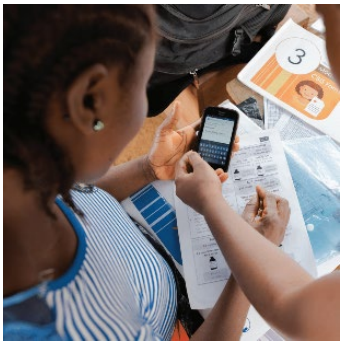


Applying the WHO Monitoring and Accountability Framework to Strengthen Community Health Worker Programming

Liberia Case Study

August 2021

This briefer provides recommendations to strengthen the community health workforce in Liberia. These recommendations are derived from a consultative process of applying the World Health Organization (WHO) Monitoring and Accountability framework. Photo credits, left to right: 1. Clinical supervisor coaches CHW as she reviews program data stored on her mobile device. Credit: Last Mile Health. 2. A woman and child in Liberia. Credit: Last Mile Health via Ministry of Health, Republic of Liberia. 3. A female CHW conducts a routine household visit with her neighbor, with support from her supervisor. Credit: Last Mile Health.

KEY MESSAGES

To support the next five years of Liberia's National Community Health Assistant Program (NCHAP), the WHO Monitoring & Accountability (M&A) framework was applied to assess the existing community health workforce information sources, stakeholders, and systems most relevant to monitoring progress towards improving quality of care, optimizing distribution and management, and reducing workforce attrition. High-level recommendations from the M&A application include investing in information systems metrics to monitor community selection of community health assistants (CHAs), frequency and quality of supportive supervision, availability of health supplies, remuneration and active labor stock, continuing professional development and career pathways. In the short- to long-term, developing a CHA registry and mapping the existing and desired functionalities for the electronic community-based information system (eCBIS) and electronic logistics management information system (eLMIS) can help to operationalize strategies to monitor and disaggregate priority CHA metrics. The CHA and health information systems (HIS) technical working groups can broker ongoing discussions to ensure adequate coordination, management, and operational capacity for CHA metrics investments to provide relevant data and evidence to guide routine program decision making, as well as support greater resource mobilization and sustainability for NCHAP.

The Problem and Opportunity

Unfinished Business: Liberia Community Health Assistant Program

In response to the Ebola outbreak of 2014-2015, the Government of Liberia committed to build a more resilient and effective health system with an integrated and standardized National Community Health Assistant Program (NCHAP). As of June 2020, the program has recruited, trained, and fielded 3,448 Community Health Assistants (CHAs) and has 373 active Community Health Services Supervisors (CHSS). These CHAs provide primary care to 70 percent of rural populations living more than five kilometers from health facilities. With strong political will, Liberia has made significant progress in improving the health status of its population, particularly in decreasing child mortality. However, major public health challenges remain in preventable communicable diseases, high maternal, child and infant mortality, and malnutrition, especially in the most rural, remote, and underserved communities.

The Liberian Ministry of Health and partners conducted a review to inform the next five-year policy and strategic plan. This review found that Liberia's CHA program is challenged by supply chain gaps, irregular payment of CHAs, subnational

variation in implementation fidelity and effectiveness, management and governance gaps and concerns around the long-term sustainability of the program. These factors contribute to high CHA attrition and high levels of variation in the quality of community-based care.

Understanding the underlying factors that contribute to attrition and poor quality of care can help identify where monitoring and accountability efforts should be focused:

- **Selection**: Male gender bias in CHA composition, which may limit service delivery effectiveness to women, especially family planning services.
- **Skills (Training):** Poor training quality (e.g., not competency based/no certification provided; student/teacher ratio not optimal; pre/post tests for M&E not deployed) and undefined career ladder.
- **Supervision:** Infrequent supportive supervision.
- **Salary/Remuneration Strategy:** Delays in incentive payments.
- **Supply Chain:** Frequent stock outs of life saving supplies due to weak supply chain infrastructure at the national level (e.g., forecasting demand, monitoring storage levels, managing inventory, handling distribution and overall coordination) and at the county level (e.g., inadequate storage space, warehousing practices, and equipment challenges for timely distribution).
- **System Support:** Weak data information systems to improve performance; including a Community Based Information System (CBIS) and integration of the implementation fidelity initiative (IFI) into the Joint Integrated Supportive Supervision (eJISS) and the monitoring and evaluation of CHA pre-service training.

> NCHAP sustainability can be assured with more robust, quality information and metrics on CHAs to demonstrate the return on investment (ROI) and make the case for future investments.

Moreover, challenges around disaggregating data to the CHA level, integrating performance management data into existing systems, and issues around data quality and data use hinders the program's ability to improve performance and quality.

Window of Opportunity: Applying the M&A Framework to Support Policy Revision

The current policy revision provides a unique opportunity for the Ministry of Health (MOH) to focus on addressing these challenges. As part of the policy revision process, the Liberia MOH recognizes the critical need to invest in improving the availability and quality of data to respond to these underlying factors. As a complement to the 2018 Community Health Worker (CHW) Guideline recommendations, the WHO Monitoring and Accountability (M&A) Framework defines evidence-based best practice indicators that span across the different functions of a CHW program and workforce life cycle: strategy, selection and skills, supervision, salary/ remuneration strategy, system support, and supply. By using the M&A Framework, national CHW stakeholders can systematically map out the existence of relevant data for building, managing, and optimizing the community health workforce, and identify what strategic actions are needed to improve workforce development in line with national CHW and community health policy priorities.

