with government to advance the CHW profession, including developing certification programs.

Amelia Plant: 'Certification is important to formalizing the CHW profession, raising CHWs profile/perceptions of legitimacy among other healthcare workers and providing them a foundation for career advancement. Yet setting up credentialing systems can be tricky; effective formal certification requires management and tracking systems. In the US, states have grappled with how to credential CHWs, what it means for sustaining the profession, and the challenges it presents to maintaining some of the best qualified CHWs – who may not speak English fluently or have high levels of education – in the profession. While the US is a high income country, we face huge barriers to health access for poor and underserved populations and many of the issues states are grappling with and the lessons they have learned will resonate with people in low- and middle-income countries.'

Joseph Ana: 'Nigeria already practices competency based certification in the pre service training arena for CHWs/CHPs. What is left is to ensure regular and timely updating of the criteria to meet current best educational/ training practices. Nigeria has already made an excellent head-start in embracing, integrating and motivating community health practitioners within its health system, especially as the practice mostly aligns with the WHO guideline under discussion. What remain for Nigeria is to adapt regularly and as frequently as necessary to keep pace with best evidence and best practice. Nigeria needs to expand the cadre of CHW to embrace others e.g. Traditional Birth Attendants for the many advantages mentioned already on this forum, provided the expansion is grounded on best practice ethos. Afae guards such as supervision, monitoring and evaluation of the whole structure is essential for success. But failure to adapt and improve consistently, leads to ossification and death of policy and practice.'

Anbreen Slama-Chaudhry, Switzerland: 'Certifying training is must. In our experience, the certification we delivered after written & oral examination process was in itself a training & empowering process! For many CHWs they had never sit exam before, they went through tough stress management process with fear to fail it and were very proudly holding their certificates during ceremony as it was in majority of cases their first degree ever received. Some brought their husbands or children and were referred as role models. Another suggestion is to have a ceremony or celebration as must as well, to celebrate completion of training, acknowledging CHWs efforts and empowering them in their community they are serving / belonging to.A celebration of success was organized with delivering of certificates,

and another ceremony was held inviting the whole community to discover the new offer CHWs were providing. Always good to gather top administrators, doctors, nurses, community members, families with CHWs to help putting some light on their work.'

Recommendation 6: Supportive supervision

Recommendation 6

WHO **suggests** using the following supportive supervision strategies in the context of CHW programmes:

- appropriate supervisor—supervisee ratio allowing meaningful and regular support;
 - ensuring supervisors receive adequate training;
 - coaching and mentoring of CHWs;
 - use of observation of service delivery, performance data and community feedback;
 - prioritization of improving the quality of supervision.

Certainty of the evidence – very low. Strength of the recommendation – conditional.

Bryan Pearson, UK: 'There is ambivalence in the guidelines. On the one hand it talks of the importance of 'integration' within the health system. On the other hand it talks of 'supportive supervision'- without in any way defining who these supervisors are from or report to. CHWs remain in a silo in too many health systems. My observation is that to be effective they MUST be an integrated part of the district health team. Keeping children with diarrhoea OUT of hospital ought to be as important to the District Medical Officer as treating them in hospital. Providing essential antenatal care in the community and identifying possible complications ahead of time is far better than receiving emergency presentations at the hospital at 3am in the morning. Helping old people manage their diabetes in the community is far better than having to cope with someone presenting with a gangrenous foot and associated complications in hospital. In short, public health imperatives should be as important to the district physicians and nurses as treating the patients who present. If CHWs are recognised as 'real' health professionals, integrated into the district health team (and remunerated) - then progress can and will be made.'

Nicholas Cunningham, USA: 'Since community workers, however intelligent, are rarely educated enough to understand the scientific bases for sterile technique, nutrition science, bacteriology versus virology, immunology, acid base balance, genetics, hyper- and hypotension, etc., etc., (and since the quality of practice of even highly trained doctors deteriorates without supervision or peer pressure!), they need regular supervision, continuing education and, for those with potential, some kind of career ladder, so as to maintain standards and avoid "burn-out". This supervision should be shared by the district health team and by the health committee of the target community since only the latter can reliably assess whether the CHW is really reaching out and getting out to those most in need, and whether they really care about what they are doing!'

Nicholas Cunningham, USA: 'Every primary care team needs to meet regularly, (at least every two weeks), and the CHW's need to be part of that meeting so that a) their contributions are recognized, b) their observations recorded and respected, and c) so that they learn and develop team loyalty.'

Nicholas Cunningham, USA: 'If/when their supervisors are absent, there needs to be a well planned & rehearsed referral system in place so that emergencies and urgencies get to a higher level of health care before anyone's life or health is imperiled'...

'Allowing deaths or serious deterioration of patients under CHW care to occur (and then blaming them for this) cannot be permitted!'

Sunanda Kolli Reddy, India: 'The Nigerian example appears to be close to what we want - CHWs not just being a part of the HS [health system] but also having some administrative support and guided supervision from pre-service training to on-the-job experiential learning that is recognised. Every country could plan to have junior extension workers drawn from the community. It requires a flexible approach to contextualise to the local needs and, of course, political will to invest more for primary care.'

Recommendation 7: Remuneration

Recommendation 7A

WHO **recommends** remunerating practising CHWs for their work with a financial package commensurate with the job demands, complexity, number of hours, training and roles that they undertake.

Certainty of the evidence – very low. Strength of the recommendation – strong.

Recommendation 7B

WHO **suggests** not paying CHWs exclusively or predominantly according to performance-based incentives.

Certainty of the evidence – very low. Strength of the recommendation – conditional.

Sunanda Kolli Reddy, India: 'A prerequisite for integration would be that CHWs must be remunerated commensurate with their work in the community in a well delineated linkage to the Health Centres whose personnel will likely provide the guidance and supervisory support that can help them perform better.

Sunanda Kolli Reddy, India: 'Would integration of CHWs within the Health System be better if they were a salaried group within Primary Health Centres linked to the District Healthcare Facility providing specialist services and training? Depends on how well organised the Health System is in terms of levels of Care and administrative support for UHC.

