WHO guidelines on health policy and system support to optimize community health worker programmes

Planning proposal –2 December 2016

1. Background and context

- Disease burden and distribution across subgroups
- Background on the intervention or topic
- History of this guideline

Health workforce shortages, maldistribution, imbalances and quality and performance challenges represent some of the main obstacles for the scale up of essential health interventions and services. Addressing these challenges is essential for progress towards universal health coverage (UHC) and the Sustainable Development Goal 3 to "Ensure healthy lives and promote well-being for all at all ages:"[1] the health workforce underpins the proposed health goal, with a target (3c) to "substantially increase health financing, and the recruitment, development and training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States". Further, as evidenced by the recent launch of a United Nations High Level Commission on Health Employment and Economic Growth, there is also increasing recognition of the potential of the health sector to create qualified employment opportunities, in particular for women, contributing to the job creation and economic development agenda.[2]

Following decades of ebbing and flowing interest, in the last few years, there has been growing attention to the potential of various types of community health workers (CHWs) in reducing inequities in access to essential health services, particularly in under-served or excluded, vulnerable populations. The emerging WHO Global Strategy on HRH: Workforce 2030 encourages countries to adopt a diverse, sustainable skills mix, harnessing the potential of community-based and mid-level health workers in inter-professional primary care teams.

Notwithstanding, several systematic reviews and other studies have demonstrated the effectiveness of various types of CHWs in delivering a range of preventive, promotive and curative services related to reproductive, maternal, newborn and child health, [3,4,5,6,7] infectious diseases,[8] non-communicable diseases, [9,10] and neglected tropical diseases.[11] In parallel, other systematic reviews have identified the most effective policy approaches for a successful integration of health workers in health systems: these include, among others, providing CHWs with predictable financial and non-financial incentives, frequent supervision, continuous training, embedment of CHWs in health systems, with clear roles and communication channels for CHWs.[12,13,14,15] There is also substantial evidence through systematic reviews and economic evaluations that delivering essential health services through CHWs may represent a cost-effective approach in some contexts.[16,17]

2. Rationale

- Why this guideline is needed

The support for community health workers and their integration into the health system are uneven across and within countries; good practice examples are not necessarily replicated and policy options for which there is greater evidence of effectiveness are not uniformly adopted. Although they should be considered as an integral part of the health system, CHW programmes are often fraught with challenges, including: poor planning; unclear roles and education pathways; multiple competing actors with little coordination; fragmented, disease-specific training; donor-driven management and funding; tenuous linkage with the health system; poor coordination, supervision,

quality control and support; and under-recognition of CHWs' contribution. These challenges can contribute to wastage of both human capital and financial resources: many well-intentioned and performing CHW initiatives fail to be properly integrated in health systems, and remain pilot projects or small scale initiatives that are excessively reliant on donor funding. resulting in sub-standard qualifications, management and support for these cadres in many contexts. Accordingly, the performance of community health worker programmes is highly variable., hindering the full realization of their potential contribution to the implementation of health policies based on primary health care.

An unclear nomenclature and classification complicate matters further: the term "community health workers" is often used in a non-specific way, referring to a diverse typology of lay and formally educated, formally and informally assigned, paid and unpaid health workers. Even the official definition of community health workers in the International Labour Organisation (ILO) International Standard Classification of Occupation (ISCO) is fairly generic, stating that "Community health workers provide health education, referral and follow-up, case management, basic preventive health care and home visiting services to specific communities… Occupations included in this unit group normally require formal or informal training and supervision recognized by the health and social services authorities."[18] The non-specific definition of blurred boundaries between these cadres, the existence of overlapping terminology in the literature (such as "lay health workers", "frontline health workers", "close-to-community providers"), as well as widely differing policies relating to their scope of practice, education, and relation with health systems have contributed to undermining efforts to strengthen service delivery systems at community level.[19,20]

Whereas standard human resource management functions (such as formalized training, certification, payment, among others) are taken as a given for professional health workers (such as doctors, nurses and midwives), policies and practices vary enormously across countries in relation to the application of these same functions to community health workers. As community health workers undergo shorter training, have a more restricted scope of practice, and in many cases are not paid, they often exist and operate at the margins of or outside public policy, with varying (and often informal) policy arrangements around their inclusion in and support by the health systems. The value added of the guidelines rests in identifying whether similar management support systems and strategies as those offered to other cadres should also be applied to community health workers, and if so how and under what circumstances.

Various departments in WHO headquarters, regional offices, as well as country offices are engaged in CHW-related work. Existing WHO guidelines encourage the delegation of certain tasks relating to prevention, diagnosis, treatment and care, for example for HIV, and a range of reproductive, maternal, newborn and child health services (see section 5 and annex 1). However, successful implementation of these recommendations requires evidence-based models for educating, deploying, remunerating and managing CHWs to optimize their performance and contribution to the health system across various health service areas.

Many institutions provide policy recommendations (in the form of guidelines, toolkits, policy documents and other formats) on how to optimize performance of CHW programmes. These recommendations cover a range of topics, from education, motivation and performance of CHWs, to the policy and governance considerations for support by health systems. For these existing normative products, however, it is not always clear how the evidence was analysed, appraised, and considered in the formulation of these policy recommendations.

Governments, development partners, civil society organizations, research and academic institutions have expressed a clear demand for scaling up CHW programmes,[21] and committed to integrating CHW programmes in health systems and harmonizing their actions accordingly.[22] Optimizing the design and performance of CHW programmes requires streamlined nomenclature, clarity on

competencies and roles of community health workers, and agreed criteria for sustainable support by and integration in local and national health systems and plans.[23] The guidance should be based on evidence to better define factors such as the education, regulation, remuneration, performance, quality and career advancement prospects of these cadres. This is a normative vacuum that WHO is best placed to address through the development of new guidelines on health policy and system support to optimize CHW programmes.

3. Target audience

- The end-user(s) of the guideline

The primary target audience for these guidelines will be policy-makers, planners and managers responsible for health workforce policy and planning at national and local levels that rely on CHWs for the delivery of health services.
Secondary target audiences include development partners, funding agencies, global health initiatives, donor contractors, NGOs and activists who fund, support, implement, and/ or advocate for the greater and more efficient involvement of CHWs in the delivery of health services.

4. Persons affected by the recommendations

- Service users, patients, populations affected by the recommendations in the guideline

The scope and penetration of CHW programmes is extremely variable across and within countries. While reliable and comprehensive data for these cadres do not exist for the majority of WHO Member States, these cadres are most commonly employed in the context of primary health care services, particularly in expanding access to essential health services in under-served areas, including rural and remote areas, marginalized populations, pastoralist and nomadic communities, and urban slums.
The most significant beneficiary group of these guidelines, beyond CHWs themselves, are therefore the individuals and communities living in these contexts, who often lack equitable access to primary health and other services and consequently lag behind in terms of health service coverage and health outcomes, as well as development outcomes more broadly. The guidelines therefore have a potential to contribute to the reduction of inequities among these populations by strengthening the competencies, motivation, performance and management of CHWs and programme sustainability which in turn can improve effective service coverage of essential health interventions.

5. Related guidelines and tools

- WHO guidelines related to the current guideline
- Relevant guidelines produced by external organizations

There is currently no published WHO guideline providing guidance to policy-makers planners and managers on health policy and systems interventions to optimize CHWs programmes. Several WHO and joint WHO/ UNICEF guidelines and policy recommendations exist, however, that relate either to certain specific elements of the health workforce discourse and evidence at large, or that examine the specific potential role of CHWs in the context of delivery of specific health services. The health workforce – specific guidelines provide recommendations on some related aspects (such as education and retention in rural areas) although they are focused on health workers in general or particularly on health professionals. The extensive list of other WHO guidelines illustrate the very broad range of thematic areas where CHWs have been identified as a possible vehicle for delivery of services. This guideline will add value to existing normative guidance of WHO by providing a structured framework for the design and management of CHW programmes, which can improve the effectiveness of these cadres, contributing to greater impact across different service delivery priorities.
The focus of the guidelines is not dissimilar from non-WHO tools that, similarly, aim to inform the design of CHW programmes; however the WHO guideline will add value by providing a more objective and evidence-based approach to the formulation of recommendations.

The main WHO guidelines and tools that are partly related to the topic include:

Increasing access to health workers in remote and rural areas through improved retention (WHO HWF, 2010)

These policy recommendations outline policy options for maximizing the retention of health workers in rural and underserved areas; they can be used in conjunction with other WHO resources, such as the WHO Global Code of Practice on the International Recruitment of Health Personnel. The guideline includes contextually relevant recommendations, encompassing a bundle of interventions on education, regulation, financial incentives, and personal and professional support. http://www.who.int/hrh/retention/guidelines/en/.

Transforming and scaling up health professionals' education and training (WHO HWF, 2013)

These guidelines set out a vision of scaling up the training and education for the health professions while transforming them by producing graduates that are responsive to the health needs of the populations they serve. The guideline recommendations encourage educational and training institutions to foster institutional and instructional reforms, and to enhance the interaction and planning between education, health and other sectors.

(http://www.who.int/hrh/education/en/ and http://whoeducationguidelines.org./content/guidelines-order-and-download)

Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection (WHO HIV, 2016) and Optimizing health workers' roles for maternal and newborn health (WHO RHR, 2012)

The guidelines for task sharing and delegation provide countries with the guidance on how to most efficiently and rationally use a more diverse skills mix for the delivery of essential HIV/ AIDS and maternal and newborn health (MNH) services.

http://www.who.int/hiv/pub/arv/arv-2016/en/ andhttp://www.optimizemnh.org/

ENGAGE-TB Approach: integrating community-based tuberculosis activities into the work of nongovernmental and other civil society organizations (WHO TB, 2012)

The documents guides the integration of TB activities into the work of CHWs and community volunteers working on other health and development themes through close collaboration between the public sector and non-governmental organizations and with standardized indicators for the national monitoring and evaluation systems.

http://apps.who.int/iris/bitstream/10665/75997/1/9789241504508_eng.pdf**The community health worker. Working guide. Guidelines for training. Guidelines for adaptation (WHO, 1987)**

These guidelines date back to 1987 and provide a comprehensive overview of the possible breadth of responsibilities of community health workers in primary health care in developing countries. The document however does not reflect contemporary evidence, and it is not clear what evidence was used to inform the service delivery and training recommendations. It is therefore a document of mostly historical relevance. http://apps.who.int/iris/handle/10665/38101

Additional guidelines that refer to scope of work of CHWs from the perspective of their roles in selected programme and service delivery areas (see also annex 1).

Guidelines for training community health workers in nutrition

http://apps.who.int/iris/handle/10665/37922

WHO/WFP/SCN and UNICEF joint statement on community-based management of severe acute malnutrition

http://www.unicef.org/publications/index_39468.html

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MALARIA A manual for community health workers

http://apps.who.int/iris/bitstream/10665/41875/1/9241544910_eng.pdf

Training of community health workers and community volunteers

http://apps.who.int/iris/bitstream/10665/178160/1/9789241509176_eng.pdf

Caring for newborns and children in the community (joint WHO/ UNICEF)

http://apps.who.int/iris/bitstream/10665/204273/2/9789241549295_FacilitatorNotes_eng.pdf?ua=1

Caring for the Newborn at Home (joint WHO/ UNICEF)

http://www.who.int/maternal_child_adolescent/documents/caring-for-the-newborn-at-home/en/

Caring for the Child's health Growth and Development (joint WHO/ UNICEF)

http://www.who.int/maternal_child_adolescent/documents/care_child_development/en/

Caring for the Sick Child in the Community (joint WHO/ UNICEF)

http://www.who.int/maternal_child_adolescent/documents/caring-for-the-sick-child/en/

WHO/UNICEF joint statement on iCCM.

http://www.unicef.org/health/files/iCCM_Joint_Statement_2012(1).pdf

Revised WHO classification and treatment of childhood pneumonia at health facilities

http://www.who.int/maternal_child_adolescent/documents/child-pneumonia-treatment/en/

Guidelines - Managing possible serious bacterial infection in young infants when referral is not feasible

http://www.who.int/maternal_child_adolescent/documents/bacterial-infection-infants/en/

Community case management during an influenza outbreak - A training package for community health workers

http://www.who.int/influenza/resources/documents/community_case_management_flipbook/en/

Caring for newborns and children in the community - Planning Handbook for Programme Managers and Planners

http://apps.who.int/iris/bitstream/10665/204457/1/9789241508599_eng.pdf

Community health workers: What do we know about them?