Last Mile Health, the USAID-funded Human Resources for Health in 2030 Program (HRH2030) and the WHO partnered with the Liberian MOH to apply the framework and identify and elaborate upon the specific CHW data indicators that best respond to the needs of the NCHAP. This included desk review, workshops, and key informant interviews (see Appendix 1). M&A Framework application revealed that of the 26 indicators, approximately half were available, with the biggest gaps in "strategy" which includes training and professional development. The findings demonstrate that while there is significant data available, investments are needed to strengthen the quality and use of CHW metrics (see Appendix 2 and Appendix 3).

M&A Indicator Recommendations

Investments in CHA metrics should align with Liberia's forthcoming policy priorities to address quality of care and health workforce attrition. Providing a menu of optional indicators for countries to select based on their priority policy needs, the M&A Framework application assessed availability of data related to these priority areas, as well as data sources and flows.

Metrics to demonstrate quality of care: In Liberia, issues of quality of care revolved around lack of trust and support for CHAs from the communities they serve, lack of consistent support from supervisors, and a need to improve access to supplies.

- *To assess and build trust in CHAs*. Locally governed Community Health Committees (CHC) currently select CHAs and regularly meet for priority setting, planning, and monitoring. However, while selection criteria for CHAs do exist in the national policy, there is no official record or verification mechanism within a CHA profile that s/he meets specific selection and skills criteria.
- *To monitor CHA training quality and link to performance.* The NCHAP and partners track numbers of CHA training participants and their post-training knowledge. However, these data are not systematically shared with CHSS who are responsible for supporting CHAs (as their supervisors) to apply training knowledge and continually improve skills and effectiveness.
- *To increase support and accountability for CHA performance.* The CHA Program has a well-structured supervisory structure. However, within current health information flows, supervision data are only available to certain

stakeholders, available in a read-only format, which limits the ability of supervisors to use the data to monitor and track quality of supervision.
- *To improve availability of last-mile CHA supplies*. Although 20% of health facility drugs are earmarked for National CHA Program and stored at the health facility separately, CHA supplies are aggregated with health facility requisition. This makes it difficult to quantify and provide each CHA's supply needs to deliver services.

To address these underlying factors affecting quality of care, investments to better capture and use a subset of the following M&A indicators are recommended:

Recommended M&A Indicators
- M&A #4. Existence of selection criteria (minimum education and skills, community memberships and acceptance, person capacities and skills, appropriate gender equity).
- M&A #5a. Ratio of students enrolled in CHW education and training programmes to qualified educators in a given year.
- M&A #5b. Ratio of students completing a CHW education and training programme to students initially enrolled.
- M&A #6a. Existence of an up-to-date master list of accredited CHW education and training entities that is publicly available.
- M&A #6b. National and/or subnational mechanisms exist for accreditation of CHW education and training institutions and their programmes.
- M&A #7a. Presence of a training system for supervisors that addresses technical content and supervision skills.
- M&A #11. Community representatives are formally and regularly engaged in planning, selection, priority setting, monitoring, evaluation, and problem solving of the CHW program and its activities.
- M&A #12. Health supply chain that includes adequate, quality assured commodities and consumables for CHWs.

Metrics to capture and reduce CHA workforce attrition: High attrition was identified as a key challenge for NCHAP success and sustainability, though current CHA systems did not facilitate trend analysis.
- *To understand internal and external labor market forces.* Some CHAs may leave the program because compensation may not be commensurate with service delivery workload and/or they may not receive their allotted remuneration on a timely basis. While a remuneration strategy and average entry level wage exists in Liberia, there is a need to continuously monitor wages to ensure CHA pay is competitive within the local job market, to monitor whether wages are being delivered to the CHA and to quantify attrition, disaggregated by geography, gender, and other CHA characteristics. These are not currently captured by NCHAP managers. The WHO country office can support health labor market analyses.
- *To promote life-long learning and career paths.* Program managers have limited understanding of how the NCHAP can help CHAs achieve their long-term professional development goals; building career pathways was acknowledged as an area for further investment. A national system for continuing professional development could help enhance the CHA program by motivating CHAs and improving the quality of care.

To address underlying factors affecting CHA attrition, investments to better capture and use a subset of the following M&A indicators are recommended:

Recommended M&A Indicators
- M&A #2. Human resources for health information systems to generate data to track CHW stock, education, distribution, flows, demand, capacity, and remuneration.
- M&A #5c. Existence of national systems for continuing professional development for CHWs.
- M&A #8. Presence of a remuneration strategy with a financial package commensurate with the job demands, complexity, number of households, training, and roles that CHWs undertake, training and roles and average entry level wage and salary.
- M&A #8c. Existence of a career pathway envisioned for CHWs, including other health qualifications or CHW role progression.