Massimo Serventi, Uganda: 'CHWs are not supported by their communities. So far nobody wrote a convincing paper/letter/study where it is stated beyond any doubt that their community supported (\$) the work of CHWs and for long. CHWs are neither supported(\$) by Governments. So far governments pay for their health workers that are officially trained, wear a uniform, work in the thousand rural dispensaries/health centres/hospitals. This personnel is the one that communities recognized as their health providers, from ever. CHWs just came 'recently' brought forward by foreign INGOs that like the idea of their service and support(\$) them. The idea of having CHWs originates from the love of PHC (primary health care), that was an excellent move in 1975, resisted for years but today has died, replaced by privatisation of services and market.'

Sunanda Kolli Reddy, India: 'It is also true that communities do not pay the salaries to CHW. Often they are paid under projects of non-governmental sector when not part of the Government system. However, there have been suggestions for village heads to sustain the salaries from the funds allocated to them. We are also advocating for CHWs to form Self helps groups as in Bangla Desh but it may not be easy to sustain in India. ASHAs are there for specific work and many of us have voiced our opinions at various fora that they need to be paid well. It goes without saying that existing cadres at PHCs need to be paid even better. I endorse your view that Health care personnel should all do what they are expected to do, and we should be looking at task sharing and not task shifting. Let us face it, task shifting is needed only because Health facilities are poorly staffed in the first place. If we need CBR workers in disability related Health Initiatives, it is because of a shortage of rehabilitation professionals; poor urban slum communities cannot afford the costs of transdisciplinary care (early intervention) the children require. If slim budgets prevent good

remuneration for front line workers, will Governments even have the finances to create health infrastructure everywhere to meet the doctor/ nurse- patient ratio better? I believe that it is not an "EITHER- OR" situation. We need both to achieve UHC. Increasing allocation for health in National budgets is a priority and WHO recommendations, I hope, will serve to strengthen political will.'

Massimo Serventi, Uganda: CHWs are nowhere recognized/remunerated by their communities (as it should be - my note). Formal health workers are already trained, are respected by their communities and above all CAN DO AND SHOULD DO THE SAME WORK EXPECTED FROM CHWs(in capital letters!). When budgets are slim one should concentrate on what is already in place, support-refresh personnel that already is employed and NOT create new cadres that wont be able to sustain on the long run. This is the case of CHWs.

Toumzghi Sengal, Eretria: The other concern is the issue of remuneration without an incentive it would be incomplete lets learn the lesson from Ethiopia about that. IN Bodies can contribute a lot in those countries who cannot afford to do that. WHO guideline is not enough. Let the rich countries start the commonly accepted approach to solve the problem of access. It is obvious A comprehensive CHW is a solution in the right place.

Neil Pakenham-Walsh, UK: 'ASHAs (community health workers in India) 'are motivated by both non-financial and financial factors'. Interestingly, they were found 'to exhibit a strong preference for jobs that incorporated training leading to promotion, a fixed salary and free family healthcare'.

Rebecca Furth, USA: 'The CHW Guidelines stress the importance of formalizing national CHW cadres, yet they also recognize the diversity of the workforce and the need to keep it diverse in many contexts. Some CHWs/volunteers may not want or need to work on a full time basis and may have special skills or characteristics that make them important to strengthening health care e.g. PLHIV [*] peer educators, mentor mothers, or others. How do we best combine the need for full-time extensively trained and salaried community health workers, with part-time, specialized and incentivized (or non-incentivized) "volunteers?" Certainly more evidence on team-based approaches to community-level care are needed and the logistical challenges of training and managing a diverse community workforce are presently being grappled with in many countries.'

Recommendation 8: Contracting agreements

Ndemere Rukara Benon, Uganda: 'In Uganda Health Assistants are trained community Health Workers. There is a significant number of them unemployed.

Recommendation 9: Career ladder

Nicholas Cunningham, USA: 'I believe that CHW's should be considered "paraprofessionals" not professionals; they have their expertise, and in time come to know their communities far better than the professionals! But, I believe that credentials matter... and that the educated health professionals need to be respected for what they know, teach and practice!'

Rachael Deussom, USA: 'In particular, as we look at CHW programs and where they fit within health systems and existing health worker teams, these recommendations really need to be contextualized into national and local health systems. I have heard some people debate which recommendations should be implemented versus deprioritized; what I think is more useful is to consider which combination of recommendations would have the greatest impact. For example, it is not useful to contract and pay a CHW but then not provide

supportive supervision or support his/her enabling environment or hold him/her accountable for a reasonable scope of work. Likewise, the new CHW programs are an opportunity to transform pre-service education - many CHWs in LMIC settings have been trained through a patchwork of donor-supported trainings and it is hard to know what their qualifications are / the quality of the training, and what performance support is needed to ensure they provide quality health prevention, promotion, curative, palliative, and/or referral services. In addition, I think that we have a lot more to learn about opportunities within the community health labor market. How can we promote career development of young CHWs who are committed to their communities' health but want to continue their education and advance within the health sector? What are viable CHW career paths? While CHW professionalization and recognition is essential for SDGs and promoting decent work, there may inevitably be community health volunteers who continue to provide support in their communities on an ad-hoc, part-time basis. What do we, as a global health community, do to harness and appropriately recognize their roles as well?'

Nicholas Cunningham, USA: 'It seems to me that the word paraprofessional is useful. When it comes to medical or even health knowledge, educational degrees should count, in the sense that they confer a science based data base which cannot be available to the CHW. To establish and maintain quality of care, there should be an hierarchy based on the science of health. I would however ascribe superior knowledge of the community to the CHW recruited from that community; hence doctors, nurses, midwives and other health specialists should understand and accept the CHW's superior understanding of community politics, belief systems, sensitivities, "reference figures" and past history all of which are relevant to the design of primary care, for that community. For that kind of knowledge, a reverse hierarchy is appropriate!'

Specifically the call 'to develop standardised, evidence based tools and resources that support the implementation of effective, safe, and patient centred primary healthcare' represents a direct call for increased investment in evidence-based tools such as PACK (Practical Approach to Care Kit), as described by HIFA members Joseph Ana, Tracy Eastman and others.'