http://www.who.int/hrh/documents/community_health_workers.pdf

WHO/ GHWA/UNICEF/IFRC/UNHCR joint statement Scaling up the community-based health workforce for emergencies

http://www.unicef.org/media/files/Scaling-up_community-based_health.pdf

Age-friendly Primary Health Care Centres Toolkit

http://apps.who.int/iris/bitstream/10665/43860/1/9789241596480_eng.pdf?ua=1

BABY-FRIENDLY HOSPITAL INITIATIVE

http://apps.who.int/iris/bitstream/10665/43593/5/9789241594981_eng.pdf

Clinical guidelines for withdrawal management and treatment of drug dependence in closed settings

http://www.wpro.who.int/publications/docs/ClinicalGuidelines_forweb.pdf?ua=1

Comprehensive cervical cancer control A guide to essential practice

http://apps.who.int/iris/bitstream/10665/144785/1/9789241548953_eng.pdf?ua=1

HIV PREVENTION, DIAGNOSIS, TREATMENT AND CARE FOR KEY POPULATIONS

http://apps.who.int/iris/bitstream/10665/128048/1/9789241507431_eng.pdf?ua=1&ua=1

the use of ANTIRET ROVIRAL DRUGS FO R TREATING AND PREVENTING HIV INFE CTION

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http://apps.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf?ua=1

the use of ANTIRET ROVIRAL DRUGS FO R TREATING AND PREVENTING HIV INFE CTION

http://apps.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf?ua=1

Guidelines on the treatment of skin and oral HIV-associated conditions in children and adults

http://apps.who.int/iris/bitstream/10665/136863/1/9789241548915_eng.pdf?ua=1&ua=1

HIV AND ADOLESCENTS: GUIDANCE FOR HIV TESTING AND COUNSELLING AND CARE FOR ADOLESCENTS LIVING WITH HIV

http://apps.who.int/iris/bitstream/10665/94334/1/9789241506168_eng.pdf?ua=1

Home visits for the newborn child: a strategy to improve survival (joint WHO/ UNICEF)

http://apps.who.int/iris/bitstream/10665/70002/1/WHO_FCH_CAH_09.02_eng.pdf?ua=1&ua=1

Infant and young child feeding

http://apps.who.int/iris/bitstream/10665/44117/1/9789241597494_eng.pdf?ua=1&ua=1

GUIDELINE Managing possible serious bacterial infection in young infants when referral is not feasible

http://apps.who.int/iris/bitstream/10665/181426/1/9789241509268_eng.pdf?ua=1

Operations Manual for Delivery of HIV Prevention, Care and Treatment at Primary Health Centres in High-Prevalence, Resource-Constrained Settings

http://www.who.int/hiv/pub/imai/om.pdf?ua=1

Optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting

http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843_eng.pdf?ua=1

Responding to intimate partner violence and sexual violence against women WHO clinical and policy guidelines

http://apps.who.int/iris/bitstream/10665/85240/1/9789241548595_eng.pdf?ua=1

Treatment of tuberculosis Guidelines Fourth edition

http://apps.who.int/iris/bitstream/10665/44165/1/9789241547833_eng.pdf?ua=1&ua=1

GUIDELINE UPDATES ON THE MANAGEMENT OF SEVERE ACUTE MALNUTRITION IN INFANTS AND CHILDREN

http://apps.who.int/iris/bitstream/10665/95584/1/9789241506328_eng.pdf?ua=1

Guidelines for the Management of Conditions Specifically Related to Stress

http://apps.who.int/iris/bitstream/10665/85119/1/9789241505406_eng.pdf?ua=1

WHO recommendations on health promotion interventions for maternal and newborn health 2015

http://apps.who.int//iris/bitstream/10665/172427/1/9789241508742_report_eng.pdf?ua=1

Non-WHO relevant guidelines and tools

In addition, several other institutions and organizations have developed tools and documents that have examined similar or related issues. Below is a list of some of the most significant ones.

USAID Community Health Worker Assessment and Improvement Matrix (CHW AIM): A Toolkit for Improving CHW Programs and Services (USAID, 2013)

This toolkit provides a structured approach to assess the functionality of CHW programmes, and provides implicit policy recommendations on their desirable features by defining best practices across several domains of performance of CHW programmes, including: recruitment criteria, CHW roles, initial and continuing training, equipment and supplies, supervision mechanisms, performance management, incentives, community involvement, referral systems, opportunities for career advancement, documentation and information management, linkages to health systems, programme performance, and country ownership.

http://www.who.int/workforcealliance/knowledge/toolkit/CHWAIMToolkit_Revision_Sept13.pdf

USAID community health framework (USAID, 2015)

This framework outlines a conceptual model and relevant criteria to assess, design and improve the performance of health interventions delivery at the community through active involvement of the community. It contains implicit recommendations on desirable features of programmes that rely on CHWs. http://mpoweringhealth.org/the-community-health-framework/

Developing and Strengthening Community Health Worker Programs at Scale (USAID, 2014)

This reference guide provides programme managers and policy makers with recommendations on selection, recruitment, training, management and supervision of CHWs, and on integration in health systems and scale-up of CHW programmes.

http://www.mchip.net/sites/default/files/mchipfiles/MCHIP_CHW%20Ref%20Guide.pdf

Community-based worker systems. Guidelines for practitioners (DFID, 2007)

The purpose of these guidelines is to assist practitioners and implementing partners to run CHW systems more effectively, maximising impacts for clients of the service, empowering communities, empowering the CBWs themselves, and assisting governments to ensure that services are provided at scale to enhance livelihoods. They contain policy recommendations on role of CHWs, recruitment processes, training, equipment, support, supervision, accountability and referral, learning, coordination and partnership. The guidelines are based on experience in 4 African countries.

http://r4d.dfid.gov.uk/PDF/Outputs/Citizenship/8354_CBW_Guidelines.pdf

6. Goal and objectives

- Goal of this guideline
- Specific objectives

The overall goal of this guideline is to assist national governments as well as national and international partners to improve the design, implementation, performance and evaluation of CHW programmes, contributing to the attainment of universal health coverage.

The specific objectives of this guideline are to:

i. Provide recommendations in the areas of CHW selection, education, continuing training, linkage with other health workers, management, supervision, performance enhancement, incentives, remuneration, governance, health system integration;
ii. Identify relevant contextual elements, implementation and evaluation considerations at the policy and systems level;
iii. Suggest tools to support the uptake of the recommendations at the country level in the context of the planning and implementation of CHW programmes;
iv. Identify priority evidence gaps to be addressed through further research.

7. Contributors to guideline development

- Steering group

The Steering Group comprises representation from all 6 WHO regions and from 8 different HQ departments for which the guideline has direct relevance (health workforce, governance and financing, service delivery, HIV, TB, reproductive health research, maternal, newborn, child and adolescent health, Polio). In addition, UNICEF is also a member of the Steering Group.

- Guideline development group

The Guideline Development Group (GDG) includes health workforce and CHW experts from the academia and research community, and end-users of the guidelines – such as planners and

managers - from governments, development partners, civil society, professional associations, and a methodologist. Members were selected in order to maximize relevant expertise, and diversity in the constituencies represented, geographical origin, and gender.

The GDG will meet twice, in:

-October 2016 to agree on scope of the guidelines and to define and prioritize research questions;

-September (tentatively) 2017 to review the results of the systematic reviews, and to formulate policy recommendations accordingly.

- Systematic review team

One or more systematic review teams will be selected on the basis of a competitive tendering process based on WHO procurement guidelines. In the assessment of bids, a selection panel comprising 2 WHO staff and 1 UNICEF staff (the member of the Steering Group) will review quality and cost as per the following criteria:

- Capacity and track record of institution (20%);
- Experience of proposed personnel (30%);
- Proposed methodological approach (30%);
- Financial competitiveness (20%).

With regards to the first three criteria, the selection panel will place particular emphasis on assessing individual and institutional expertise in using GRADE and producing GRADE evidence profiles, as evidenced by a relevant track record of publication in the peer-reviewed literature. Specific expertise on the topic of CHWs and prior experience in supporting WHO guideline development processes will represent a considerable asset.

- External review group

The External Review Group (ERG) will be composed of some 20 persons drawing a similar range of constituencies, encompassing health workforce experts, CHWs experts, Human Resources for Health (HRH) and CHW planners, managers and advocates. The network of existing groups and networks on CHWs will be canvassed by the HWF department of WHO and other members of the Steering Group to verify interest and availability, ensuring regional, constituency and gender balance. The composition of the ERG will be determined following the first GDG meeting, with inputs from GDG members.

- Stakeholders, including service users
- External partners

In addition to the institutions and individuals involved in the Steering Group, GDG and ERG, a wide range of partners and stakeholders have an interest in, and can provide useful inputs into, the conceptualization and peer-review of the guidelines. Their engagement in the guideline development process can also be instrumental in maximizing ownership and uptake of the guidelines recommendations once these are developed, as evidence shows that the early involvement of decision-makers and stakeholders in the setting of research priorities can be instrumental in scaling up and utilizing research results.[24]

To this end, WHO has organized a public consultation process (both physical and virtual) to invite inputs that can inform the conceptualization and the peer review of the guidelines, and to build awareness of and momentum for the process, laying the grounds for a broader uptake and enhanced implementation and consistent use once the guideline is developed. The results of these public consultation processes were synthesized by the RTO and presented to the GDG meetings as an input into their deliberations.

The finalization of the PICO questions and the formulation of recommendations will remain the exclusive prerogative of members of the GDG.

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8. Management of the guideline development group

- Selection of the chair, vice-chair
- Group processes and decision-making

The GDG will have two co-chairs: one will be the guideline methodologist, and the other one will be appointed by the Secretariat on the basis of relevant capacity and track record.

Group process for prioritizing recommendation questions: The refinement of the recommendation questions during the first GDG meeting will be done using, when relevant, a Delphi approach. Delphi is based on the principle that forecasts (or decisions) from a structured group of individuals are more accurate than those from unstructured groups. The GDG members will debate questions, and – when needed to move towards a consensus - take decisions on relevance or focus of research questions in two or maximum 3 rounds. During Delphi processes, the range of the answers tends to decrease and the group converges towards the "correct" answer. The Delphi process will therefore be used as may be needed as a tool to improve quality of prioritization and decision-making and to accelerate progress towards consensus; it will not replace the GDG decision-making rules outlined below.

All decisions will be reached by discussion and consensus on recommendations, including their strength, and where appropriate, as well as the conditions to be attached to the recommendations. Consensus will be defined as support by a majority of the GDG, without any member of the GDG expressing substantial reservations or objections. In the event of significant objections emerging from GDG members, disagreements will be resolved by discussion and redrafting recommendations and rationale. In the case of persistent divided opinions among the GDG, the co-chairs will work with the Secretariat to attempt to develop proposals which represent an acceptable synthesis of all the perspectives represented in the GDG. If, despite all reasonable attempts to reach a common position, there is no consensus in the Guideline Development Group on a particular recommendation, a decision will be made by vote.
In the case of decisions made by vote, the recommendation of the majority will be adopted, but the minority view, together with its rationale, will also be recorded in the guidelines. Only the actual members of the Guideline Development Group will take part in voting decisions, whereas observers and WHO Secretariat staff will not. In the unlikely event of a tied vote within the GDG, the two co-chairs will be requested to identify a solution or break the tie by consensus between the two of them.

9. Conflict of interest

- Collecting disclosures of interest
- Assessing disclosures of interest
- Managing conflicts of interest
- Confidentiality agreement

All matters pertaining to conflict of interest will be handled according to the relevant WHO policies and procedures, including the revised Guidelines for Declaration of Interests (WHO Experts) issued by the WHO Office of Compliance, Risk Management and Ethics (CRE). All members of the GDG were requested to provide a declaration of interest (DOI) identifying any personal or financial interests. Identified interests were managed in accordance with WHO standard procedures and legal advice will be sought, if required. All GDG (as well as the External Peer Review group) members were required to complete the conflict of interest assessment before the initial GDG teleconference or meeting. Also the members of the systematic review team will undergo the same process of declaration of interest for external experts. The RTO, in consultation with the Steering Group, will review and assess the declarations submitted by each member, and determine, in consultation with the director of the HWF department and the GRC Secretariat, whether any identified conflict warrants one of several actions: (exclusion from the panel; exclusion from one or more topic areas;

inclusion in all of evidence review sessions, but exclusion from final voting on recommendations; no action required). The Responsible Technical Officer (RTO) will perform a search of relevant information on candidates to serve on the GDG and ERG, and prepare, in collaboration with the SG, a Note for the Record following the review and assessment of the DOI forms. In addition, all potential GDG members will be asked to complete a one page summary of background, recent relevant publications and grants to inform other panel members of areas of expertise and current activity in the area, and to ensure transparency regarding academic interests. There will be a public notice and comment period, including the publication for at least 14 days of names and the brief biography of potential members of the GDG on the WHO website, together with a description of the objectives of the meetings for which such individuals are being considered. Comments received by the public on the individuals considered for membership of the GDG will be kept confidential. Comments that are deemed to indicate a significant conflict of interest will generally be shared in writing and verbatim only with the potential GDG member about whom the comments were made.
Individuals found to have a conflict of interest, financial or non-financial, will be excluded from the GDG, or, as relevant, from participation on any topics where interests are conflicting. The management of conflicts of interest will be a key task throughout the process, with particular attention for the appraisal of evidence, the formulation of recommendations and the external peer review process of the drafted guidelines.
There will be an agenda item "Conflicts of Interests" at the beginning of the first GDG meeting. To ensure transparency is maintained, the details of each member association with commercial organizations (for personal or financial interests within the last year), as well as academic interests, will be shared with other members in the group, and the member being reviewed will be asked to confirm the validity of the declarations upon disclosure. A summary of relevant declared conflicts of interest of GDG members will be mentioned in the guidelines publication as well as their handling.
The completed declaration of interest forms will be kept confidential at WHO in the custody of the Responsible Technical Officer (RTO) for 10 years, and will not be distributed or made public.