Operationalizing investments in CHA information systems to improve availability and quality of priority metrics

To capture these CHA metrics in a country-owned, efficient manner, we recommend investments to improve the ability of existing, or development of new, interoperable information systems to manage disaggregated data on **individual CHAs (including their training), and workload** and support strategic decision-making and resource allocation. These investments must align with the national Health Information System Strategic Plan, and consider the human resource capacity, infrastructure, and policy mandates needed to be able to develop, manage and institutionalize the systems. The following short- and long-term recommendations to operationalize CHA metrics are organized by information system.

CHA registry development

Currently, data on individual CHAs is inaccessible, out of date, and aggregated, making it difficult to better build, manage, and optimize the workforce. Therefore, centralized CHA registry, which is maintained and managed by the MOH, capturing standardized information about CHAs with inputs from and access for trainers, county health teams, CHSS and county-level partners is recommended. This registry should contain basic information on the CHA, such as salary information, training, service delivery activity, performance/

supervisory measures, any continuing professional development information, and career history. Specifically for tracking training, the CBIS could include development of the master list of CHA graduates during their training; this list would better facilitates connections between training, performance, and workload, and ultimately to ensure that community health needs are met. The CHA registry should also be able to develop reports on number and location of CHAs, training history, workload, and any other reports for management and decision making. A CHA registry would merge existing data from the CHA training roster, CBIS, IFI (eJISS), and supervisory forms. Including data from these various sources is critical to allow both national and county level stakeholders access to basic CHA information to better support, coordinate, and monitor activities, and respond more rapidly to performance issues. Ultimately, a CHA Registry will support CHCs, county health teams and CHSS's to perform their oversight roles. The CHA Registry should be built in phases to promote optimal roles and responsibilities and data needs for all actors involved in management of the CHA workforce but without immediately disrupting existing systems. A workplan with clear roles and responsibilities will be an important first step to building the CHA registry. The registry should connect with the existing national human resources information system (HRIS) which is used to inform the National Health Workforce Accounts (NHWA).

In the short term (next one year), NCHAP stakeholders could begin the process of integrating data from existing systems/data sets/initiatives to compile a master list of CHAs which could be stored in a temporary web-based database. IFI data integration into eJISS can also occur, enabling improved linkage between performance and implementation fidelity data to individual supervision of CHAs. And finally, as eCBIS development continues, NCHAP stakeholders need to ensure disaggregation of CHA data to the individual level as much as possible.

In the long term (next three years), an interoperable CHA Registry should be developed to serve as the main source of individual CHA information for other information systems. While the Registry may be a separate information system, it should integrate into the overall eCBIS architecture ensuring the seamless exchange of data between information systems.

eLMIS and eCBIS disaggregation

Currently, eLMIS tracks data on commodities and other supplies, and CHAs are included in the supply chain system. In addition, a hybrid paper-based/electronic CBIS currently exists in which data from paper forms are then entered into the national DHIS2 platform, which further aggregates individual level data on CHA services. Overall, **disaggregation between supply consumption and health service activities between CHA and facility-based health workforce is limited.** This limits the ability of supervisors and decision makers to better understand CHA workload and respond to potential performance issues. By understanding CHA workload and performance, CHAs contributions to health services in Liberia will be well documented and better planning can occur to ensure CHAs are equipped and supported to respond to population health needs.

In the short term (next one year), a review of the eLMIS and the in-development eCBIS should be conducted to better understand the systems' capacity to disaggregate data to the individual level. After this review, decisions can be made on how the functionality and capacity of the system can be enhanced to accommodate these data needs.

In the long term (next three years), using the CHA Registry as the main source of data on CHAs, the disaggregated data on commodity and supply consumption and health services provision should be reported into the eLMIS and eCBIS respectively and shared between the systems through interoperability. This data can then be used by supervisors and decision makers to regularly assess workloads, performance, and trends in needs and demands of the population. Coupled with metrics on the quality of care that CHAs deliver, this data can help inform strategic decisions for equipping, training, and planning the CHA workforce.

Cross-cutting operations

To realize these recommended investments, areas of coordination, management and operational capacity must be addressed. In terms of **coordination**, all CHA information systems strengthening should be supported by the CHA TWG and HIS TWG. These stakeholders should guide decision making on the development and/or enhancements of these systems. These decisions may include data standards flows, data sharing agreements and overall standard operating procedures for the exchange of data. In regard to **management**, to ensure there is adequate capacity for the different generators and users of CHA data, job descriptions and reporting requirements may need to be updated at both the national and County Health Teams. Finally, in terms of **operational capacity**, with the inclusion of more data comes the need for more capacity within the IT infrastructure, such as a server space and additional IT equipment (i.e., laptops, uninterruptible power supply, and connectivity). In addition, ensuring that there is human capacity at all levels, central MOH, County, facility and CHSS level to manage, maintain and use these systems, and the data within, is critical to ensure the enhancements made are implemented and used. To manage and maintain these systems effectively, dedicated resources and commitment to long-term integrated strategy and investments will be needed by the MOH.