Neil Pakenham-Walsh, UK: 'Currently the career progression opportunities for CHWs worldwide are limited. Just as with other health workers, it make sense to have a career ladder with the possibility of further training for 'higher cadres'. Personally, I find the systematic promotion of career pathways quite exciting - this has the potential not only to be a motivating factor for selection, certification, and service, but also to strengthen links between CHWs and other members of the primary healthcare team. Indeed, a health professional who originally trained as a CHW and who has then goneon to further training will have exceptional skills and qualities that are less likely to be seen in colleagues who have not had that experience.'

Amelia Plant, Tunisia: Massimo's point is important -- what is the effect of the existence of CHWs within the flow of the health workforce? As Rachel asked, how do we "harness and appropriately recognize" those CHWs who "continue to support in their communities on an ad-hoc, part-time basis"? Is there simultaneously space for those CHWs who want opportunities for career advancement and those that enjoy the status of serving the community in limited ways? If career advancements are provided for CHWs, does that disrupt the country's traditional medical education system?'

Recommendation 10: Target population size Recommendation 10

WHO **suggests** using the following criteria in determining a target population size in the context of CHW programmes.

Criteria to be adopted in most settings:

- expected workload based on epidemiology and anticipated demand for services;
- frequency of contact required;
- nature and time requirements of the services provided;
- expected weekly time commitment of CHWs (factoring in time away from service provision for training, administrative duties, and other requirements);
- local geography (including proximity of households, distance to clinic and population density).

Criteria that might be of relevance in some settings:

- weather and climate;
- transport availability and cost;
- health worker safety;
- mobility of population;
- · available human and financial resources.

Certainty of the evidence – very low. Strength of the recommendation – conditional.

Recommendation 11: Community engagement

Recommendation 11

WHO **suggests** that practising CHWs document the services they are providing and that they collect, collate and use health data on routine activities, including through relevant mobile health solutions. Enablers for success include minimizing the reporting burden and harmonizing data requirements; ensuring data confidentiality and security; equipping CHWs with the required competencies through training; and providing them with feedback on performance based on data collected.

Certainty of the evidence – very low. Strength of the recommendation – conditional.

Recommendation 12: Types of CHWs

Recommendation 12

WHO **suggests** adopting service delivery models comprising CHWs with general tasks as part of integrated primary health care teams. CHWs with more selective and specific tasks can play a complementary role when required on the basis of population health needs, cultural context and workforce configuration.

Certainty of the evidence – very low. Strength of the recommendation – conditional.

12.1 General comments

Neil Pakenham-Walsh: 'Page 24 of the Guideline notes: 'This guideline did not appraise critically the body of evidence on which specific health services CHWs can deliver to quality standards, and thus it contains no recommendations regarding these aspects. Published evidence and existing WHO guidelines encourage the delegation of certain tasks relating to prevention, diagnosis, treatment and care, for example for HIV, tuberculosis (TB), malaria, other communicable and noncommunicable diseases, a range of reproductive, maternal, newborn and child health services, hygiene and sanitation, ensuring clients' adherence to treatment, rehabilitation and services for people affected by disabilities, and advocating and facilitating underserved groups' access to services.'

The selected highlights of the Guideline note: 'There is growing recognition that community health workers (CHWs) are effective in the delivery of a range of preventive, promotional and curative health services. They can contribute to reducing inequities in access to care.' The guideline emphasises maternal and newborn health, child health, communicable diseases, non-communicable diseases, trauma, surgical care, mental health, sexual and reproductive health... and they are also important in helping people to access health services and to advocate for their health rights.

Neil Pakenham-Walsh, UK: 'I am impressed - and daunted - by the huge diversity of roles that CHWs can potentially play in primary health care, and the evidence that supports this.

On the other hand, the Guideline says: 'A broad set of core competencies may ensure that all CHWs have the basic skills necessary to adequately carry out their role.'

If I am interpreting this correctly, there is a shift from the idea of a primarily universal curriculum for CHWs towards one where pre-service training is tailored according to a country's needs.

This also has the advantage of addressing unrealistic expectations of individual CHWs to become competent in an unfeasibly wide range of tasks. Furthermore, it opens up the option for CHWs who have completed basic training (in line with national priorities) to receive further modular training in specific areas of health (in line with the CHW's interests) and thereby become specialised CHWs.

There are caveats, however. As the Guideline notes, 'CHWs are often trained unimodally to specialize in the care of a single patient condition, such as diabetes or HIV' (this is also the case in training of lay health workers in mental health). So in some situations there may be a case for permitting such specialist training without the need for prior general CHW training.

Also, there would need to be a balance between general and specialist training. 'A model based exclusively on specialised CHWs might carry risks of fragmentation of care, resulting in gaps in service provision and inefficiency.'

Toumzghi Sengal, Eritrea: 'It is true CHWs will misdiagnosed many many diseases but with simple algorithm and RTF they can diagnose malaria, simple dehydration from diarrhea and recognize certain signs and REFER isn't that what we are trying to seek from them but most of all CHEWs are there to inform and advise on preventive and primitive heath care.'

12.2 Disability and Rehabilitation

Huib Cornielje, The Netherlands: 'Will we include in this discussion also the fact that the Disability & Rehabilitation unit of WHO is thinking about expanding the role of CHWs to the field of rehabilitation in the context of the Rehab 203 Action Plan ensuring that rehabilitation becomes integral part of universal health care? Will we focus also in this discussion on the rehabilitation field worker sometimes called the community (based) rehabilitation worker (CRW) or the community rehabilitation facilitator (CRF): the latter usually being a more midlevel rehabilitation worker?'

Neil Pakenham-Walsh, UK: A systematic review by the Campbell Collaboration (2015) concluded there is 'Moderate to high quality evidence shows that community-based rehabilitation has a positive impact on people with disabilities' https://campbellcollaboration.org/library/community-based-rehabilitation... Page 25 of the full WHO Guideline on CHWs contains a graphic of 'Primary health care services for which there is some evidence of CHW effectiveness', but this does not include disability or rehabilitation.