10. Formulating key questions

- Background questions
- Foreground (key/PICO) questions
- Important and critical outcomes

The formulation of recommendation questions will proceed in iterative steps, with the initial proposals from the Steering Group (reflected in this document) progressively refined and prioritized through a public hearing, the development of a scoping review, and the first GDG meeting.
The definition of appropriate and answerable recommendation questions must acknowledge that the determinants of the performance of CHW programmes lie in both health sector actions and in community actions, at both the programme and system levels (figure 1).[25]

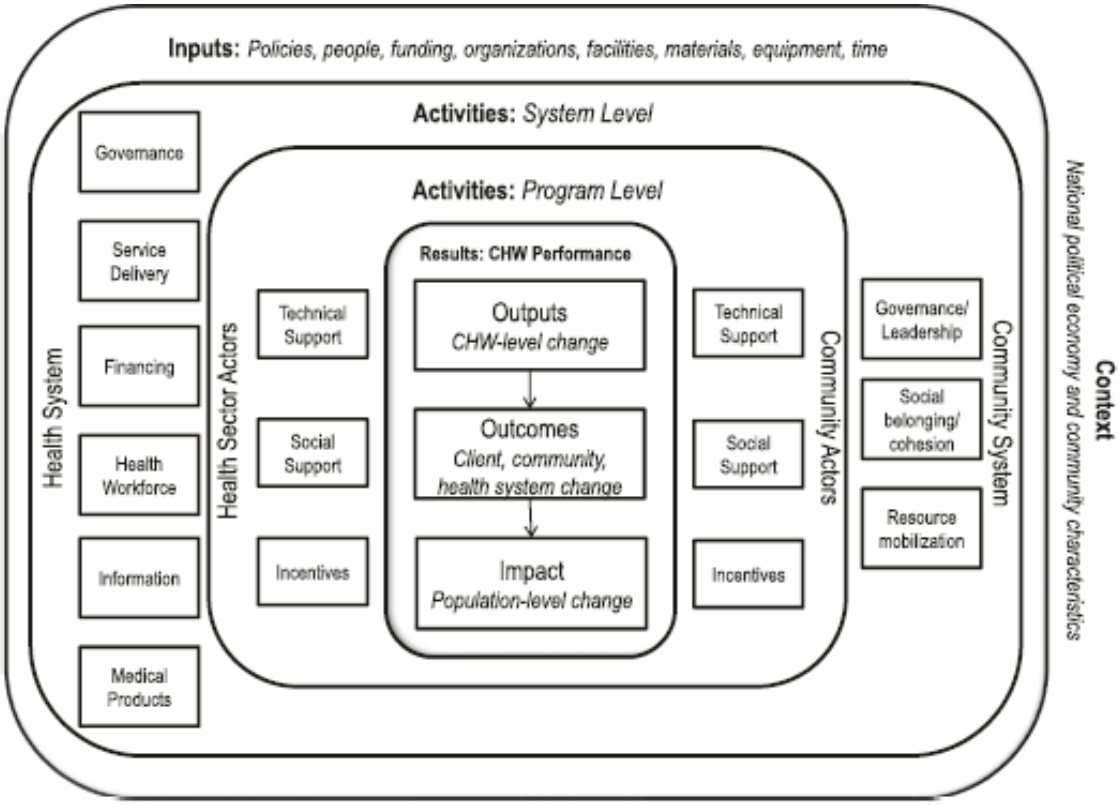


Figure 1: CHW logic model (Source: Naimoli et al, HRH Journal, 2014)

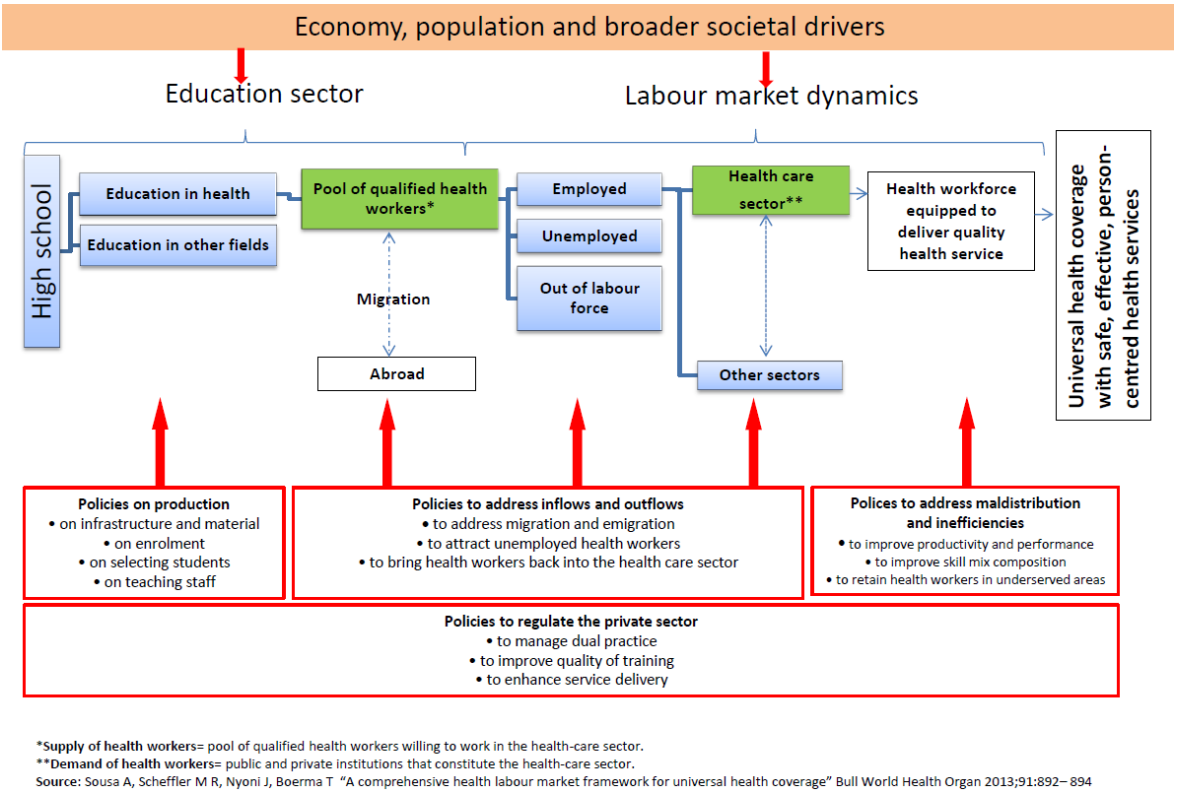
Further, it is critical to adopt an outcome framework that recognizes different possible levels of outcomes relating to CHW interventions, [ibidem] at the health worker, health system and population level (table 3). For instance, improved knowledge and expertise of health workers will result in improved quality of care. Improved motivation and reduced absenteeism will result in a greater number of patients cared for. In turn, improved coverage of services – both in quantitative and qualitative terms – will result in changes in health outcomes. While this model is specific to CHWs, it is consistent with published literature that has established a link between health workforce availability, service coverage and health outcomes.[26,27]

Results	Measures	Definition
Outputs changes at CHW level	Knowledge	Degree to which the CHW has the theoretical or practical understanding of the function and tasks assigned to him/her
	Competencies	Degree to which the CHW has the skills necessary to carry out the tasks assigned to him/her
	Motivation	An individual's degree of willingness to exert and maintain effort on assigned tasks
	Morale	The mental and emotional condition (as of enthusiasm, confidence, etc.) of an individual CHW with regard to the function or tasks at hand
	Satisfaction	Degree to which CHWs derive personal satisfaction from serving the community, providing good quality services
	Absenteeism	Rate at which those CHWs who are supposed to be delivering services habitually fail to appear to carry out their tasks
	Service delivery	Quantity and quality of promotional, preventive, and curative services CHWs provide to community members
	Responsiveness	The degree to which an individual CHW responds to the needs of an individual client or group within a reasonable time period
	Productivity	A CHW's total output per unit of total input
	Attrition	The rate at which practicing CHWS resign, retire, or abandon their

		positions over time
	Advancement	The rate at which CHWs are advancing in their skills, competencies, formal responsibilities, and formal status within the community and the formal health system over time
Outcomes CHW- attributable changes at patient, community l or health system evel	Access	Client's physical and social access to essential services delivered by CHWs
	Coverage	The coverage of selected health services among the population served by CHWs
	Quality	The quality of services rendered by CHWs
	Health care-seeking behaviour	Client in need of essential services and with access to CHWs is routinely seeking and using promotional, preventive and/or curative services CHWs offer
	Health-promoting behaviour in home	Client has adopted health-promoting behaviours in the home as a result of contact with CHWs
	Satisfaction	Client's reported degree of satisfaction with the services rendered by CHWs
	Cost savings	Money not spent by client that he/she otherwise would have spent (on transportation and other items) in the absence of a CHW
	Patient health	Change in client's state of illness, wellness, survival
Impact CHW attributable changes at population level	Morbidity	Change in the prevalence of serious illness in the population served by CHWs
	Mortality	Change in the level of mortality in the population served by CHWs
	Fertility rate	The ratio of live births in a CHW-served area to the population of that area expressed per 1,000 population per year
	Equity	Degree to which access, coverage, or morbidity/mortality levels vary among different socio-economic or socially defined sub-groups in the population served by CHWs

Table 3: outcome framework of CHW programmes (Source: Naimoli et al, adapted)

In this context, the performance of CHW programmes is not considered in a narrow sense in terms of service coverage and/ or health outcomes, but also considering broader system implications, including, among others, health workforce competencies, motivation, attrition, retention.
In formulating the PICO questions, interpreting the results and developing recommendations, the GDG took into account a broad system perspective, reflecting on policy implications in terms of both the education and health labour market forces that determine CHW availability, accessibility quality and performance (Figure 2). The systematic review teams will identify for each question outcomes drawn from the above outcome framework. In the unlikely event that more than 7 outcomes are reported for any individual questions, the GDG will be requested to prioritize the outcomes of greatest relevance to each question.



*Supply of health workers= pool of qualified health workers willing to work in the health-care sector.
**Demand of health workers= public and private institutions that constitute the health-care sector.
Source: Sousa A, Scheffler M R, Nyoni J, Boerma T "A comprehensive health labour market framework for universal health coverage" Bull World Health Organ 2013;91:892– 894

Figure 2. Policy levers to shape health labour markets (Source: adapted from Sousa et al., 2013.)

As part of the scoping of the literature, and of the writing of the introduction to the guidelines, some background (non-recommendation) questions will be considered, including the prevalence and penetration of CHW programmes, roles and tasks they normally perform, issues concerning metrics and health workforce information systems for CHW, costing of CHW programmes, among others.

The foreground questions will be structured Population, Intervention, Control, Outcome (PICO) questions, all applied in the setting of rural or otherwise under-served communities. As part of the systematic review processes, an attempt will be made to assess whether the evidence can be disentangled according to different typologies of CHWs and the roles that they are expected to perform in the health system; and according to different country and socio-economic contexts (e.g. by income level groupings).

Accordingly, for each PICO question, the systematic reviews will be conducted attempting to stratify the evidence according to a range of parameters relating to the typology of CHWs under consideration (including the length of their pre-service training; scope of practice; full-time vs. part-time nature of their engagement, etc) and contextual factors (such as the socio-economic level of the countries where the evidence originates) in order that the evidence can be correctly interpreted, and recommendations contextualized accordingly.

A tentative list of the PICO questions is provided below, with the proviso that this will continue to be refined through discussions with the systematic review team. For each PICO question, multiple outcomes will be selected recognizing the multi-layered outcome framework above. Relevant outcomes will be further prioritized in case the systematic review team identifies evidence on more than 7 outcomes for a given intervention; a maximum of seven outcomes per PICO question will be identified. It is anticipated that for most PICO questions evidence will be found only on some of the outcomes. It is also recognized that some outcomes can reflect more specifically the results and performance of CHW programmes, while others (such as population health and mortality) are multi-factorial

and are determined by a wider range of health system characteristics and the broader social determinants of health.