Considerations for Applying the M&A Framework in Liberia

As a first step, the M&A Framework can provide a valuable opportunity to benchmark a country program and its metrics

against the WHO CHW guideline recommendations. In addition, it should be applied using a variety of data sources such as policies, routine health information systems or data collection tools, special surveys, programs, and other resources, to monitor policy, program, and metric progress. Based on our experience, the M&A Framework application is beneficial to:

- *Supplement other CHW program strengthening tools.* While the CHW AIM functionality matrix and toolkit can be useful to consider CHW program strength, the M&A framework is more focused on metrics and information systems for performance monitoring and health system linkages.
- *Quantify CHA program parameters for evidence-based costing and resource mobilization.* Coordinated CHA metrics, including costing information, can facilitate resource mobilization particularly due to the fact that the CHA program is primarily funded by donors through different implementing partners. Currently, insights on performance captured through quarterly review meetings, special studies, research, and/or evaluations are often 1) not synthesized in a systematic way and 2) when opportunities for investments are identified, there is no clear financing mechanism to take advantage of these opportunities. A good example of this is that while many challenges are identified through analysis of the IFI data, stakeholders noted that there is no way for counties to secure financial or technical support to address them.

  Further, if an innovative or performance-based financing (PBF) mechanism were to be created, there could be a more robust set of incentives for developing the data system architecture to collect, analyze, share, and use community-based information. Taking a community- or CHA-centered approach to service delivery data could help address some challenges faced by PBF implementation to avoid an imbalance of incentives for certain vertical programs and to instead incentivize for greater accessibility and quality of services provided, especially for historically underserved communities. It should be noted that while the M&A Framework provides a standard set of metrics to identify CHA performance gaps, it does not facilitate decision making on which of these gaps to prioritize or how to mobilize resources to address them.
- *Use by existing TWGs.* Learnings from the M&A Framework application in Liberia can be integrated into the CHA TWG and health information system (HIS) TWG to improve program performance and spur future investments.
- *Integrate into routine decision-making.* Using the M&A indicators can complement existing M&E frameworks and guide current discussions on the revision of the NCHAP policy and strategy. The framework application highlights indicator availability and gaps to inform efforts to strengthen how CHA data are captured and used within the IFI, quarterly review meetings (QRMs), and annual/semi-annual policy review processes to drive program performance.
- *Integrate into national and global Initiatives.* NCHAP data and information collected when applying the framework can also be incorporated into Liberia's NHWA reporting to better integrate CHAs within Liberia's strategic health workforce planning and broader health systems strengthening.

For the next steps, the Liberia NCHAP and key stakeholders, such as the CHA and HIS TWGs, can carry forward the M&A Framework application and learnings to make investments to better monitor key CHA metrics and integrate them within existing information systems and activity streams to improve NCHAP impact and sustainability.

APPENDIX 1: Methodology

Last Mile Health, the USAID-funded Human Resources for Health in 2030 Program (HRH2030) and the WHO partnered with the Liberian MOH to apply the framework and identify and elaborate upon the specific CHW data indicators that best respond to the needs of the NCHAP. This was achieved through remote collaboration with in-country stakeholders and partners to:

1. **Assess data availability** for M&A indicators by mapping their sources, stakeholders, and systems.
2. Identify and prioritize the M&A indicators **that align with and could respond to CHA program and policy priorities.**
3. Identify **priority investments** in CHA-related data and information systems to support program monitoring, performance improvement, advocacy, and evidence generation.
4. In addition, as this was the first application of the M&A Framework, solicit input on **how the M&A framework could be improved and further integrated** into the overall CHW information ecosystem.

Specific activities over a 3-month period included:

- **Desk Review:** Review of existing policies, reports, and other documents about the National CHA Program to provide an initial understanding of CHA-related data availability and potential priorities, given policy/program needs.
- **Stakeholder Consultation:** Facilitation of two 90-minute workshops to orient stakeholders on the M&A Framework indicators; assess CHA-related data availability; map data sources and stakeholders; and identify priority metrics using a template for stakeholder consultation. Facilitation of additional key informant interviews to identify investment priorities and how these recommendations could inform the ongoing policy revision process.
- **Case study development and final consultation:** After developing a draft synthesis of findings and preliminary recommendations, feedback was solicited from MOH stakeholders and partners in Liberia to assess their relevance and salience.

Table 1 provides a list of CHA-related data and information sources identified. Stakeholders consulted included representatives from: The Ministry of Health (Community Health Services Division, Vital Statistics, M&E); implementing partners (Last Mile Health, Partners in Health); and multilateral and bilateral institutions (USAID, UNICEF, WHO).

Table 1. Sources of CHA-related Data & Information Identified

Strategic Plans & Policies • Investment Plan for Building a Resilient Health System in Liberia 2015 to 2021 • Essential Package of Health Services: The Community Health System (2011) • Liberia Health Workforce Program (2016) • National Health and Social Welfare Policy and Plan 2011–2021 (2015) • Revised National Community Health Services Strategy and Policy 2016–2021 (2016) • Liberia Health Information System Strategic Plan (2016-2021)	**Special Studies** • Implementation Fidelity Initiative • Ministry of Health CHW Guidelines Snapshot • Liberia Exemplar Case Study **Routine Information Systems** • Community Based Information System • eJISS **Routine Databases and Reporting** • CHW training roster • Supervisory reports and CHW report • CHW rosters in Google sheets