Stuti Chakraborty, India: 'CBR/CBID programs are growing increasing importance across LMICs with CHWs at the heart of this community based approach. **They are not only helping in crucial aspects of providing rehabilitation but also in identification, screening and prevention of further disabilities among individuals. From my observation, I have seen

numerous cases wherein PwDs [*]refused to go to the nearest hospital/ CHC primarily due to stigmatisation and lack of awareness regarding what needs to be done or were reluctant as they thought seeking medical help would require spending a lot. Under these circumstances, CHWs play an imperative role in making people aware about health, the importance of not neglecting it, especially when there are chances of it leading to a disability and also about various healthcare schemes, subsidies etc. They also play a critical role in identifying, creating awareness and reducing neglect associated with cases of mental health. More number of tertiary hospitals must be encouraged to establish CBR and CBR+ programs and be responsible for the training of efficient health aids in order to reduce the burden of NCDs and communicable diseases within the community.'

Mohammad Ali Barzegar, Iran: 'I also whole heartedly support the integration of CBR into Primary Health Care (PHC), and add to the Job description of CHWs. There are two points which should be taken into consideration as follow: 1) the size of the population of catchment area of CHWs should be reduced, 2) a skillful mid level technical person on CBR should be added to the supervisory team of the CHWs at the Community Health Center. Supportive reasons for the integration is cost effectiveness and afford ability, specially in LMIC, and the nature of comprehensiveness of PHC.'

Sunanda Kolli Reddy, India: 'I am fully in agreement with Dr. Barzegar's recommendation that there be a mid-level technical person with experience in CBR to guide and supervise CHWs for Disability-related work or rehabilitation in resource constrained settings.'

12.3 Care for older people and those with multimorbidity

Stephen Okeyo, Kenya: 'I am especially interested in the role that CHWs can play in health of the rising number of older persons, given that the nature of their health and medical conditions (including mental health and disability), and the WHO advisory to restructure services from hospital based to community based.'

Neil Pakenham-Walsh, UK: 'The complexity of modern healthcare and increasing levels of multimorbidity in LMICs provide a further rationale for integrating CHWs into the health system as the first level of care, with referral to higher levels in the system as needed. Of course, this implies adequate knowledge of co-morbidities among CHWs as well as integrity of the system as a whole to deal with cases requiring higher levels of care.'

12.4 CHWs and complementary and alternative medicine

Narendra Javadekar, India: 'There are many BAMS (Ayurveda) and BHMS (Homeopath) doctors in rural India doing private practice. Can we integrate them to such services? It would help if these practitioners are aligned with the thought process and goals of WHO, so as to achieve harmony in the management of diseases and preventive strategies. The program would work better if integrated into existing system.'

Maryam Rumaney, South Africa: 'In South Africa there has been an attempt at regulating allied health professionals through The Allied Health Professions Council of South Africa (AHPCSA). "The Allied Health Professions Council of South Africa (AHPCSA) is a statutory health body established in terms of the Allied Health Professions Act, 63 of 1982 (the Act) in order to control all allied health professions, which includes Ayurveda, Chinese Medicine and Acupuncture, Chiropractic, Homeopathy, Naturopathy, Osteopathy, Phytotherapy, Therapeutic Aromatherapy, Therapeutic Massage Therapy, Therapeutic Reflexology and Unani-Tibb. "https://ahpcsa.co.za/

Narendra Javadekar, India: '80% of health care in India is private (pay from pocket). This is often provided by alternative practitioners as there is shortage of MBBS doctors in India. These doctors generally provide allopathic (modern medicine) treatment to patients despite their degree. So its a skilled workforce available. For rural population and urban poor, these practitioners are the main providers of primary care. Their services are seen as value for money and are mainly symptomatic. Preventive health care is segregated to government centers and somehow there is discord between private and government health services. Private is quick, value for money, focused on symptomatic relief and patient satisfaction, whereas as government services are slow, generally free, but with less patient satisfaction. It might be a good idea to integrate services of these private health practitioners as CHW so as to achieve integration of curative and preventive health goals and synthesis and cooperation between government and private health services. Unless these two start working hand in hand, it will be difficult to achieve our goals.'

Recommendation 13: Collection and use of data

Recommendation 14: Mobilization of community resources

Recommendation 15: Supply chain

Citations

- Folz R; Ali M. Overview of community health worker programmes in Afghanistan, Egypt and Pakistan. East Mediterr Health J. 2018;24(9):940– 950 https://doi.org/10.26719/2018.24.9.940
- Community Health Centres: Operationalizing the Declaration of Astana on Primary Health Care. Jan De Maeseneer MD PhD1; Antonija Poplas Susič MD PhD2; Scott A Wolfe MA3; Meng Qingyue MD PhD4; Shabir Moosa MFamMed MBA PhD5; Lynne Raskin RN6; Tom Symondson BSc7; Daniel R Hawkins BA8 http://www.ifchc.org/wp-content/uploads/2019/05/Community-Health-Centres...
- Does volunteer community health work empower women? Evidence from Ethiopia's Women's Development Army. Svea Closser Harriet Napier Kenneth Maes Roza Abesha Hana Gebremariam Grace Backe Sarah Fossett Yihenew Tesfaye. Health Policy and Planning, czz025, https://doi.org/10.1093/heapol/czz025 Published: 29 May 2019 [restricted-access]
- 4. Catherine Kane: an interesting article on home and community-based health aides in the U.S. The article looks at income, selection, training, certification and supervision. One of the reasons the CHW Guideline is so relevant is that issues for community health workers transcend socio-economic status and national boundaries.https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2019.00021
- Rebecca Furth: Case studies of large-scale CHW programs by Perry et. al. 2017. https://www.chwcentral.org/case-studies-large-scale-community-health-worker-programmes
- 6. Rebecca Furth: Factors enabling community health workers and volunteers to overcome sociocultural barriers to behaviour change: meta-synthesis using the concept of social