PICO 1 Selection (policy relevant question)	What essential and desirable attributes strategies should be adopted for selection of CHWs for pre-service training?
PICO 1 Selection criteria for enrolment in pre-service training (systematic review relevant question)	In CHWs being selected for pre-service training, what strategies for selection of applications for CHWs should be adopted over what other strategies?
P	CHWs being selected for pre-service training
I vs. C	Selection of applicants based on essential and desirable attributes: • Higher vs. lower literacy level • Married vs. non-married status • Female vs. male • Older vs. younger age • Membership of the target community (e.g. nomadic, people living with HIV and AIDS, cast, religion or cultural beliefs) vs. non-membership of the community
C	Control as identified above in the second part of each bullet point (following vs. of each sub-intervention)
O	Based on outcome framework, adding discrimination as an outcome
Setting	Under-served communities
Potential stratifiers:	• Volunteer vs. paid • Level of training • Polyvalent vs. monovalent • Full time vs part time Expert client/patient • Type of work (preventive/promotive versus also curative)

PICO 2 education (policy relevant question)	What is the appropriate duration of pre-service training for CHWs?
PICO 2	For CHWs receiving pre-service training, should the duration of training be

education (systematic review relevant question)	shorter versus longer?
P	CHWs receiving pre-service training
I	Shorter training (length defined in relation to the task of interest)
C	Longer training
O	Based on outcome framework
Setting	Under-served communities
Potential stratifiers:	• Volunteer vs. paid • Level of schooling (primary, secondary schooling, etc.) • Type of work (preventive/promotive versus also curative; complexity of task; emergency oriented vs. routine PHC) • Polyvalent vs. monovalent • Expert client/patient
Notes	• Link to PICO 4 (types of training: Theoretical (knowledge) and practical (skills) • Retraining and updating to ensure the person remains competent • Consider under 'implementation': certification of trainees, accreditation/approval of program, venue of training, distance learning

PICO 3 education (policy relevant question)	What competencies should CHWs acquire during their pre-service training?
PICO 3 education (systematic review question)	For CHWs receiving pre-service training, should the curriculum address specific versus non specific competencies?
P	CHWs receiving pre-service training
I	Curriculum addresses specific competencies • Biological /medical (determinants, basic notions of human physiology, pharmacology, and diagnosis and treatment) vs. not • Household level preventative behaviours in relation to priority health conditions vs. not • Education about social determinants of health vs. not • Counselling and motivation skills (including communication skills) vs. not • Scope of practice (attitude, when to refer patients, range of tasks, power relationships with the client, personal safety) vs.not • Integration within the wider system (access to resources) vs. not
C	Curriculum does not address specific competencies listed above
O	Based on outcome framework

Setting	Under-served communities
Potential stratifiers:	• Volunteer vs. paid • Level of training as CHWs (longer vs. shorter) • Type of work (preventive/promotive versus also curative; complexity of task; emergency oriented vs. routine PHC) • Polyvalent vs. monovalent • Expert client/patient
Notes	• Consider certification of trainees and accreditation/approval of program under implementation; consider venue of training, consider distance learning

PICO 4 education (policy relevant question)	What are appropriate delivery modalities for pre-service training of CHWs?
PICO 4 education (systematic review relevant question)	For CHWs receiving pre-service training, should the curriculum use specific delivery modalities versus not?
P	CHWs receiving pre-service training
I	Curriculum uses specific delivery modalities • Theoretical focused (knowledge) vs. practical focused (skills) • Face to face vs. electronic/ web-based learning • Training in or near the community vs. in health education facility away from the community
C	Curriculum does not use any specific delivery modalities
O	Based on outcome framework
Setting	Under-served communities
Potential stratifiers:	• Volunteer vs. paid • Level of training as CHWs (longer vs. shorter) • Type of work (preventive/promotive versus also curative; complexity of task; emergency oriented vs. routine PHC) • Polyvalent vs. monovalent • Expert client/patient
Notes	Options include a mix of the above interventions (ranging from apprenticeship strategies where all training is based in the practical setting to the opposite situation of a purely theoretical training) • Consider certification of trainees and accreditation/approval of program under implementation; consider venue of training, consider distance and electronic/web based learning

PICO 5 certification (policy relevant question)	Should CHWs who have received pre-service training undergo competency-based formal certification?
PICO 5 certification (systematic review relevant question)	In CHWs who have received pre-service training, should competency-based formal certification be used versus not used?
P	CHWs who have received pre-service training
I	Use of a competency-based formal certification recognized by official authorities (regulatory bodies, government authorities, academia)
C	No use of a competency-based formal certification
O	Based on outcome framework
Setting	Under-served communities
Stratifiers	• Level of training as CHWs (longer vs. shorter) • Type of regulatory authorities • Expert client/patient • Type of work (preventive/promotive versus/also curative)

PICO 6 supervision (policy relevant question)	What supportive supervision strategies can improve CHWs practice? (focus on type and modality of supervision, type of supervisor, supervision training, content and frequency of supervision)
PICO 6 supervision (systematic review relevant question)	In the context of CHWs programmes, what strategies of supportive supervision should be adopted over what other strategies?
P	Practicing CHWs
I vs. C	• Coaching vs. no coaching of CHWs • Higher vs. lower supervisory to supervisee ratio • Use vs. no use of task checklists • Dedicated vs. ad hoc supervisors • Observation at facility only vs. observation at community and facility • Peer supervision vs. expert supervision • Training vs. no training of supervisor • Higher vs. lower frequency of supervisory visits • Supervision uses observation of service delivery only vs. uses observation of service delivery and community feed-back
C	Control as identified above in the second part (following vs. of each sub-

	intervention
O	Based on outcome framework
Setting	under-served communities
Potential stratifiers	• Volunteer vs. paid • Level of training as CHWs (longer vs. shorter) • Polyvalent vs. monovalent • Full time vs part time • Expert client/patient • Type of work (preventive/promotive versus also curative)

PICO 7 (policy relevant question)	Should practicing CHWs be paid for their work?
PICO 7 (systematic review relevant question)	In the context of CHWs programmes, should practicing CHWs be paid for their work versus not?
P	Practicing CHWs
I vs. C	• Payment of a salary, monetary or non-monetary incentives vs. no payment/ incentives • Monetary payment vs. non-monetary incentives • Higher vs. lower payment of salary/ incentives (dose response gradient?)
C	Control as identified above in the second part (following vs. of each sub-intervention
O	Based on outcome framework
Setting	under-served communities
Potential stratifiers	Polyvalent vs. monovalent Level of training as CHWs (longer vs. shorter) Full time vs part time
Notes	Contracted (what is more effective) Payment of a salary above a minimum pre-determined threshold (e.g. average GDP per capita/ annum, minimum wage, subsistence level, minimum household subsistence basket, % of other health workers' salary) Dose response gradient?

PICO 8 (policy relevant question)	Should practicing CHWs have a career ladder with possibilities to progress to other roles?
PICO 8 (systematic review relevant question)	In the context of CHWs programmes , should practicing CHWs have a career ladder opportunity/ framework versus not?
P	Practicing CHWs
I	Having a career ladder opportunity/ framework
C	Not having a career ladder opportunity/ framework
O	Based on outcome framework
Setting	under-served communities
Potential stratifiers	Polyvalent vs. monovalent Full time vs part time Volunteer vs. paid Level of training as CHWs (longer vs. shorter)

PICO 9 (policy relevant question)	Should practicing CHWS have a contract with the health system?
PICO 9 Gover-nance (systematic review relevant question)	In the context of CHWs programmes , should practicing CHWs have a formal contract versus not?
P	Practicing CHWs
I	Having a formal contract
C	Not having a formal contract
O	Based on outcome framework
Setting	under-served communities
Potential stratifiers	Polyvalent vs. monovalent

	Full time vs part time Volunteer vs. paid Level of training as CHWs (longer vs. shorter)
Notes	contracted = Some form of written agreement on working conditions, job description, remuneration terms, rights and responsibilities The intervention may also refer to a regularized position in the health system

PICO 10 planning (policy relevant question)	What is the optimal target population size that should be covered by a practicing CHW?
PICO 10 Planning (systematic review relevant question)	In the context of CHW programmes, should there be a target population size versus not?
P	Practicing CHWs
I	Having a threshold size for the target population (i.e. above 100, 500, 1000) – dose response gradient?
C	Not having a threshold size for the target population
O	Based on outcome framework
Setting	under-served communities in a general population setting (i.e. no refugee camps, nomadic populations etc)
Potential stratifiers	• Focused vs. multi-tasking • Volunteer vs. paid • Level of training • Full time vs part time • Expert client/patient

PICO 11 health data (policy relevant question)	Should practicing CHWs collect, collate and use health data?
PICO 11 health data (systematic review relevant question)	In the context of CHWs programmes, should practicing CHWs collect, collate, and use health data versus not?
P	Practicing CHWs
I	CHW collect and submit data on their routine activities
C	CHW do not collect or submit data on their routine activities
O	Based on outcome framework
Setting	under-served communities
Potential stratifiers	• Volunteer vs. paid • Level of training • Polyvalent vs. monovalent • Full time vs part time • Expert client/patient • Type of work (preventive/promotive versus/also curative)
Notes	• Intervention include: CHW collect and submit data on their routine activities, commodities and referrals/outcomes (including e-health data collection and transmission platforms); these data can be directly to relevant supervisors including written reports as appropriate. The data and synthesis could also be used for feedback, motivation and supervision of CHWs.

PICO 12 team composition (policy relevant question)	Should there be a single type of generalist practicing CHWs, or more types of practicing CHWs specialized in different areas of primary health care?
PICO 12 team	In the context of CHWs programmes, should practicing CHW work in a multi-cadre team versus in a single cadre CHW system?

composition (systematic review relevant question)	
P	Practicing CHWs
I	Two or more cadres of CHWs operating within an area
C	Single cadre of CHWs operating within an area
O	Based on outcome framework
Setting	Rural or otherwise under-served communities
Potential stratifiers	• Volunteer vs. paid • Level of training • Full time vs part time • Expert client/patient • Type of work (preventive/promotive versus/also curative)

PICO 13 Community support 1 (policy relevant question)	Do community engagement strategies improve performance and results of practicing CHWs?
PICO 13 community support 1 (systematic review relevant question)	In the context of practicing CHW programmes, are community engagement strategies effective in improving CHW program performance and utilisation?
P	Practicing CHW programmes
I	Community engagement strategies for CHW support: • village committees (community health committees, village development committees, community liaison committees, facility-liaison committees, hygiene and sanitation committee etc) vs. not • Village groups (mothers' groups, fathers' groups, youth groups, religious groups, support groups, savings and credit or farmers' groups) vs. not • community health action planning activities, involvement of community representatives in decision making, planning, budgeting processes vs. not
C	No community networks, structures or mechanisms for CHW support
O	Based on outcome framework
Setting	Rural or otherwise under-served communities
Stratifiers	• Volunteer vs. paid

	• Level of training • Polyvalent vs. monovalent • Full time vs part time • Expert client/patient • Type of work (preventive/promotive versus also curative)

PICO 14 community support 2 (policy relevant question)	Should practicing CHWs pro-actively mobilize the communities where they operate?
PICO 14 community support 2 (systematic review relevant question)	In the context of CHWs programmes, should practicing CHW mobilize wider community resources for health vs. not?
P	Practicing CHWs operating in underserved communities
I	CHWs undertake specific activities to mobilize wider community resources for health: • CHW engages community in identifying priority health and social problems vs. not • CHW engages community in mobilizing and helping coordinate relevant, local resources representing different stakeholders, sectors and civil society organizations to address priority health problems vs. not • CHW engages community in participating in evaluating and disseminating outcomes of interventions vs. not • CHW engages community in strengthening linkages between community and health facility vs. not
C	CHWs do not mobilize wider community resources
O	• Level of community participation in problem identification, intervention, evaluation and dissemination (features of “Community-Based Participatory Research,” or “Community-Oriented Primary Care,” or “Community-Centered Health Homes”) • Impact of community-engaged interventions listed above on local health and social parameters (eg. rates of malnutrition in children, rates of secondary school completion among girls) • Sustainability of program by local efforts and existing public sector funding without external, short term grant funding • Strong linkage between community and health facility
Setting	under-served communities
Stratifiers	• Volunteer vs. paid • Level of training • Polyvalent vs. monovalent • Full time vs part time

	• Expert client/patient • Type of work (preventive/promotive versus also curative)

PICO 15 commodity provision (policy relevant question)	What strategies can be adopted to ensure adequate availability of commodities and consumable supplies in the context of practicing CHW programmes?
PICO 15 commodity provision (systematic review relevant question)	In the context of practicing CHWs programmes, what strategies should be used for ensuring adequate availability of commodities and consumable supplies over what other strategies?
P	Practicing CHWs
I vs. C	Strategies for ensuring adequate availability of commodities and consumable supplies: • Ensuring inclusion of relevant commodities in the National Pharmaceutical Supply Plan or equivalent national supply chain plan vs. not • Simplified stock management tools and visual job aids for CHWs that accommodate low literacy with minimum data points to facilitate recording of data and resupply vs. not • Use of mobile phone applications (mHealth) for reporting stock and other data vs. not • Co-ordination, supervision and standardization of resupply procedures, checklists and incentives vs. not • Products specifically designed for use by CHWs (presentation, strength, form and packaging) vs. not • Use of social media to manage redistribution vs. not
C	No strategies for ensuring adequate availability of commodities and consumable supplies
Outcomes	• Outcome framework
Stratifiers	• Volunteer vs. paid • Level of training • Polyvalent vs. monovalent • Full time vs part time • Expert client/patient • Type of work (preventive/promotive versus also curative)

11. Systematic review methods

- Need for new systematic review
- Study inclusion and exclusion criteria

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- Evidence identification and retrieval
- Quality assessment of the primary studies
- Synthesis of the body of evidence for each outcome
- Quality assessment of the body of evidence for each outcome

Many systematic reviews have been published on the topic of CHWs in the last few years, some specifically focusing on contextual factors or health systems interventions to maximize their performance. In order to avoid duplication and target more effectively the commissioning of new systematic reviews, WHO has commissioned Johns Hopkins University to conduct an overview of existing systematic reviews of potential relevance. The draft findings of this analysis were presented to the first meeting of the GDG, to help inform decisions on what recommendation questions are wholly or partly addressed by existing reviews, and which, conversely, need updating existing reviews or commissioning new ones.