APPENDIX 2: Findings

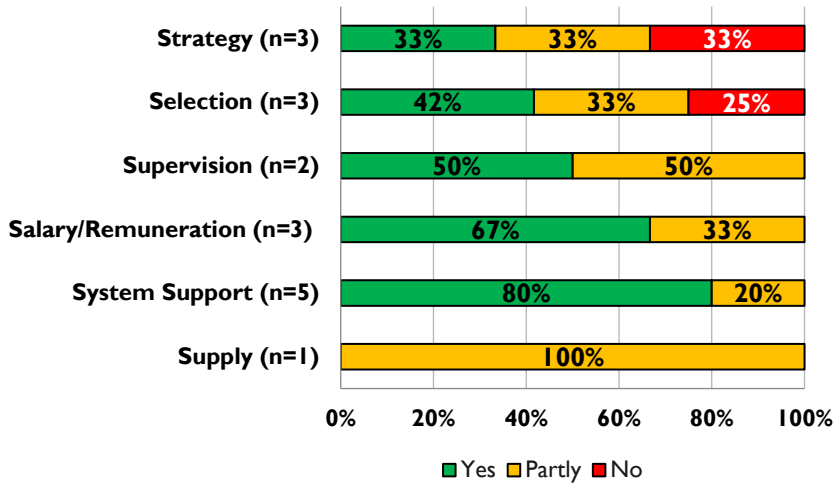
Findings identified trends in availability, accessibility, quality, and use of M&A Framework indicators as relates to the CHA program and future policy priorities. Overall, the M&A Framework provides a menu of optional indicators, and each country should select the indicators that apply to their specific priority policy areas.

Availability & accessibility of M&A Framework indicator data

Overall, about two-thirds (17/26) of M&A indicator data were fully (n=14) or partially (n=3) available (Figure 1). Data and information on CHAs are available in a variety of formats, with several policies and plans that delineate the CHW program and role of CHWs within the health system but lacking in individual-level data on CHAs and the services they provide through routine M&E or information systems.

M&A indicators in CHA strategies, plans and policies. Our application of the M&A Framework revealed that of the 15 policy-specific M&A indicators (e.g., does this policy exist and is it implemented? Yes, No or Partly), 13 could be confirmed to exist as a national strategy. Several key strategic planning documents (Table 1) created during the development phase of the program describe the vision for building, managing, and optimizing the CHA program through needed investments, essential package of services, roles of CHAs within the overall health workforce program and inclusion of CHA data within the digital health architecture. Developed by the MOH and partners, these key documents demonstrate the political will for CHA institutionalization and monitoring of CHA program metrics and are publicly accessible to community health stakeholders. The two policy-specific M&A indicators that were not known to be present are:

Figure 1. CHW M&A Framework Indicator



- *M&A #5c. Existence of national systems for continuing professional development for CHWs*; and
- *M&A #8c. Existence of a career pathway envisioned for CHWs, including other health qualifications or CHW role progression.*

However, stakeholders did note that the issue of a defined career pathway is a future priority.

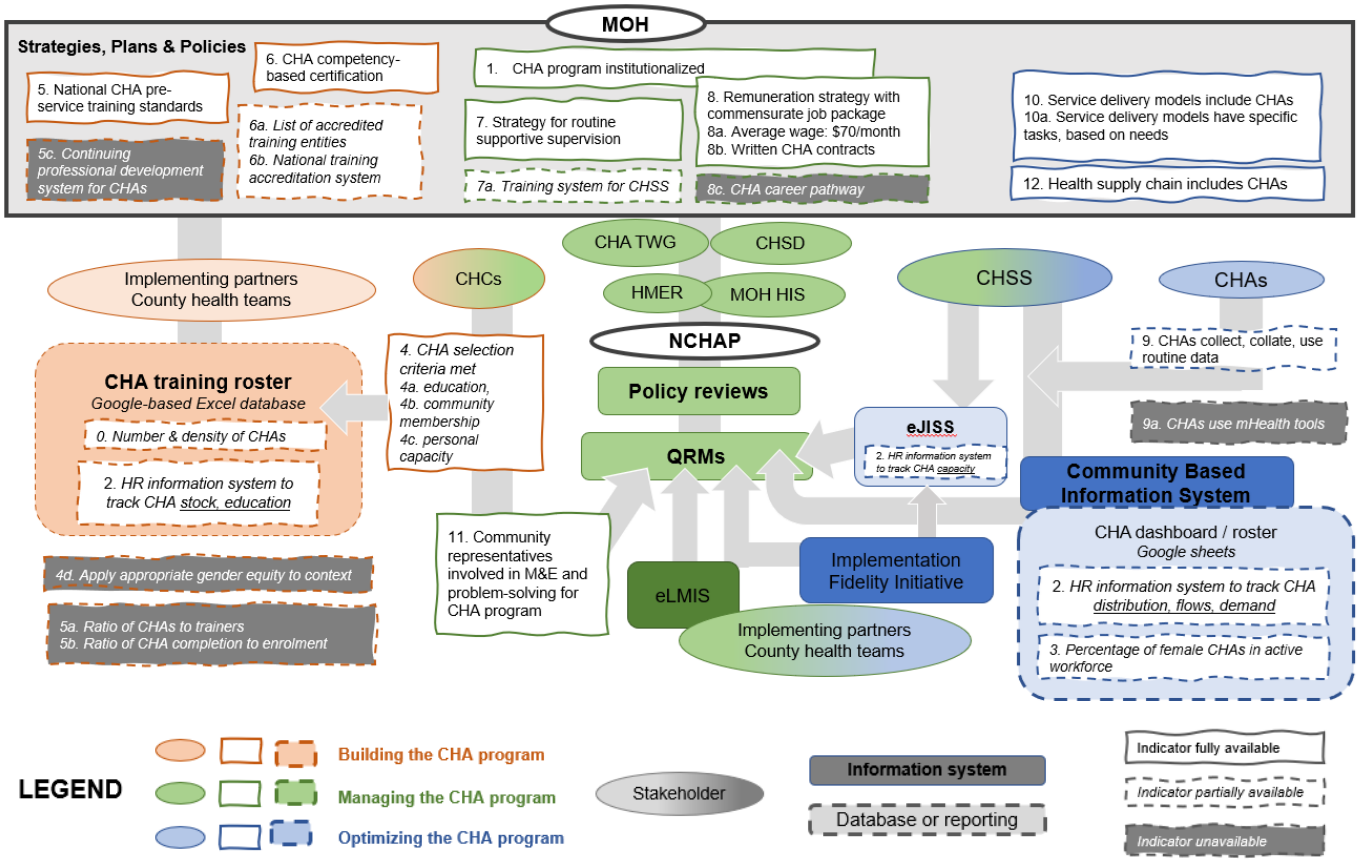
M&A indicators in special studies Past and ongoing research initiatives, such as the Implementation Fidelity Initiative (IFI), various guidelines, and case studies provide more detailed snapshots on CHAs, though the recommendations coming out of these initiatives are often not incorporated into program improvement and planning efforts or resourced appropriately.