- capital. By Mohajer and Singh.
- 2018. https://www.chwcentral.org/sites/default/files/untitled.pdf
- 7. Rebecca Furth: Can a community health worker and a trained traditional birth attendant work as a team to deliver child health interventions in rural Zambia? By Yeboah-Antwi et. al. 2014

 https://www.chwcentral.org/sites/default/files/CHW TBA Team Zambia 2014.pdf
- 8. <u>Neil Pakenham-Walsh: A new Fact Sheet on Rehabilitation: https://www.who.int/news-room/fact-sheets/detail/rehabilitation</u>
- 9. Abdel-All M, Angell B, Jan S, et al What do community health workers want? Findings of a discrete choice experiment among Accredited Social Health Activists (ASHAs) in India BMJ Global Health 2019;4:e001509. https://gh.bmj.com/content/4/3/e001509
- 10. Hector Carrasco: A really good case study on a CHW program run by medical students: http://chwcentral.org/blog/companion-care-creating-and-maintaining-conne...
- 11. Catherine Kane: Transfer of certification between provinces in Canada https://globalnews.ca/news/5399527/b-c-care-providers-associations-files
- 12. Health worker text messaging for blended learning, peer support, and mentoring in pediatric and adolescent HIV/AIDS care: a case study in Zimbabwe. V. BertmanEmail authorView ORCID ID profile, F. Petracca, B. Makunike-Chikwinya, A. Jonga, B. Dupwa, N. Jenami, A. Nartker, L. Wall, L. Reason, P. Kundhlande and A. Downer. Human Resources for Health 2019 17:41 https://doi.org/10.1186/s12960-019-0364-6
- 13. Neil Pakenham-Walsh: A systematic review by the Campbell Collaboration (2015) concluded there is 'Moderate to high quality evidence shows that community-based rehabilitation has a positive impact on people with disabilities' https://campbellcollaboration.org/library/community-based-rehabilitation...
- 14. Susan Leibtag: The latest Compass Trending Topic covers resources for social and behavior change in the area of community engagement https://is.gd/xaXnqY
- 15. Rachael Deussom https://hrh2030program.org/a-vision-for-professionalizing-community-heal...
- 16. Sunanda Kolli Reddy, India: 'Sharing a weblink hoping you will find it useful as evidence, even though it may not be high on the heirarchy of evidence. http://www.millenniumvillages.org/uploads/ReportPaper/1mCHW_TechnicalTas... The appendix is particularly about the evidence base.
- 17. Rebecca Furth: Case studies of large-scale CHW programs by Perry et. al. 2017. https://www.chwcentral.org/case-studies-large-scale-community-health-wor...
- 18. Rebecca Furth: Factors enabling community health workers and volunteers to overcome sociocultural barriers to behaviour change: meta-synthesis using the concept of social capital. By Mohajer and Singh.
 2018. https://www.chwcentral.org/sites/default/files/untitled.pdf
- 19. Rebecca Furth: Can a community health worker and a trained traditional birth attendant work as a team to deliver child health interventions in rural Zambia? By Yeboah-Antwi et. al.
 - 2014 https://www.chwcentral.org/sites/default/files/CHW_TBA_Team_Zambia_2014.pdf

- 20. Rebecca Furth: You also might be interested in the feature on CHWs in occupied Palestine recently published in the CHWs and health equity feature series; click here: https://www.chwcentral.org/blog/community-health-work-under-occupation-t...
- 21. Sunanda Kolli Reddy: an evidence-based policy brief from a project (ANCHUL) by IIPH Delhi, (PHFI) where the team adopted principles of Implementation research to identify optimal approaches for a particular setting with the principal objective to develop intervention targeted towards ASHA workers (CHW) for improved processes to optimize or enhance their work performance https://phfi.org/wp-content/uploads/2019/06/anchul_4_page_policy_brief-...
- 22. Neil Pakenham-Walsh: CITATION: Rieger M, Wagner N, Mebratie A, Alemu G, Bedi A. The impact of the Ethiopian health extension program and health development army on maternal mortality: A synthetic control approach.Soc Sci Med. 2019 Jul;232:374-381. doi: 10.1016/j.socscimed.2019.05.037. Epub 2019 May 22.
- 23. Sunanda Kolli Reddy: on behalf of Dr. Suparna Ghosh (HIFA member) https://phfi.org/wp-content/uploads/2019/06/ANCHUL-Toolkit-Final.pdf
- 24. Supervision of Task-Shared Mental Health Care in Low-Resource Settings: A Commentary on Programmatic Experience. Christopher G. Kemp, Inge Petersen, Arvin Bhana, Deepa Rao. Global Health: Science and Practice,2019
 http://www.ghspjournal.org/content/7/2/150
- 25. Martin Carroll: Kumar M B, Madan J J, Aching M M, Limato R, Nima S, Kea A Z, Rex Chikaphupha K, Barasa E, Taegtmeyer M Is quality affordable for community health systems? Costs of integrating quality improvement into close-to-community health programmes in five low-income and middle-income countries BMJ Global Health. 2019 https://gh.bmj.com/content/4/4/e001390
- 26. BMC Health Serv Res. 2018 Jun 14;18(1):446. doi: 10.1186/s12913-018-3213-8.What are the effective elements in patient-centered and multimorbidity care? A scoping review. Poitras ME1, Maltais ME2, Bestard-Denommé L3, Stewart M3, Fortin M2
- 27. Rebecca Furth: State approaches to certification and CHW leadership in certification processes in the US try:

 https://www.chwcentral.org/community-health-worker-chw-certification-and...

 https://www.chwcentral.org/community-health-worker-credentialing-state-a...
- 28. Rebecca Furth, USA: I pulled this resource from CHW Central on CHW Certification in the US which might interest you: https://www.chwcentral.org/community-health-worker-training-and-certification-programs-united-states-findings-national-survey).
- 29. Sian Williams: https://www.bmj.com/content/365/bmj.l2391/rapid-responses
- 30. Neil Pakenham-Walsh: Health Informatics Forum e-Seminar: Dr Niall Winters and Dr Judith McCool Forum: https://healthinformaticsforum.com/) In this webinar, recorded on 4 June 2019, HIFA CHW working group member Niall Winters (University of Oxford) discusses the use of mobile technologies can support the training and supervision of CHWs in LMICs, drawing on empirical work in Kenya and Uganda. He also examines ongoing research into how the latest advances in artificial intelligence may be leveraged to support exploratory learning by CHWs during their day-to-day work. The work includes 'the ability to recognise naturalistic reactions in virtual reality spaces'.