The principal source of evidence for the recommendations will be represented by the systematic reviews addressing the PICO questions. Comprehensive strategies and protocols will be developed for each of the systematic reviews based on the PICO questions and outcomes identified and ranked.

The evidence search, retrieval, appraisal and grading process will follow the standards outlined in the WHO (2014) Handbook for Guideline Development. The GRADE system will be used for the development and review of recommendations, and for rating the quality of evidence and the strength of recommendations. [20]

A protocol will be developed for each systematic review that includes the search terms and strategy, the list of interventions, the critical end outcomes of interest, comparison groups, and exclusion and inclusion criteria. The search strategy for each PICO questions will be agreed with the methodologist and the systematic review team and will include identifying relevant published and unpublished articles, manuscripts, abstracts, presentations including, where relevant, contacting research centres and individual authors for further information.

Evidence synthesis will begin with a comprehensive search strategy, identifying and retrieving relevant evidence, including evidence concerning both benefits and harms.[28] Although the details of the search strategy can vary for each systematic review, in general they will include the following electronic databases (such as EMBASE, Medline, Cochrane, the Database of Abstracts of Reviews of Effects (DARE), Epistemonikos, Health Systems Evidence, PROSPERO, the National Guideline Clearinghouse of the US Department of Health and Human Services), as well as hand searching relevant publications, conference proceedings and handbooks from other health agencies for available evidence and systematic reviews. Support will be sought from the WHO library if relevant.

To identify on-going trials, the ClinicalTrials.gov web site (http://www.clinicaltrials.gov/), Current Controlled Trials (www.controlled-trials.com) and Pan-African Clinical Trials Registry (www.pactr.org) will also be searched. The search strategies will combine both text words and Mesh/EMTREE terms for each systematic review identified. In addition to this search strategy, the reference lists of the included reviews and papers will be checked, as well as articles listed in the 'Related Article' option in PubMed and the 'Find Similar' option in Ovid. Papers identified by the search strategy will be screened for inclusion based on title and then on abstract. Full text will be reviewed in the absence of an abstract, and for trials with eligible abstracts. The PRISMA flow chart will be used to present the search and data extraction process. Inclusion and exclusion criteria will be defined for each systematic review. PRISMA and MOOSE reporting guidelines will be used to write the systematic review reports that include randomized controlled trials and observational evidence, respectively.

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After an initial search and screening of references, two reviewers will independently extract information onto a standardized data extraction forms in duplicate. Extracted information will include study details (e.g. study design and location), participant details (e.g. study population inclusion and exclusion, population size, attrition rate), intervention details and outcome details.

The quality of the evidence will be assessed using the GRADE system on the important agreed end outcomes. A standardized table, the GRADE evidence table, will be developed for each PICO question listing the important and critically important outcomes from the systematic reviews, and summarizing specific details about the studies included, such as study outcomes, limitations, possible inconsistency, and indirectness, imprecision and other factors that might change the quality of evidence. Evidence quality will be assessed by consideration of study limitations, inconsistency, and indirectness, imprecision and other limitations.[29] The quality of the evidence will then be graded as high, moderate, low or very low. Reports of the systematic reviews that include these GRADE tables will be reviewed by the methodologist prior to the GDG meeting. Potential disagreement regarding inclusion, study quality or extraction will be dealt with by a third person/mediator and potentially referred to the GDG for discussion. Meta-analytical syntheses will be performed where data quality and heterogeneity permit; otherwise a narrative synthesis will be performed. The systematic review team(s) will participate in regular evidence reviews with the study methodologist and WHO technical staff, particularly in the lead up to the second guideline development group meeting.

12. Evidence to recommendations

- Use of the GRADE framework
- Factors to consider, e.g. values and preferences; resource use; equity, human rights and gender
- Tools for formulating recommendations

The systematic reviews and GRADE evidence tables will be presented and discussed at the guidelines meetings. During the second GDG meeting, the panel will first review and discuss the findings of the systematic reviews, and the GRADE evidence tables for each topic. Then, the panel will review for each topic the Evidence to Decision (EtD) table, a standardized decision-making table covering the following elements: proposed recommendations; summary of the evidence, benefits and harms; quality of evidence; community and health worker values and preferences; costs and resource implications; cost-effectiveness; feasibility and barriers to implementation; acceptability; and impact on equity, ethics and human rights; the suggested rating of the strength of recommendations and quality of evidence. The GDG will make a judgment for each of these elements before rating the strength of recommendations, and quality of evidence, and providing any conditions to be attached to the recommendations. In translating evidence into recommendations, the GDG will take into account the principle of the *Global Strategy on Human Resources for Health: Workforce 2030*, which will be considered by the World Health Assembly in May 2016 (table 4). The GDG will discuss the proposed wording of the recommendations and the rating of its strength (strong or conditional) considering not just the nature and quality of evidence but an assessment of the balance between benefits and harms, as well as patient's values and preferences and resource use. In addition the EtD table will allow the panel to indicate issues relevant to monitoring and evaluation, implementation considerations, and research gaps.

All decisions will be ideally reached by discussion and consensus on recommendations, including their strength, and the conditions to be attached to the recommendations. Disagreements will be resolved through email discussions, teleconferences, and redrafting recommendations and rationale. If there is no consensus on a particular recommendation, decision will be made by vote (see section 8). Early drafts of sections of the guidelines will be circulated to GDG members, and a full draft of the guidelines will be circulated to GDG members and peer reviewers for comments.

- Promote the **right to the enjoyment of the highest attainable standard of health**
- Provide integrated, **people-centred health services** devoid of stigma and discrimination
- Foster empowered and engaged **communities**
- Uphold the personal, employment and professional **rights of all health workers**, including safe and decent working environments and freedom from all kinds of discrimination, coercion and violence
- Eliminate **gender-based violence**, discrimination and harassment
- Promote **international collaboration and solidarity,** in alignment with national priorities
- Ensure **ethical recruitment practices** in conformity with the provisions of the WHO Global Code of Practice on the International Recruitment of Health Personnel
- Mobilize and sustain **political and financial commitment** and foster **inclusiveness** and collaboration across sectors and constituencies
- Promote **innovation and the use of evidence**

Table 4. Principles in the WHO Global Strategy on HRH: Workforce 2030.

13. Writing the guideline document

- Writer, editor

The lead writer of the guidelines will be the RTO, with inputs from the SG, GDG, systematic review team and guideline methodologist (the role of members of all these groups will be explicitly acknowledged in the guideline document). A professional editor will be recruited to edit the final version of the document. Design and lay-out will be contracted out to a professional firm, selected in compliance with WHO procurement rules and processes.

The guideline will have an executive summary, a main body and appendices. The executive summary will present the key recommendations of the guideline, together with the strength of the recommendation and the quality of the evidence of each. The main text of the guideline will include a table of contents, introduction, methods, recommendations and conclusions. All participants, roles and affiliations will be listed and acknowledged, with their conflicts of interests and how these were managed. The gender composition of the participant groups will be noted. The systematic review(s), outcome ratings, summaries of findings, GRADE evidence profiles, evidence-to-decision frameworks and tables, and any other relevant documentation will be supplied in web appendices and published electronically, thereby reducing printing and distribution costs for the main guideline.

GRC review of final guideline documents will take place as part of the final executive clearance, with . submission to the GRC done after approval by the relevant director and before submission to the assistant director-general.

14. Peer review

- Process

The external review group will be primarily responsible for peer review, along with the relevant departments at WHO headquarters and in the regional offices represented in the Steering Group. The draft guideline with recommendations will be circulated for review before it is submitted into the WHO clearance process and to the GRC. The request to the external review group for comments on the draft guideline will specify what changes can be made (i.e. those relating to errors of fact, clarifications, and considerations related to implementation, adaptation, and the conditions in which the recommendations apply). If the peer reviewers have major concerns about the wording of the recommendations, the GDG will need to be involved in addressing these concerns and agreeing to any changes. The SG will lead the review of comments from the peer reviewers and consult, if relevant, with the guideline methodologist and systematic review teams to propose revisions to the guideline for consideration by the GDG. The GDG will follow the same decision-making processes as outlined earlier (section 8) in the revisions of the recommendations, if applicable, seeking consensus wherever possible and providing everyone with a chance to contribute to the discussion and the

decision-making process. Reviewers inputs will be acknowledged. Peer review of specific sections of the guideline may also be sought from individual experts.

Drafts of the key questions (in PICO format) will be circulated for comments to technical experts and experts on equity, gender and human rights at WHO headquarters and in the regional offices, as well as to selected members of the external review group and potential end-users of the guideline. Systematic review protocols outlining the search strategy, study eligibility criteria, research synthesis methods and draft evidence profiles will also be circulated to selected members of the external review group for comments.

15. Logistics and resources

- Funding
- Budget
- Timeline
- Other logistics

Funding for the development of the guidelines is available with the HWF department through assessed contributions to core funding.

A stepwise approach, consistent with the WHO Handbook on guidelines development, will be followed in the development of the guidelines on CHWs. Table 6 below outlines an indicative timeframe.

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Activities	Timeframe								
	Q1 16	Q2 16	Q3 16	Q4 16	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18
1. Establish SG									
2. Develop initial planning proposal									
3. Commission overview of existing systematic reviews									
4. Establish GDG									
5. Public consultation to inform scope of the guidelines (immediately before 1st GDG meeting)									
6. First GDG meeting (finalization/ prioritization research questions)									
7. Commissioning additional systematic reviews: evidence retrieval, assessment, synthesis									
8. Second GDG meeting (assessment of the evidence, development of recommendations)									
9. Development of initial draft of the guideline									
10. Peer-review of recommendations by external review group									
11. Finalization of guideline by Steering Group, executive clearance									
12. Editing, design, lay-out, printing of the guideline									
13. Dissemination and advocacy									

Table 6: indicative timeframe

16. <u>Implementation and evaluation</u>

- Publication formats
- Derivative products
- Implementation
- Adaptation
- Evaluation

The guideline will be produced in electronic format (pdf and html) and disseminated widely, including through existing list-servs, newsletters and existing generic and dedicated networks (such as the GHWA membership, the PAHO-equity distribution list, CHW-central, HRH list-serv, IHP newsletter). Hard copies of the executive summary and the main document will be printed and dispatched to WHO regional and country offices. WHO Press will be consulted on mandatory free distribution. The guideline will be produced in English and translated to the other 5 official WHO languages; in addition, it will also be translated to Portuguese. USB keys will be produced to facilitate dissemination in contexts with limited connectivity and at conferences.

The systematic reviews contributing to the guidelines will be submitted for consideration by the *Bulletin of the World Health Organization*, or other journals. An editorial will be developed to accompany the launch of the guidelines. Opportunities for raising awareness of, building ownership

and launching the guideline (once completed) will be sought in the context of general health and thematic health conferences, including the WHO Executive Board and World Health Assembly, and thematic conferences on health systems, health workforce, reproductive, maternal, newborn and child health, infectious diseases, among others.

Subject to mobilization of additional resources, derivative products will be developed, such as charts and visuals using infographics.

The nature of the topic makes it necessary to envisage a process of adaptation to the countries, recognizing the heterogeneity of baseline conditions in health systems and of design and scope of CHW programmes and initiatives. Adaptation will be supported by the regional and country offices as appropriate and demanded by Member States, with backstopping from Headquarters. The development of derivative documents or tools to facilitate implementation – such as a "how to" manual or handbook; a flowchart, decision aide or algorithm; fact sheets; quality indicators; checklists; computerized applications; templates, apps, etc – will be considered taking into account guidance and feed-back from the GDG and ERG.