M&A indicators in routine information systems and reporting Within more routine information systems, data processes, and reporting to capture quantitative CHA data, our analysis explored what kinds of information are available within CHA training rosters, the community-based information system, and supervisory reports and regular CHA reporting. In addition, some individual level data on CHAs exists in Google sheets used by partners and the MOH. The metrics by which to identify which of CHA-specific policies were successfully implemented were more elusive. When possible, M&A indicator values were captured, such as for CHA salary. However, for most M&A indicators requiring a quantitative value (e.g., number and density of CHAs percentage of female CHAs in active workforce; ratio of CHA trainees to trainers), it was difficult to ascertain that these data were readily available, up-to-date, or accurate for decision makers.

Mapping the M&A Framework in Liberia by stakeholder and system

Across the CHA lifecycle, there are stakeholders that generate data throughout their activities and there are owners who manage, maintain, and use this data. In Liberia, all stakeholders involved in the CHA lifecycle generate data. This includes members of the CHA Technical Working Group (TWG) and those involved in the National Community Health Assistant Program (NCHAP) (including MOH, partners, donors) County Health Teams (CHT), and community health teams (CHCs). Within the MOH, this includes the Community Health Services Division (CHSD) and the Health Information Systems, Monitoring & Evaluation and Research (HMER) Team. Owners of CHA data included the MOH, NCHAP and programs such as the TB Program, and the Health

Figure 2. Mapping the M&A Framework indicator availability in Liberia by stakeholder and system



Information Systems (HIS) and Pharmaceutical Directorate which manages the electronic logistics management information system (eLMIS). Figure 2 maps the stakeholders, and their systems across the CHA lifecycle: building, management, and optimization. The three primary information systems and databases for CHA strategic management and performance improvement across the lifecycle are the: Community Based Information System (CBIS)- including CHA training roster and CHA/CHSS service reports-, the eJISS, and the eLMIS. All three systems feed into the general data warehouse DHIS2. The CBIS consists of routine data that originates from CHAs and CHSSs in the field and is focused on service delivery and disease monitoring. The eJISS assess system performance issues. The eLMIS tracks supply of commodities. The CHA training roster was described as a fragmented and static list in a Google excel-based database, considered as part of the overall CBIS, only documenting those that completed all four trainings. In addition, the training data captured is only related to initial four trainings and does not indicate additional education or training history that may be important for future planning of trainings to ensure proper skills mix for quality of care. Data is aggregated and only updated quarterly when there are trainings at the central level.

There is no complete registry of CHAs, noting that partial M&A indicator #2 availability may exist within at least three different data sources (CBIS/training roster and eJISS). The eJISS guidance is intended to include CHAs to address standards of care. In addition to collating data on different thematic areas and disease/program-specific services, the eJISS is in the process of incorporating the Implementation Fidelity Initiative (IFI) which was initially a standalone set of facility and community surveys that help assess how closely program implementation aligns with the CHA national policy. The implementation challenge is generally that adequate resources and financing are not available to implement the actions that are identified through supervision visits and QRM action plans. Individual level data is managed by the CHA. This data is aggregated into the CHA Monthly Service Report (MSR). The CHSS then aggregates all data from the CHA MSRs within their catchment area into a CHSS MSR. The CHSS MSR is then given to the County Health Team for data entry.