- 31. Primary healthcare is cornerstone of universal health coverage BMJ 2019; 365 doi: https://doi.org/10.1136/bmj.l2391 (Published 03 June 2019) BMJ 2019;365:l2391 Correspondence to: A Bingawaho abinagwaho@ughe.org
- 32. Nandita Thatte: An Evidence Brief highlighting CHWs as a High Impact Practice for FP services [https://www.fphighimpactpractices.org/briefs/community-health-workers/].
- 33. Nandita Thatte: The Family Planning Training Resource Package a useful tool when designing training module for various service providers including CHWs [https://www.fptraining.org/].
- 34. Nandita Thatte: The WHO task sharing guidelines to optimize health worker roles for maternal and newborn health provide a comprehensive look at WHO recommendations for addressing global health worker shortages

 [https://www.who.int/reproductivehealth/publications/maternal_perinatal_h.... The Guideline is offered in an interactive format [https://optimizemnh.org/] that outlines the ranges of services WHO recommends for various health workers. A summary specific for family planning has also been developed and can be found on the WHO website here [https://apps.who.int/iris/bitstream/handle/10665/259633/WHO-RHR-17.20-en....
- 35. Amelia Plant, Tunisia: 'China's first CHWs from the 1950s were called "barefoot doctors" (https://www.who.int/bulletin/volumes/86/12/08-021208/en/). CHWs were integral to the success of the Matlab, Bangladesh studies in the 1970s that helped to spread contraceptive use globally (https://www.icddrb.org/research/platforms/field-sites/more-on-matlab).
- 36. Amelia Plant: Luis Tam and Muluken Melese's April 2019 piece in John's Hopkins' Global Health NOW Newsletter https://www.globalhealthnow.org/2019-04/community-health-workers-and-vol...
- 37. Susan Leibtag, USA: 'The latest Compass Trending Topic covers resources for social and behavior change in the area of community engagement we invite you to review the page and contribute your own resources to this list. https://is.gd/xaXnqY '
- 38. Sunanda Kolli Reddy, India: 'Sharing a weblink hoping you will find it useful as evidence, even though it may not be high on the heirarchy of evidence.

 http://www.millenniumvillages.org/uploads/ReportPaper/1mCHW_TechnicalTas... The appendix is particularly about the evidence base. An excellent project on scale, the 1 million Health workers project, shows the way. However, my main reservations about saying it can be replicated to optimise CHW programs to meet the goal of UHC are twofold. 1. It had a huge budget (more than the annual health budget of many LMIC) that may pose a problem in sustainability when such an investment is not possible. 2. This Columbia University project was not built into the existing Health Systems in a way that we could say is cost effective. Stand alone vertical programs in a project mode have good pre-job training, effective evaluation and monitoring mechanisms throughout the duration of the project, and above all, a decent remuneration to ensure there is no attrition in numbers. (The challenges will come to the fore once the external funding ceases). Having said that, there are a lot of lessons for countries that wish to prioritise CHW programs to strengthen the efforts towards UHC.'

Profiles of contributors

HIFA profile: Owolabi Sunday Adebayo is a Health Officer (CHW) with special interest in Herbal medicine at Ilera Eda Herbal World in Nigeria. Professional interests: Trained Community Health Extension Worker, has cert in Health Administration and Mgt and a Bsc in Health Edu. Professional interest in Traditional medicine. I operate a traditional medicine center, produce Herbal medicine.... currently treating patients with High blood pressure, stroke and breast cancer. Email address: oasisofcreative AT yahoo.com

HIFA profile: Tijani Musibau Akande is Community Health Officer at the Ministry of Health, Ogun State, Nigeria. Professional interests: Primary Health Care and Community Health. tijanimao AT gmail.com

HIFA profile: Joseph Ana is the Lead Consultant and Trainer at the Africa Centre for Clinical Governance Research and Patient Safety in Calabar, Nigeria. In 2015 he won the NMA Award of Excellence for establishing 12-Pillar Clinical Governance, Quality and Safety initiative in Nigeria. He has been the pioneer Chairman of the Nigerian Medical Association (NMA) National Committee on Clinical Governance and Research since 2012. He is also Chairman of the Quality & Performance subcommittee of the Technical Working Group for the implementation of the Nigeria Health Act. He is a pioneer Trustee-Director of the NMF (Nigerian Medical Forum) which took the BMJ to West Africa in 1995. He is particularly interested in strengthening health systems for quality and safety in LMICs. He has written Five books on the 12-Pillar Clinical Governance for LMICs, including a TOOLS for Implementation. He established the Department of Clinical Governance, Servicom & e-health in the Cross River State Ministry of Health, Nigeria in 2007. Website: www.hriwestafrica.com Joseph is a member of the HIFA Steering Group: http://www.hifa.org/people/steering-group jneana AT yahoo.co.uk

HIFA profile: Faith Atai is a Health Inspector at Soroti Municipality in Uganda. Professional interests: Working with grass root community health workers to protect, preserve and promote health. Email address: ataifaith AT @gmail.com

HIFA profile: Mohammad Ali Barzegar is an initiator of Primary Health Care in Iran since 1971, and Representative of People's Health Movement (PHM) Iran. His interest include 45 years of national & international experiences on PHC, Sustainable Development and Public Health. barzgar89 AT yahoo.com

HIFA profile: Ndemere Rukara Benon is a Senior Environmental Health Officer at Uganda Prisons Service in UGANDA. Professional interests: Community based health programming, monitoring, evaluation and financing. Email address: ndemereb76 AT gmail.com

HIFA profile: Hector Carrasco* is a medical doctor and DrPH Candidate at Harvard T.H. Chan School of Public Health. he.carrasco03 AT gmail

HIFA profile: Martin Carroll was previously Head of the International Department at the British Medical Association, London UK, and has worked on issues affecting health in LMICs since 2003. He represented the BMA on the HIFA Steering Group from 2008-16 and is now an independent adviser to the group. martin_c63 AT hotmail.com

HIFA profile: Stuti Chakraborty is an undergraduate student from Christian Medical College, Vellore. Areas of interest: 1) Disability prevention and awareness; 2) Community based rehabilitation; 3) Research on NCDs; 4) Neurosciences (Brain Injury and CVA); 5) Sexual and Reproductive Health Rights of Women with disabilities; 6) Gender inequality and disability. stutibb@gmail.com

HIFA profile: Kenneth L Chanda is Associate Consultant and Lecturer at National Institute of Public Administration where he is lecturing in Records Management. He is co-author of The development of telehealth as a strategy to improve health care services in Zambia. Kenneth L. Chanda & Jean G.