Implementation will be the responsibility of countries, with technical support from WHO at country and regional level. Headquarters and regional offices will support implementation activities by promoting new guidelines at international conferences and providing guideline dissemination workshops, tools, resources and overall coordination. WHO Headquarters will lead efforts to disseminate and build awareness of the guidelines with other international agencies, development partners and global health initiatives.

The review and evaluation of the guidelines will take place in the context of the implementation of the WHO Global Strategy on Human Resources for Health: Workforce 2030. This envisages, among the responsibilities of the WHO Secretariat, the need to "Review the utility of, and support the development, strengthening and update of tools, guidelines and databases relating to data and evidence on human resources for health for routine and emergency settings." This process will also apply to the WHO guidelines on health policy and system support to optimize community health worker programmes.

17. Updating

- Plans for when and how to update
- Strategies for identifying new information

The guidelines will be issued with a tentative validity date of 10 years. 5 years after the launch, the need for an earlier update will be considered, and a decision will be made on the basis of feed-back from countries, any lessons learned through implementation, and the emergence of new evidence that would be likely to influence the contents and strength of recommendations.

Strategies to identify new information will include commissioning additional reviews for emerging areas requiring guidance, and updating earlier reviews.

Annex 1. Matrix of services that can be provided by CHWs according to existing WHO guidelines.

Guideline Title, Year, Web Link	Relevant Extracts From Guidelines Relating To Recommendations On CHW Roles
Primary Health Care	
Age-friendly Primary Health Care Centres Toolkit 2008 http://apps.who.int/iris/bitstream/10665/43860/1/9789241596480_eng.pdf?ua=1	Step 1: 10-minute comprehensive screening (Tool 1) Should be done by a member of the PHC centre while the patient is waiting to see the doctor and included in the medical record. Try to provide privacy for the patient as much as possible. Step 2: Geriatric giants assessment (Tool 2 to 7) Assessment by doctors using questionnaire and physical examination. Where there are multiple conditions, the doctor needs to prioritize assessment and decide which condition to work up in the first visit and schedule subsequent visits for other conditions. The following order is suggested: 1. Memory loss 2. Depression 3. Urinary Incontinence 4. Falls/immobility Step 3: Diagnosis, treatment and education Establish diagnosis. Plan pharmacological and non-pharmacological management strategies. Counsel patients and family/caregivers on appropriate targets for reducing risk, including education. This can be done by nurse or a community health worker. Refer to appropriate services when needed. Step 4: Follow-up Assess response and effectiveness of treatment. Change clinical management as necessary. If needed, discuss referral for specialty evaluation and management.
Joint Statement / Scaling-up The Community-based Health Workforce For Emergencies (WHO, GHWA, UNICEF, UNHCR, ICRC) 2011 http://www.who.int/workforcealliance/knowledge/publications/alliance/jointstatement_chwemergency_en.pdf?ua=1	Many different groups make up the community-based health workforce. The community-based health workforce comprises all those at the community level who contribute to better health outcomes by promoting health and providing primary health care (PHC) (4). This workforce traditionally comes from and works in the community, has relevant cultural and linguistic skills, and can be from migrant communities and populations displaced due to emergencies. The community based health workforce includes: à community health workers (CHW) who are appropriately trained and accredited according to national policy; The best way to provide preventive and curative services at a large scale to address the top causes of death in both emergencies and non-emergencies is via CHWs getting trained and supported in CCM in their communities then mobilized at larger scale in an emergency.
Reproductive, Maternal, Newborn, Child and Adolescents' Health	

Baby-friendly Hospital Initiative 2009 http://apps.who.int/iris/bitstream/10665/43593/5/9789241594981_eng.pdf	Community health workers are often nearer to families than are hospital-based health workers and may be able to spend more time with them. To be effective, community health workers need to be trained to support mothers to feed and care for their babies. • Community health centres can have “lactation clinics” which means that there are trained staff who will help a breastfeeding mother at the time that she contacts the clinic rather than waiting for an appointment. It may be effective to see more than one mother together so they can exchange experiences. A mother support group can come out of these clinics. A group may be started by a few mothers themselves or by a health or community worker. There may be special support groups for women who are HIV-positive.
UNICEF/WHO joint statement on iCCM http://www.unicef.org/health/files/iCCM_Joint_Statement_2012(1).pdf	This statement presents the latest evidence for integrated community case management (iCCM) of childhood illness, describes the necessary programme elements and support tools for effective implementation, and lays out actions that countries and partners can take to support the implementation of iCCM at scale.
Guidance on caring for the sick child in the community http://www.who.int/maternal_child_adolescent/documents/caring-for-the-sick-child/en/	These materials are designed to help lay community health workers (CHW) assess and treat sick children age 2 - 59 months. In this process, also known as "Community Case Management" (CCM) the CHW: • identifies and refers children with danger signs; • treats (or refers) pneumonia, diarrhoea and fever; • identifies and refers children with severe malnutrition to a health facility; • refers children with other problems that need medical attention; and • advises on home care for all sick children. The selected interventions require the availability and use of four simple medicines: an antibiotic (usually amoxicillin), an antimalarial, oral rehydration salts (ORS) and zinc tablets. For countries whose policies do not permit the use of antibiotics by CHWs, the materials can be adapted for example to include the management of diarrhoea and malaria at home, and referral of children with signs of pneumonia.

Caring For Newborns And Children In The Community 2015 http://apps.who.int/iris/bitstream/10665/204273/2/9789241549295_FacilitatorNotes_eng.pdf?ua=1	Key Competencies for Community Health Workers Taught in this Course: At the end of the course, CHWs should be able to: 1. Greet the family appropriately and develop a good relationship 2. Identify all pregnant women in the community 3. Counsel families effectively — ask, listen, understand the situation of the family, give appropriate information in the form of a story, check understanding of the family, discuss what the family intends to do, praise and together solve any problems the family may have. 4. Promote antenatal care 5. Promote birth in a health facility and help a family prepare for birth 6. Advise on home care of a pregnant woman 7. Advise on immediate care of the newborn 8. Support the mother to initiate and sustain exclusive breastfeeding. Observe a breastfeed and assess attachment and suckling. Help improve position and attachment if necessary.
Guideline Managing Possible Serious Bacterial Infection In Young Infants When Referral Is Not Feasible 2015 http://apps.who.int/iris/bitstream/10665/181426/1/9789241509268_eng.pdf?ua=1	Community health workers and home visits for postnatal care At home visits made as part of postnatal care (2), community health workers should counsel families on recognition of danger signs, assess young infants for danger signs of illness and promote appropriate care seeking.
	Community health worker recommendations The GDG made one recommendation for young infants 0–59 days old regarding home visits by CHWs: Recommendation 1: At home visits made as part of postnatal care, CHWs should counsel families on recognition of danger signs, assess young infants for danger signs and promote appropriate care seeking. Strong recommendation based on moderate quality evidence Remarks: The committee noted the following: • CHWs should be provided with appropriate training, job aids, logistical support and close monitoring and supervision in order to be able to identify danger signs.
Guideline Updates On The Management Of Severe Acute Malnutrition In Infants And Children 2013 http://apps.who.int/iris/bitstream/10665/95584/1/9789241506328_eng.pdf?ua=1	Criteria for identifying children with severe acute malnutrition for treatment 1.1 In order to achieve early identification of children with severe acute malnutrition in the community, trained community health workers and community members should measure the mid-upper arm circumference of infants and children who are 6–59 months of age and examine them for bilateral pitting oedema. Infants and children who are 6–59 months of age and have a mid-upper arm circumference <115 mm, or have any degree of bilateral oedema, should be immediately referred for full assessment at a treatment centre for the management of severe acute malnutrition (strong recommendation, low quality evidence)
	Criteria for identifying children with severe acute malnutrition for treatment 1.1 In order to achieve early identification of children with severe acute malnutrition in the community, trained community health workers and community members should measure the mid-upper arm circumference of infants and children who are 6–59 months of age and examine them for bilateral pitting oedema. Infants and children who are 6–59 months of age and have a mid-upper arm circumference <115 mm, or who have any degree of bilateral oedema should be immediately referred for full assessment at a treatment centre for the management of severe acute malnutrition. (strong recommendation, low quality evidence)

Home Visits For The Newborn Child: A Strategy To Improve Survival 2009 http://apps.who.int/iris/bitstream/10665/70002/1/WHO_FCH_CAH_09.02_eng.pdf?ua=1&ua=1	Sick newborns need urgent treatment to prevent death. Treatment for local infections and some feeding problems can be provided at a health facility or at home. The families of newborns identified as having severe illness at home visits should be assisted to seek hospital or facility-based care. In situations where referral to a hospital is not possible, treatment with antibiotic injections should be provided in first-level health facilities on an outpatient basis. In a setting in Nepal where referral to hospital was not possible for most families, a study showed that recognition of severe illness and administration of oral antibiotics by community health workers and referral to facility-based health workers for provision of daily antibiotic injections substantially improved access to treatment. Research studies conducted in Bangladesh and India in areas with poor access to health facilities have successfully used appropriately trained and well-supervised community health workers to give antibiotic injections at home. This, together with other interventions, has been shown to reduce significantly mortality in controlled settings. Before they can be recommended by WHO and UNICEF for inclusion in programmes, however, the safety and long-term sustainability of these approaches need to be further evaluated in studies in routine settings.
	Newborns of HIV-infected mothers need special care. To prevent mother-to-child transmission of HIV and strengthen the continuum of care, mothers should be provided with information and support to enable HIV-infected women and their newborn to access additional care and services available at the health facility, such as antiretroviral prophylaxis to mothers and newborn infants, lifelong antiretroviral treatment for mothers when indicated, infant feeding counselling and support, HIV- testing and care of exposed infants, including prophylaxis for opportunistic infections, and antiretroviral treatment when indicated. Community health workers particularly need to be aware of the issues around infant feeding so that they can promote and support appropriate feeding practices, and understand that many HIV-infected newborns are born premature and are more susceptible to infections.
	Who can make the home visits? Postnatal care should be provided by skilled health workers. These are also best suited to make home visits for newborn care. They can perform all the essential tasks for providing preventive and curative care. In many settings, this option is not feasible due, for example, to shortages of skilled health workers, lack of transportation, or a workload that does not allow them to make timely and repeated home visits. In such settings, many of the essential tasks for basic newborn care can be carried out by trained auxiliary health workers or trained community health workers who are either part of the health care delivery system or are linked to it.
Infant And Young Child Feeding 2009 http://apps.who.int/iris/bitstream/10665/44117/1/9789241597494_eng.pdf?ua=	Some questions are usefully discussed in groups, while for others individual counselling is more appropriate. Opportunities for both are needed antenatally and postnatally, when mothers visit a health facility, or during contacts with a community health worker. At group sessions, women can raise doubts and ask questions, and discuss them together. Women who have concerns that they do not want to share with a group, or who have had difficult experiences before, need to discuss them privately.

1&ua=1	Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic. This step addresses the need that mothers have for follow-up support for breastfeeding after they leave a maternity facility (see Session 7). Breastfeeding may not be established for a few weeks, and many problems can arise during this time. To be accredited as baby-friendly, a hospital must be able to refer a mother to an accessible source of ongoing skilled support. This may be outpatient care provided by the hospital, a health centre or clinic, a primary care worker or a community health worker trained in breastfeeding counselling, a peer counsellor, or a mother-to-mother support group.
	There should be no missed opportunities for sup- porting feeding in any contact that a mother and child have with the health system, whether it involves doctors, midwives, nurses or community health workers. Lay or peer counsellors who have the skills and knowledge to support optimal infant and young child feeding can also contribute to improved feeding practices
	Most women can lactate any number of years after their last child, but it is easier for women who stopped breastfeeding recently, or if the infant still suckles sometimes. A woman needs to be highly motivated, and well supported by health care workers. Continuing support can be provided by community health workers, mother support groups, women friends, older women and traditional birth attendants.
	9.3.2 Training and support of community health workers Community health workers can be important agents of change in a community and provide services to support infant and young child feeding (14). How-ever, to do so effectively they need to be trained in the requisite knowledge and skills, and be supported by supervisors and more highly-skilled health workers to practise accordingly. WHO and UNICEF have developed several courses that can be used for such training (15,16). Research shows that infant and young child feeding counselling provided by community health workers can improve caregiver knowledge and practices and lead to improved health outcomes including child growth.
	9.3.4 Fostering breastfeeding support groups Breastfeeding support groups, or mother-to-mother support groups, enable mothers to encourage and assist each other to establish and sustain breastfeeding (19). They can also support appropriate complementary feeding. A hospital that is designated Baby-friendly is required, when discharging a mother, to refer her to a breastfeeding support group, if there is one nearby, and to foster and promote the establishment of such groups (see Step 10 in Session 4.7). Group meetings are led by members with experience and some training, but depend on a sense of equality and acceptance, which encourages mothers to share experiences, ask questions and help each other in a familiar, non-threatening community setting. Breastfeeding support groups can be initiated by health workers from primary and referral level facilities, community health workers, or lay or peer counsellors.