Data at the county level is often out of date and not shared with the central MOH which can hinder planning and coordination. The CBIS is based in Liberia's central health information system, DHIS2, with health services data initially captured on paper and then entered in the DHIS2 on a monthly basis. CHAs provide reports to CHSS, who then enter data into the CBIS monthly. The development of the CBIS is still in progress, with continuous investments being made. It was also noted that mHealth interventions, which can be used to support service delivery, are not commonly used at scale in Liberia due to challenges with sustained costs to maintain thus CHAs will continue to submit paper-based forms for the foreseeable future. Across these data sources, there is not a system or process to capture CHA activity over time to indicate attrition.

APPENDIX 3: Summary of M&A Framework Application Findings for the National CHA Program, Liberia

Indicators	Yes	No	Partly	Value	Key Findings
0. Number and density of CHWs				?	There is not complete, accurate, up to date and accessible data on the number and density of CHAs. Program members rely on CHA training records which may exist at county level or through ad-hoc verification to determine if trained CHA is active.
STRATEGY					
1. Community health worker programmes institutionalized within human resources for health strategies and policies, particularly for PHC and UHC, and in health sector investment plans.			X		CHAs are included in the National Health Sector Investment plan 2015-2021 as part of a "fit for purpose" health workforce and contribution towards sustained community engagement. The National CHA program is institutionalized under the National Community Health Services Policy and Strategy. CHWs are recognized as a core component of the public sector health system and are formally integrated into the continuum of care through the essential health services package. However, the NCHAP has been funded primarily by external donors and implemented through partners,
2. Human resources for health information systems can generate data to track community health worker stock, education, distribution, flows, demand, capacity, and remuneration.			X		Data on CHAs is not included in the national HRIS. There is limited comprehensive or centralized individual data on CHAs. The available data is mostly from training records, but this is not up to date and does track attrition. - Stock: dependent on eJISS and frequency of supervision - Education: based on CHA training roster, though completion of modules not always available - Distribution, flows, demand: CHSS can verify how many of their 10 CHA supervisees are active based on their activity reporting - Capacity: while the WHO M&A framework does not fully define this term, it was interpreted to mean their capacity to provide quality services, which is theoretically available from eJISS / supervision reports by CHA.
3. Percentage of female community health workers in active workforce.				?	The percentage of female CHAs in the active workforce is unknown based on the accuracy and detail of data on CHAs in general. However, CHA program stakeholders noted sex-disaggregated CHA data would be valuable to understand workforce trends, including attrition rates. Anecdotally, in some counties the male CHA attrition rate was high due to more lucrative earning opportunities, such as mining.
SELECTION & SKILLS					
4. Existence of selection criteria that:					Selection criteria do exist per the national policy. Community Health Committees (CHCs) select a permanent member of the community to serve as CHA. There is not any official record or verification mechanism within a CHA profile whether s/he meets specific selection and skills criteria, however stakeholders noted that CHCs and county health teams were generally successful in meeting them. They also confirmed that these data were most useful during annual or multi-year reviews, as opposed to more regular visits.
4a. Specify minimum educational competency & skill levels	X				Stakeholders noted that an aptitude test before training would be helpful to confirm literacy, which is needed to provide quality services. Those selected must be trustworthy and respected, able to perform CHA tasks, motivated, and a good mobilizer and communicator.
4b. Require community membership and acceptance	X				CHCs select CHAs based on being permanent community members.
4c. Consider personal capacities and skills			X		Stakeholders noted that an aptitude test before training would be helpful to confirm literacy, which is needed to provide quality services.
4d. Apply appropriate gender equity to context, favouring equal or greater female-to-male ratios	X				Females should be given preference, as well as those with interest in TB/leprosy. The CHA workforce roster is disaggregated by sex, however there was not a systematic information flow from county health teams to CHCs to influence subsequent selection.