Shaw. Health Information & Libraries Journal. Volume 27, Issue 2, pages 133139, June 2010. He recently retired as Assistant Medical Librarian at the University of Zambia. klchanda AT gmail.com

HIFA profile: Huib Cornielje is director of Enablement, The Netherlands. Professional interests: Disability and Development - rehabilitation\ Community Based Rehabilitation Impact studies Monitoring and evaluation. h.cornielje AT enablement.nl

HIFA profile: Nicholas Cunningham is Emeritus Professor of Clinical Pediatrics & Clinical Public Health at Columbia University, New York, USA. He is interested in International Primary Maternal and Child Health Care, community owned, professionally overseen, and supported by \$/power interests, encorporating integrated cure/prevention, midwifery/child care, child saving/child spacing, nutrition/infection, health/education (especially female), monitored but not evaluated for at least 5-10 years, based on methods pioneered by David Morley at Imesi (Nigeria) and by the Aroles at the Jamkhed villages in Maharashtra State in India. Totatot AT aol.com

HIFA profile: Rachel Deussom is a Health Workforce Officer, CapacityPlus with IntraHealth International, USA. Her professional interests are human resources for health (HRH), mHealth, M&E, MNCH, health information systems and midwives. rdeussom AT intrahealth.org

HIFA profile: Ranti Ekpo is Program Manager/Researcher at the dRPC in Nigeria. Professional interests: Health Advocacy, Child Health, Child diarrhoea, Childhood Pneumonia, Child Nutrition, Routine Immunisation, Family Planning. ekpooy AT yahoo.co.uk

HIFA profile: Rebecca Furth is Senior Technical Advisor at Initiatives Inc., USA. Professional interests: Human Resources for Health, Community Health Worker program strengthening, Organizational capacity building, Health systems strengthening, Culture and development. She is a member of the HIFA working group on CHWs. http://www.hifa.org/support/members/rebecca-0

HIFA profile: Shabina Hussain is an independent global health consultant and is based in the USA. Professional interests: Maternal & Child Health, Family Planning, Reproductive & Sexual Health, women's rights, survival of girl child, poverty eradication, Prevention of Infectious diseases. hussain.shabina AT gmail.com

HIFA profile: Narendra Javadekar is a physician and health economist with RESPIRE in India and has a professional interest in internal medicine, health economics, and public health. Email address: narenjavdekar AT yahoo.co.in

HIFA profile: Aparna John is a researcher who works on Community Health Workers in India. Her PhD, which she successfully defended early 2018, focused on the drivers of performance of one of the CHW cadres in India: Anganwadi workers. She later worked on a FLW grant by Oxford Policy Management, funded by the Gates Foundation. She is based in Witney, Oxfordshire, UK and is keen to network with others. She is a memmber of the HIFA working group on CHWs. john.aparna AT gmail.com

HIFA profile: Catherine Kane is a member of the WHO Health Workforce team, responsible for advocacy and dissemination of the Guideline on health policy and system support to optimize community health worker programmes. She has experience with community health worker programmes at strategic and operational levels through WHO, the International Federation of Red Cross and Red Crescent Societies and at one point as a social worker supporting migrant communities. Twitter: readycat

HIFA profile: Enku Kebede-Francis (PHD, MS, MEd) is an advisor in global health governance. She has worked for the United Nations (UNESCO, UNDP, UNFPA and UNDPI); was an Assistant Professor at Tufts University Medical School/Department of Public Health; and, a Visiting Scientist at the USDA's Center for Human Nutrition Research Center for Aging and a Visiting Fellow at the

Australian National University Medical School. She also designed and implemented preventive health programs promoting women's health and tobacco cessation programs in Croatia and worked on addiction prevention programs in Florida and Massachusetts, USA. Her professional interests include preventing scurvy and childhood blindness in developing countries using micronutrients. An advocate for primary healthcare for all as a right, she published a textbook in 2010, Global health Disparities: closing the gap through good governance.

HIFA profile: Susan Leibtag is Health COMpass Curator, Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs (CCP), Health Communication Capacity Collaborative (HC3), Baltimore, Maryland, USA. www.healthcommcapacity.org www.thehealthcompass.org sleibtag AT jhsph.edu

HIFA profile: Sieglinde Mauder is Librarian at the Medical Mission Institute, Würzburg, Germany. She collects and distributes resources on HIV/AIDS, tropical diseases, humanitarian aid, health service management, e-learning for partners in developing countries. sieglinde.mauder AT medmissio.de

HIFA profile: David Musoke is a Lecturer at the Makerere University School of Public Health, Uganda. Professional interests: Malaria prevention, community health workers, environmental health, public health, disadvantaged populations. He is a member of the HIFA working group on CHWs.

HIFA profile: Flata Mwale is a Student at the College of Medicine, University of Malawi. Professional interests: Health systems strengthening and health policy. Advocacy for equity and equality in access, utilization and distribution of health care. Email address: fltmwale AT gmail.com

HIFA profile: Alison Nicholls works at Trinity College, Oxford, UK. alison.nicholls AT trinity.ox.ac.uk

HIFA profile: James O'Donovan is a doctor and a DPhil candidate at Oxford University, UK. His research interests include the use of mobile phones for community health workers in low- and middle-income countries. He is a member of the HIFA working group on CHWs.