	Health workers' roles in supporting community-based approaches Involvement of the health sector is necessary for community-based approaches to succeed (12). Health workers' supporting roles include: - Helping with the training of lay or peer counsellors; - Providing feedback to lay or peer counsellors when they refer infants with feeding difficulties; - Initiating and participating in breastfeeding sup- port group meetings to provide information and discuss appropriate feeding practices; Encouraging women's groups formed for other reasons, such as micro-enterprise, community service, or for economic, social, political or religious reasons, to include support for optimal infant and young child feeding in their activities; - Participating in other community activities where appropriate infant feeding can be promoted (such as health fairs, community meetings and radio programmes); - Protecting, promoting and supporting appropriate feeding practices whenever they are in contact with mothers, caregivers or families.
Optimizing Health Worker Roles To Improve Access To Key Maternal And Newborn Health Interventions Through Task Shifting 2012 http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843_eng.pdf?ua=1	There is insufficient evidence on the effectiveness or acceptability of using LHWs to administer misoprostol to prevent postpartum haemorrhage. However, this intervention may be feasible under certain conditions and may reduce inequalities by extending care to underserved populations. In settings where skilled birth attendants are not present and oxytocin is not available, a WHO guideline recommends the administration of misoprostol (600 mcg PO) by community health care workers and LHWs for the prevention of PPH. (Strong recommendation, moderate quality evidence). We therefore recommend this option. We suggest that this intervention be implemented where a well-functioning LHW programme already exists.
	- Membership is a volunteer appointment. Members will have a chance to learn about HIV and influence what happens in their community, voluntary CAB (Community Advisory Board) role may be recognized by the community. It is strongly recommended that the CAB includes PLHIV. Possible members of the CAB include: '- the health centre HIV coordinator; '- community stakeholders providing services (e.g. women's groups, faith leaders, etc.); '- people at risk '- local leaders (e.g. mayor's, chiefs, religious leaders, school principals etc); '- staff from other CBOs/FBOs/NGOs providing care at community and home levels; '- community health workers; '- health centre staff.
	Community Health Workers (CHWs) are valuable members of the clinical team that provides services to the community. CHW's may or may not be part of the district health network, but effective linkages are essential. CHWs are not a substitute for a weak health system and need to work in a strong health system with effective linkages to health centres. CHWs should receive adequate and sustainable remuneration for their work. Health centres and CABs need to identify the possible tasks that CHWs can realistically deliver (see the table on p.53 and note that each CHW can only effectively provide a limited number of services. Other services can be delivered by

	community/family volunteers/community carers). In some countries, TBAs deliver 40% to 50% of all infants and with special training they can play an important auxiliary role in HIV prevention and home-based testing.
	Successful CHW programmes include: - good planning and realistic expectations; - identified person(s) in the health centre who liaise with CHWs; - association with wider community mobilization e orts; - appropriate selection and recruitment processes and then appropriate training; - continuing education including educational and mentoring activities with health service staff to ensure understanding of the CHW role, as well as continuous health centre supervision and support; - Financial compensation for CHWs (there is no evidence that volunteerism can be sustained for long periods); - adequate logistical support; - political leadership and sustained commitment and investment; - close working relationship between CHWs (and TBAs) and health center staff.
	Assistance provided by CHWs Nutrition • nutritional assessment and referral • breastfeeding/infant feeding counselling and support • community therapeutic feeding • link to or provide food security interventions • provide education and reinforce good clean water and sanitation practises and access to safe water Child health • checking vaccination and PMTCT records and follow-up • growth monitoring • information on education on oral rehydration • screening for malaria • community IMCI interventions • identify and refer HIV-exposed and -infected children PMTCT/maternal care • home-based delivery of ARV prophylaxis • back-up to home delivery when centre delivery not possible • promoting PMTCT interventions such as supporting home-based delivery of ARV drugs; mother-to-mother programmes, or ’PMTCT graduate’ programmes HIV care/ART and TB (including prevention by people who are HIV-positive to protect their own health) • ART and TB treatment support • TB case detection and referral • home-based HIV testing and counselling, link with treatment and care at centre • screening for mental health

	• provide insecticide-treated bed nets and safe water vessels Prevent HIV transmission • home- and community-based HIV testing and counselling including partner testing, active support for disclosure • risk reduction and sexuality counselling and support for discordant couples, etc. • support positive prevention by PLHIV • screen for STIs, refer for STI care Malaria • treat malaria – oral anti-malarials • identify when referral and transfer to health facility is required • provide insecticide-treated bed nets Palliative care • symptom management including pain management, management of diarrhoeal disease, skin problems, constipation, difficult breathing, etc. • end-of-life care Psychological/spiritual care • screening and support for mental health/emotional problems related to HIV disease • active support for disclosure of HIV status • bereavement counselling • referral to and provision of spiritual/religious programming (support groups, ceremonies, spiritual leadership guidance) (see list of psychosocial support for children – IMAI Chronic care) Social Care • link to or provide food security interventions, income generation activities, livelihood strengthening interventions • assist in accessing child protection interventions • assist in accessing government grants/social welfare support • assist with succession planning
	How to support community health worker activities Organize a monthly meeting for community health workers who are involved in activities such as providing nutrition, a malaria, TB or HIV assistance. is is an important opportunity for health centre staff to provide clinical support to community health workers. Having PLHIV on the clinical team and on the CAB bolsters the support provided in key areas. Organize these meetings in collaboration with the CAB to ensure good links between health centre staff and the community health workers. Hold separate meetings for community health workers in each area of work. For example, all community health workers involved in educating the community and identifying malnourished children should come to the same meeting. Invite community health workers from NGOs in the district, as well as those who use the health centre as a base. In order to ensure that activities are sustainable, health centre workers should facilitate these meetings with a view to empowering and enabling NGOs to take the lead. Investing in NGO leadership will pay off in the long run; resulting in systems and programmes that support the efforts of PLHIV and maintain functional links with the health centre. Ensure that several health centre staff are available to discuss problems with CHWs and to provide them with feedback.

	Community workers • Follow up and trace lost patients
	Counselling training for integrated HIV prevention, care and treatment: All staff who provide counselling services – including clinical providers, counsellors, lay counsellors or community health workers – should receive at least basic counselling training. Further follow-on courses prepare the counsellor to manage other content areas building on the basic training course.
Revised WHO Classification And Treatment Of Childhood Pneumonia At Health Facilities. Evidence Summaries 2014 http://apps.who.int/iris/bitstream/10665/137319/1/9789241507813_eng.pdf	In these studies, the children with chest in-drawing pneumonia were identified and treated on an outpatient basis by qualified doctors, and were followed up either in an outpatient facility or at home. This made it difficult to generalize to situations where pneumonia is treated within the community, by CHWs who may have little or no formal education. Data were needed to assess the effectiveness of community case management of chest in-drawing pneumonia.
	According to the WHO/UNICEF joint statement on management of pneumonia in community settings (52), an important strategy to increase access to quality care for pneumonia is to train and deploy CHWs to assess and treat children with pneumonia. There is strong scientific and programmatic evidence to support the effectiveness of this approach.
	The current WHO/UNICEF tools for CHWs recommend oral amoxicillin in two daily doses. Because the CHW is not expected to treat chest in-drawing pneumonia, these guidelines will retain two age bands and will not be revised at the present time. Some data from Asia (56,57) shows that CHWs can manage chest in-drawing pneumonia with oral amoxicillin. However, current CHW guidelines will not be changed until more evidence becomes available from additional regions and countries.
	The WHO/UNICEF joint statement Management of pneumonia in community settings (52) recommends the training and deployment of CHWs as a central strategy for increasing access to quality care for pneumonia. Research showed that educated community members could be trained to detect and manage pneumonia in their communities; large-scale studies confirmed that the sensitivity, specificity, and overall agreement rates in pneumonia diagnosis and treatment were high among health volunteers who had intensive basic training and routine supervision. This led to a substantial decrease in the proportion of severe pneumonia cases and deaths. It has also been shown that properly trained and supervised CHWs can appropriately manage chest in-drawing pneumonia with oral amoxicillin at community level, resulting in increased access to treatment and reduced costs for families. As evidence is limited, the iCCM guidelines are not currently being updated to include the management of chest in-drawing pneumonia. In situations where referral is not possible, however, CHWs may treat chest in-drawing pneumonia with oral amoxicillin, if local health policy allows them to do so. Thus, at the community level the revised recommendations imply that: — all children with fast breathing are classified as having “pneumonia” and treated with oral amoxicillin; — children with “chest in-drawing” pneumonia should be referred to a higher level. However, in situations where referral is not possible and if local health policy allows, CHWs may treat chest in-drawing pneumonia with oral amoxicillin;

	— dispersible amoxicillin is the preferred treatment for children.
WHO Recommendations On Health Promotion Interventions For Maternal And Newborn Health 2015 2015 http://apps.who.int//iris/bitstream/10665/172427/1/9789241508742_report_eng.pdf?ua=1	The use of lay health workers including trained TBAs is recommended for promoting the uptake of a number of maternal and newborn-related health care behaviours and services, providing continuous social support during labour in the presence of a skilled birth attendant and administering misoprostol to prevent postpartum haemorrhage.
Non Communicable Diseases	
Clinical Guidelines For Withdrawal Management And Treatment Of Drug Dependence In Closed Settings 2009 http://www.wpro.who.int/publications/docs/ClinicalGuidelines_forweb.pdf?ua=1	The in-reach project employs community health workers to visit prisoners receiving maintenance treatment who are soon to be released. The health worker assists the patient to arrange to continue methadone treatment in the community. The health worker also identifies other needs of the prisoner, such as accommodation, education or health needs and refers the prisoner to appropriate services. The objectives of the in-reach project are to: - Minimise drug-related morbidity and mortality in released prisoners - Minimise the barriers to entering methadone or buprenorphine programs - Establish links between health agencies to ensure continuity of treatment between prison and the community - Link patients with other services required to address their individual needs
Comprehensive Cervical Cancer Control, A Guide To Essential Practice	Palliative care is best provided using a multidisciplinary team approach involving the patient, her family and close support persons, community health workers and special palliative care workers in the community, as well as health-care providers at all levels of facilities.

2014 http://apps.who.int/iris/bitstream/10665/144785/1/9789241548953_eng.pdf?ua=1	Community health workers (CHWs) may be involved in raising awareness about cervical cancer in the community, motivating and assisting women to use services, and following up with those who have received a positive screening test result and those who have been treated at higher levels of care when they return home.
	Health-care providers and community health workers involved in HPV vaccination programmes could facilitate access to other health services for this age group, and vaccine introduction may also serve as an opportunity to improve and facilitate adolescent health education.
	Role of community health workers (CHWs) in outreach efforts To facilitate an outreach strategy, taking into account that many target-aged girls live in poor, distant and isolated communities and do not attend school, one approach may be to train CHWs (if permitted by national guidelines) to: • transport and maintain sufficientvaccinesforallgirlsaged9–13yearsinan appropriate cold storage device, such as a cool box; • administer the required doses of vaccines to those girls who meet eligibility criteria; and • record vaccinations on standardized forms.
	Primary- and secondary-level providers also have other important collaborative roles as members of the cervical cancer team. These may include: • educating and training communities; • trainingcommunityhealthworkers,includingtodispensemedicinesforpain-relief(if this is permitted by the national regulations);
	When the patient is no longer able to work or care for her family, meagre resources may become further stretched. In this case, money for food, supplies and medicines for her care may be obtained by the family from local and regional nongovernmental and faith-based organizations. It is very useful for community health workers to have established links with these organizations before they are needed, so that patients can be referred to them as needed.
	The role of community health workers Community health workers (CHWs) and other special members of the community who are dedicated to assisting with palliative care, in coordination with primary- and secondary-level providers, have a role in the following: • Develop a personal care plan in order to provide the patient with home visits on a regular, scheduled basis, to anticipate and, if possible, prevent and manage any problems. • Provide treatments, instruct the family in this task, and train the patient and her family on care and comfort-giving procedures, and check that these are being done. • Facilitate access to supplies and medicines. • Routinely conduct assessment of the patient's physical, psychosocial and spiritual needs, and inform the patient's primary care provider (physician) of the findings. • Based on the assessments and feedback from the patient's primary care provider (physician), pay particular attention to ensuring as far as possible the availability of treatment, including for pain management. • Answer questions, provide information and keep records. • Encourage the family to keep the patient involved in their daily lives as much as possible.