5. Existence of a national and/or subnational standard on the duration, delivery methodologies and content of CHW pre-service training and education.	X				National training standard defined through national policy. Four training modules cover all roles and responsibilities with standardized content. CHAs for TB, HIV, and family planning undergo separate training, and may not receive all modules. Pre-tests measure existing knowledge. Post-test performance is not systematically shared with CHSS for post-training follow up support.
5a. Ratio of students enrolled in CHW education and training programmes to qualified educators in a given year.		X		?	Qualified "master trainers" may be from MOH central level, implementing partners, or county health teams, including CHSS. Data does not exist in a readily available format for analysis.
5b. Ratio of students completing a CHW education and training programme to students initially enrolled.		X		?	Data on completion of CHA training does not exist in a readily available format for analysis. When CHAs leave the workforce and are replaced, they may not undergo official training per the national standards, but rather be mentored to build skills for practice.
5c. Existence of national systems for continuing professional development for CHWs.		X			This does not exist, but the importance of a career path was emphasized by stakeholders consulted.
6. Issuance of competency-based certification to CHWs who have successfully completed pre-service training.	X				Curriculum is currently objective-based, not competency-based and informal certificate given to CHAs upon completion of training. Activities throughout curriculum allow CHAs to share experience.
6a. Existence of an up-to-date master list of accredited CHW education and training entities that is publicly available.			X		There is no existence of a list of training institutions; trainings are organized within the NCHAP.
6b. National and/or subnational mechanisms exist for accreditation of CHW education and training institutions and their programmes.			X		There is no existence of an accreditation mechanisms; trainings are organized within the NCHAP.
SUPERVISION					
7. Presence of a strategy to provide regular supportive supervision	X				CHSS, who are professional health workers, are trained to provide clinical supervision, mentorship, and coaching to no more than 10 CHAs, spending 80% of their time in the field supervising CHAs and 20% in the health facilities.
7a. Presence of a training system for supervisors that addresses technical content and supervision skills			X		CHSS receive four weeks of in-depth training on the integrated service delivery package delivered by CHWs, practical training on the provision of supportive supervision for CHWs in the field, and support for the referral of patients.
SALARY/REMUNERATION STRATEGY					
8. Presence of a remuneration strategy with a financial package commensurate with the job demands, complexity number of hours, training, and roles that CHWs undertake	X				CHAs work 20 hours per week and receive standardized $70 per month; supported by donors. CHSSs work 40 hours per week and receive between $270 – $310 per month, dependent on distance from Liberia's capital; paid for by the government. Performance-based incentives are not standardized but piloted by some implementing partners. Payment mechanisms include mobile money, bank transfer, or cash.
8a. Average entry level wage and salary (in US dollars equivalent), excluding social contributions				**70USD/ Month**	
8b. Presence of written contracting agreements for paid CHWs , specifying roles, responsibilities, working conditions	X				CHSSs sign formal contracts for 1 year and CHAs sign bonding agreements for 1 year. CHSSs are gradually becoming absorbed as civil servants who are supported by the GOL's payroll. CHAs are not currently civil servants and are donor supported.
8c. Existence of a career pathway envisioned for CHWs, including other health qualifications or CHW role progression			X		No formal career pathway for CHAs, but policy calls for the development of one. Stakeholders recognize the value of a career path, in particular towards a licensed nurse practitioner (LPN)
SYSTEM SUPPORT					
9. CHWs collect, collate, and use data in routine activities	X				CHA data is collected by Community Health Services Supervisors, aggregated, and entered into Community Based Information System (CBIS). CBIS indicator trends are reviewed at quarterly review meetings to provide performance feedback and make data-driven decisions. Digital Health initiative ongoing to streamline data collection.
9a. CHWs use mHealth tools			X		mHealth tools are not widely used because of challenges in maintaining resources and connectivity.

10. Service delivery models include CHWs with general tasks as part of integrated care teams	X				CHAs provide services in the community, assisting individuals and groups to access health services, and educating community members on health issues; work as part of an integrated team.
10a. Service delivery models include CHWs with selective and specific tasks, based on population health needs, cultural context, and workforce configuration	X				CHAs are trained with a standardized package including promotive, preventive, and curative services to populations beyond 5kms. The services CHAs provide were selected to address the leading causes of morbidity and mortality in rural Liberia. The MOH is developing Community Health Protomer (CHP) cadre to provide promotive and preventive services within 5kms of a health facility.
11. Community representatives are formally and regularly engaged in planning, selection, priority setting, monitoring, evaluation, and problem solving of the CHW program and its activities	X				CHCs select CHAs and regularly meet for priority setting, planning, and monitoring. 1 CHC member attends Health Facility Development Committee (HFDC) meeting at health facility.
SUPPLY					
12. Presence of a health supply chain that includes adequate, quality assured commodities and consumables for CHWs			X		CHA supplies are aggregated with health facility requisition. 20% of health facility drugs are earmarked for National CHA Program and stored at the health facility separately. Restock is done based on consumption and CHSS led CHA restocks during regular supervision.

Acknowledgements

This case study was developed through a collaboration with USAID's HRH2030 Program/Chemonics International and Last Mile Health led by Rachel Deussom, Leah McManus, and Kyle Muther, and supported by Danielle Boyda. We would like to acknowledge the following individuals at the Ministry of Health, Republic of Liberia for their great leadership and important contributions to the M&A Framework application and case study: S. Olasford Wiah (NCHAP), Sanford Chea Wessah (National Statistics), Luke Bawo (HMER), George Jacobs (Policy and Planning), Patrick Konwloh (HIS), Jerome Korvah (CBIS), and J. Mike Mulbah (M&E). Thank you to additional partners for their consultation: Lassana Jabateh (Partners in Health), Anthony Yeakpalah (UNICEF), and Faith Cooper (International Rescue Committee). Gratitude is due to William Walker, T. Ruston Yarnko, and Brittney Varpilah (Last Mile Health/Liberia) for their inputs, support, and coordination. Thank you to Elizabeth Walsh, HRH2030 Program/Chemonics International for brief design and copyediting. Finally, we would like to extend our thanks to USAID and WHO for their contributions and oversight: Jo Jean Elenes, J. Healey and Jannie Horace (USAID/Monrovia), Nazo Kureshy (USAID/Washington, Office of Health Systems), Charles Ocan (WHO/Monrovia), and Catherine Kane (WHO/Geneva).

HRH2030
HUMAN RESOURCES FOR HEALTH IN 2030

www.hrh2030program.org

This material is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of cooperative agreement no. AID-OAA-A-15-00046 (2015-2020). The contents are the responsibility of Chemonics International and do not necessarily reflect the views of USAID or the United States Government.

@HRH2030Program @HRH2030

251 18th Street, S Arlington, VA 22202 | Phone: (202) 955-3300 | Fax: (202) 955-3400 | Email: info@HRH2030Program.org