HIFA profile: Stephen Okeyo is the Dean at Great Lakes University of Kisumu-Tropical Institute of Community Health and Development (TICH) in Kenya. Professional interests: Reproductive Health; Public/Community Health (community based approaches); Health Policy and Systems; Quality of care; Academic Management and Leadership; Research Email address: okeyo2012 AT gmail.com

HIFA profile: Neil Pakenham-Walsh is coordinator of the HIFA global health campaign (Healthcare Information For All - www.hifa.org), a global community with more than 19,000 members in 177 countries, interacting on six global forums in four languages. Twitter: @hifa_org FB: facebook.com/HIFAdotORG neil@hifa.org

HIFA profile: Bryan Pearson was editor/publisher of Africa Health journal for 40 years before passing ownership across to ACHEST in Kampala. He now works as a freelance consultant on health and associated issues; as well as tending a mango and pineapple farm in Ghana's Volta Region.

HIFA profile: Amelia Plant is a consultant in sexual & reproductive health research & practice. Projects have included: managing grants to African-based organizations that distribute contraceptives at the community level; surveying the data that links contraceptive use and fertility decline with economic development; co-authoring an online abortion course; and coding and analyzing qualitative data about LGBTQ experiences. Amelia is a member of both the HIFA project on community-health workers and the HIFA project on family planning.lnbsp; She is originally from the USA and is currently based in Tunis, Tunisia. She is a member of the HIFA working group on Family Planning and the HIFA wg on Community Health Workers.

HIFA profile: Ruwan Ratnayake is a epidemiologist and PhD candidate with LSHTM, was previously the epidemiologist for the International Rescue Committee and others, and is from Canada. He is interested in CHWs and NCDs and CHWs and surveillance, both within the context of humanitarian crises and large-scale epidemics. Email address: ruwan.epi AT gmail.com

HIFA profile: Sunanda Kolli Reddy is a Developmental Paediatrician from New Delhi, India, with a special interest in Early Child Care and Development of children with neurodevelopmental problems in underserved communities. She is actively involved in health promotion, community-based research, care provider training for promoting abilities of children with special needs, through the various programmes of Centre for Applied Research and Education on Neurodevelopmental Impairments and Disability-related Health Initiatives (CARENIDHI), which she heads (www.carenidhi.org). Her work in the community settings to widen the disability-in-development model of CBR encompasses the wider determinants of health and human capabilities and issues which impact the lives of the poor. She combines her experience in developmental paediatrics with the core work of CARENIDHI's grassroots convergence programmes in partnership with groups working in the area of Implementation research and policy. She is a member of the HIFA working group on Community Health Workers.

HIFA profile: Maryam Rumaney currently works as a freelance scientific and English language editor. In addition, she offers consulting services to the laboratory industry.

HIFA profile: Toumzghi Sengal is a physician assistant and currently works as editor and free lance consultant in Eritrea and East Africa region. toumzghisen11 AT gmail.com skype:toumsen13 He is a HIFA Country Representative

CHIFA profile: Massimo Serventi is a long-standing Pediatrician working in Africa since 1982. He currently works on a volunteer basis in an excellent missionary/credited hospital in north Uganda, St. Mary's Hospital-Lacor-GULU. He has worked for several NGOs in 6 African/2 Asian countries. His interests include clinical and community pediatrics, adherence to clinical guidelines and school education as the major determinant of good health. massimoser20 AT gmail.com

HIFA profile: Kausar Skhan is with the Community Health Sciences Dept of Aga Khan University, Karachi, Pakistan. kausar.skhan AT aku.edu

HIFA profile: Anbreen Slama-Chaudhry is a medical doctor, NCDs Management Consultant & Patients Health Advisor, Patients-Communities Health Empowerment & Capacity Building, Switzerland / Egypt. https://medicaltrainingservices.ch/home/ anbreen.slama.chaudhry AT medicaltrainingservices.ch

HIFA profile: Daniel Stern is a HIFA Representative and member of the mHIFA WG. He is a member of Uganda MCH TWG. Daniel is Co-founder of the educational NGO Uconnect, and of the Innovation Hub, Hive Colab, and is also Cofounder of ISOC Uganda and Uganda IXP. He is a UN WSA National Expert. His Uconnect team distributes off-line E-Learning content, including Hesperian Health Guides to schools in East Africa since 2008. During his six-years as Lead for Uganda Mobile Monday he regularly organized events with mobile health themes, usually in collaboration with UNICEF's Uganda team, and their pan African IntraHealth efforts to improve interoperative healthcare systems, both within and between countries,in mHero, such that developer- entrepreneurs's apps would align with the latest trends by MoH policies. http://www.hifa.org/support/members/daniel

HIFA profile: Marion Subah works for JHPIEGO in Liberia. Marion.Subah AT jhpiego.org

HIFA profile: Nandita Thatte is a Technical Officer at the World Health Organization, Geneva, Switzerland. She is a member of the HIFA working group on Family Planning.

HIFA profile: Happy Annet Walusaga is a community linkages coordinator at Makerere Joint AIDS Program in Uganda. Professional interests: breaking down medical concepts to understandable units

by the local community members in my region, hence empowering the community with knowledge to prevent HIV transmission, treatment and care, fight stigma, understand and promote as well as preventing and managing other diseases of public health importance in an all-inclusive community. email address: happyannetw AT yahoo.com

HIFA profile: Sian Williams is Executive Officer at the International Primary Care Respiratory Group in the UK. Professional interests: Implementation science, NCDs, primary care, respiratory health, education, evaluation, value, breaking down silos. sian.health AT gmail.com

HIFA profile: Dave Woods is emeritus professor in neonatal medicine at the School of Child and Adolescent Health, University of Cape Town, South Africa. He is Chairman of the Perinatal Education Trust and Eduhealthcare, both not-for-profit non-government organisations that develop appropriate self-help distance learning material for doctors and nurses who care for pregnant women and their children in under-resourced communities. He has 30 years experience as a clinical neonatologist, with particular interests in perinatal care and training of health professionals. He is currently developing paper-based continuing learning material in maternal care, newborn care, child health, and care of adults and children with HIV/AIDS. He is also participating in the design and development of wind-up appropriate health technology for poor countries. www.pepcourse.co.za pepcourse AT mweb.co.za

Note: This document represents the first of three global discussions on HIFA. It will be expanded over the coming months as we implement the second and third discussions. Join HIFA to take part! www.hifa.org