Guidelines For The Management Of Conditions Specifically Related To Stress 2013 http://apps.who.int/iris/bitstream/10665/85119/1/9789241505406_eng.pdf?ua=1	Given the delicate and technical nature of CBT with a trauma focus and EMDR, implementation by para-professionals may carry risks. Nevertheless, cognitive-behavioural interventions have been successfully implemented in low-resource settings by para-professionals (e.g. community health workers) to treat maternal depression
	CBT and EMDR involve thinking about trauma-related reminders. Given the delicate nature of this process, implementation by para-professionals may carry risks. Nevertheless, cognitive-behavioural interventions have been successfully implemented in low-resource settings by para-professionals (e.g. community health workers) to treat maternal depression and PTSD symptoms in adults and adolescents.
Outbreak And Epidemic Preparedness	
Community Case Management During An Influenza Outbreak 2011 http://apps.who.int/iris/bitstream/10665/44633/2/9789241501859_eng_trainersguide.pdf	The specific records and process for treating sick people during an outbreak of influenza will depend on factors e.g. the previous infrastructure for records and the system of record-keeping, experience and training of the CHWs, and significance of the information coming from the records. During an outbreak/pandemic, both national and international authorities may identify the record-keeping structure and the indicators to keep track of. The final recording structure and forms may have to be revised, and should be determined by the national authorities, in line with international guidelines.
	If antiviral medications and diagnostics for influenza are available and can be administered by CHWs, then the contents can be adapted according to national protocol for early use in populations at higher risk for severe illness and death and patients with severe illness.
	CHWs are not expected to detect the onset of an outbreak but to help monitor changes in the trends of respiratory illness and activities.
	CHWs should educate their communities about the importance of providing liquids as well as food to all sick people, and should provide examples of nutritious foods that can be used based on local habits and resources.
	The CHW may initiate treatment at home for patients with pneumonia, fever, malaria or diarrhoeal diseases, if the patients do not have any danger signs. Such treatment will include provision of care to patients at home by the caregiver, who will have to make sure that the medications (e.g. antibiotics, antimalarials, antipyretics, ORS, zinc) are given in a timely manner, and that the treatment is completed. The CHW should teach the caregiver how to take care of the sick at home for symptoms such as fever and dehydration. Local safe remedies for the treatment of sore throat and cough can also be included here, such as warm water and honey for adults and children who are not exclusively breastfed (breastfeeding should continue for children who are breastfed). This will prevent over-burdening of the health facilities and allow appropriate care for all patients depending on the severity of disease (i.e. mild to moderate disease taken care of at home, severe disease taken care of at facility level).
	Depending upon the severity of disease and the co-existence of other health problems, some patients may need additional treatment. People in the community, especially caregivers, should know the danger signs. It is very important to be able to identify sick people who can be treated at home, as well as those who need immediate medical attention and should be taken to the nearest health facility. CHWs are key resources for teaching the danger

	signs to people in the community.
	If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond 3 days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and refer high risk groups to a facility if there are signs of infection upon assessment. The CHW should immediately refer the sick child/adult to a health facility if she/he has any of the above danger signs
	If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond 3 days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and refer high risk groups to a facility if there are signs of infection upon assessment. The CHW should immediately refer the sick child/adult to a health facility if she/he has any of the above danger signs.
	CHWs should detect and refer all infants under the age of 2 months to a health facility with any of the danger signs with first treatment provided on referral. To prevent common illness families should practice clean cord care, keep infant warm (skin-to-skin contact, covering the baby and baby's head and not bathing the baby until after 24 hours of birth) and provide early (within the first hour of birth) and exclusive breastfeeding.
	Fever in infants aged less than 2 months may indicate a life-threatening bacterial infection. If febrile, these infants should be referred by the CHW to the health facility for further treatment. Treatment with an initial dose of oral amoxicillin may be given prior to referral, but should not delay referral for definitive care.
	If antiviral medications are available and can be administered by CHWs, then follow the national protocol for their early use in populations at higher risk for severe illness and death, and for patients with severe illness.
	In some instances, in the interests of making optimum use of human resources, minimum or no recording may be required of CHWs so as not to divert them from providing patient care. On the other hand, keeping records of the treatments provided, morbidities and mortalities is very important for improving the quality of care and for responding appropriately to the epidemic.
	Factors such as more frequent and continued contact with members of the community, especially the sick, can increase the CHW's risk of exposure to the influenza virus. Some of the key messages (such as keeping a distance, or minimizing contact with infected people) may also be challenging in practice for the CHW, depending on the local circumstances and cultural values. These risks should be mitigated through education of the community, appropriate behaviours to prevent the spread of disease, the use of personal protective equipment and infection-control techniques as appropriate, and through the CHWs' monitoring of their own health

	Protect yourself from other people's coughs and sneezes: CHWs see sick people as part of their job, so it is very important for them to continuously remind the patients to cover their mouth and nose when coughing and sneezing. CHWs can tell sick people to cover their mouth and nose with their elbow, or to use a single-use tissue, if available. If they use a tissue, the patients need to make sure that it is put in a trash can afterwards. If handkerchiefs are used, they should be washed often and dried well, in the sun if possible. Wash your hands: this simple action will protect the CHW by removing the influenza virus from the hands, especially after examining a patient, or getting the virus on the hands through other means. Hands must be washed with soap for 40 to 60 seconds, and rinsed appropriately. Remember that if the towel you are using to dry your hands is not clean, you may be contaminating your hands again. CHWs should wash their hands before and after every visit with a sick person, and should also wash their hands whenever they have a chance throughout the day. Keep your distance: whenever possible, the CHW should stay at a distance of at least one metre (arm's length) from other people. This will keep the CHW away from droplets that come out when people talk, sneeze, cough, sing or shout. Don't touch, unless necessary: the CHW should avoid touching sick people, except when necessary during examination. CHWs should wash their hands immediately after touching a sick person. The CHW must also be careful not to touch possibly infected surfaces and items (e.g. doorknobs, handles, utensils used by the sick person) and should avoid touching her/his own face (mouth, nose, eyes). Shaking of hands should also be avoided during an influenza outbreak
	As one of the key personnel to help control and prevent the further spread of influenza infections, it is very important that CHWs take proper care of themselves and also monitor themselves to make sure that they are staying healthy. The heavy workload during an outbreak may give little time for the CHW to rest and eat properly. However, if CHWs become weak and exhausted, they will not be able to do their work, and may be more likely to catch influenza. Therefore, CHWs should make sure to care for themselves, to benefit everybody (including themselves) in the community.
HIV, Tuberculosis And Malaria	
HIV	
Guidelines On The Treatment Of Skin And Oral HIV-associated Conditions In Children And Adults 2014 http://apps.who.int/iris/bitstream/10665/136863/1/9789241548915_eng.pdf?ua=1&ua=1	Trained and supervised community health workers can dispense ART between regular clinical visits (strong recommendation, moderate-quality evidence).

HIV And Adolescents: Guidance For HIV Testing And Counselling And Care For Adolescents Living With HIV 2013 http://apps.who.int/iris/bitstream/10665/94334/1/9789241506168_eng.pdf?ua=1	Trained and supervised community health workers can dispense ART between regular clinical visits. (Strong recommendation, moderate quality evidence)
HIV Prevention, Diagnosis, Treatment And Care For Key Populations 2013 http://apps.who.int/iris/bitstream/10665/128048/1/9789241507431_eng.pdf?ua=1&ua=1	(All Key Population Groups) Trained and supervised community health workers can dispense ART between regular clinical visits (strong recommendation, moderate quality of evidence)
	Train health-care providers. Sensitize and educate health-care providers (including community workers, peer outreach workers, support staff and management) on issues specific to key populations and on non-discriminatory practices and eliminating stigma, using pre- service and in-service training, job aids, supportive supervision, and training follow- up. Where possible, training should involve representatives of key populations.
Operations Manual For Delivery Of HIV Prevention, Care And Treatment At Primary Health Centres In High-prevalence, Resource-constrained Settings 2008 http://www.who.int/hiv/pub/imai/om.pdf?ua=1	The community adds to the delivery of high quality HIV services in many ways. In addition it supports the health centre in the delivery of these services, resulting in improved quality of care. Community involvement comes in the form of both formal and informal activities. Formal structures may be established including, community or faith-based organizations (CBOs, FBOs); community health workers under the supervision of district health networks or non-governmental organizations (NGOs); DOTS supporters for the national TB system; peer outreach services to high risk groups, as well as home based and palliative care. The resources vastly underutilized by formal health systems include the 'informal' resources in the community in the form of PLHIV support groups; treatment supporters; as well as PLHIV, friends and families.
The Use Of Antiretroviral Drugs For Treating And Preventing HIV Infection 2013 http://apps.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf?ua=1	Trained and supervised community health workers can dispense ART between regular clinical visits (strong recommendation, moderate-quality evidence).
	The use of rapid HIV diagnostic tests using blood from a finger-prick sample taken by trained lay counsellors and community health workers has facilitated the expansion of HIV testing and counselling in community settings including homes, transport stations, religious facilities, schools, universities, workplaces and venues frequented by key populations. Continued expansion of community-based testing to complement facility-based testing is an important consideration in achieving universal knowledge of HIV status and earlier diagnosis linked to care and treatment. Community-based HIV testing and counselling includes using mobile, door-to-door, index, campaign, workplace and school- based HIV testing and counselling approaches

	Interventions to improve linkage to care need to be more rigorously evaluated. However, several systematic reviews and observational studies suggest that several good practices can improve linkage to care (2–4). These include integrating HIV testing and counselling and care services; providing on-site or immediate CD4 testing with same-day results; assisting with transport if the ArT site is far from the HIV testing and counselling site; involving community outreach workers to identify the people lost to follow-up; ensuring support from peers or expert patients; and using new technologies, such as mobile phone text messaging.
	Lack of accurate information for patients and their families and peer support, Possible Intervention: Engage and integrate community health workers, volunteers and people living with HIV in peer support, patient education and counselling, and community-level support
	Adherence support, possible intervention: Task shifting for involving community health workers. Linking with community-level interventions and resources such as peer adherence support. Using known effect reminder methods (such as text messaging) Peer support also provides opportunities for in-person reminders
	WHO guidance in 2008 (118) recommended that nurses and non-physician clinicians may initiate and maintain rst-line ART and that community health workers may monitor people receiving ART during long-term follow-up. Since these recommendations were largely based on programme review and good practices, the evidence related to task shifting for ART was reviewed when developing these consolidated guidelines.
Tuberculosis	
Engage-TB: Integrating Community Based TB Activities Into The Work Of Nongovernmental And Other Civil Society Organizations 2012 http://apps.who.int/iris/bitstream/10665/75997/1/9789241504508_eng.pdf	Defines CHWs and CVs and the package of activities relevant for TB. Community health workers and community volunteers carry out community-based TB activities, depending on national and local contexts. Community health workers are people with some formal education who are given training to contribute to community-based health services, including TB prevention and patient care and support. Their profile, roles and responsibilities vary greatly among countries, and their time is often compensated by incentives in kind or in cash. Community volunteers are community members who have been systematically sensitized about TB prevention and care, either through a short, specific training scheme or through repeated, regular contact sessions with professional health workers. Defines key principles for public-private partnership in working with CHW: 1. Mutual understanding and respect recognizing differences and similarities in background, functions and working culture. 2. Due consideration and respect for local contexts and values while establishing collaborative mechanisms and scaling-up integrated community-based TB activities. 3. A single national system for monitoring implementation of activities by all actors with standardized indicators. Defines key components of national programming: situation analysis, enabling environment, guidelines and tools, task identification, monitoring and evaluation, capacity building
Treatment Of Tuberculosis Guidelines Fourth Edition 2010	For TB patients who live far away from a health facility the treatment observer will be a community health worker or a trained and supervised local community member.

http://apps.who.int/iris/bitstream/10665/44165/1/9789241547833_eng.pdf?ua=1&ua=1	
Malaria	
Malaria, A Manual For Community Health Workers 1996 http://apps.who.int/iris/bitstream/10665/41875/1/9241544910_eng.pdf	As a community health worker you can improve the situation by performing the following activities: Encourage people to seek treatment immediately if they have fever. This is especially important in young children and pregnant women, who should receive treatment against malaria within 24 hours of becoming ill. Recognize and treat malaria to prevent severe illness and death. Explain how to take treatment correctly, so that people can avoid repeated attacks of malaria. Advise patients who do not improve within 48 hours after starting treatment. or whose condition is serious, to go immediately to the nearest hospital or clinic capable of making a definite diagnosis and managing severe disease. ! Advise individuals and families on how to protect themselves from mosquito bites. ! Motivate the community to carry out mosquito control measures in order to reduce the number of malaria cases.
Others	
Responding To Intimate Partner Violence And Sexual Violence Against Women, WHO Clinical And Policy Guidelines 2013 http://apps.who.int/iris/bitstream/10665/85240/1/9789241548595_eng.pdf?ua=1	Interpersonal therapy and cognitive behavioural therapy (CBt) (including behavioural activation, deP 4), and problem-solving treatment should be considered as psychological treatment of depressive episode/disorder in non-specialized health-care settings if there are suf cient human resources (e.g. supervised community health workers). In moderate and severe depression, problem-solving treatment should be considered as adjunct treatment.

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