Condensed Performance Management Guidebook

How to Optimize Community Health Systems

Introduction

Living Goods developed a comprehensive Performance Management Guidebook to share recommendations for building successful, quality, and resilient community health programs. This is a condensed version of that longer document, which was created in alignment with World Health Organization and national community health guidelines and protocols, Community Health Impact Coalition principles, and other sources. Drawing from the experiences of community health workers (CHWs) and their supervisors in Kenya and Uganda, the guidebook documents the elements of data-driven performance management to optimize community health systems, incorporating evidence and case studies. Performance management for community health programs drives CHW effectiveness to deliver better outcomes, improves motivation and reduces attrition, and helps yield a high return on investment.

CHW Performance Management Process

DIGITIZE

Ensure utilization of mobile technology in an integrated way to drive greater program performance and health impact and to enable strong performance management processes.

EQUIP

Effectively select and train CHWs and provide them with the necessary skills, tools, and supplies to effectively serve their communities.

COMPENSATE

Compensate CHWs using simple, easy-to-understand performance-based incentive schemes to ensure they are motivated to continually visit households and deliver health services.

SUPERVISE

Provide CHWs with regular supervision, coaching, and mentorship via digital tools to meet pre-determined performance targets and to manage attrition in partnership with government health facilities.

EQUIP

CHW Selection

The CHW selection process is a critical activity as it determines the ability of each CHW to learn health and technical skills, retain knowledge, and apply those in the effective provisioning of health services. CHWs also must be able to engage household members and build rapport with their communities. CHWs can be selected from an existing government-recruited pool, or referred from the community and then assessed, interviewed, and tested.

Principles for effective CHW selection include:

Partner with government: Government involvement ensures that the right resources are availed, validates CHWs to community members, and provides a strong support system for capacity building, compensation, and career progress. It also builds government ownership of CHW performance, including their integration into formal health systems.

Engage clients in CHW selection: Involving the community in selection activities helps build rapport, create confidence in the selected CHWs, and better understand their health needs.

Carefully map locations for CHW selection: Factors such as population density, groupings, and epidemiology must be considered to ensure the right resources are allocated to appropriately chart the CHW workload, with household distance and client quantity well balanced.

Use digital data collection tools and evidence-based criteria: Digital tools (like TREMap) quicken and standardize the recruitment process, and relying on data helps evolve recruitment criteria based on outputs and performance.

Criteria for CHW Selection:

- Strong social ties and good standing in the community
- Age group 30-55 years
- Local language fluency
- Completion of primary school with basic numeracy and literacy in English
- Effective learning of smartphone and app
- Female (not obligatory, but female caregivers typically prefer discussing health issues with other women)

CASE STUDY

CHW DEMOGRAPHICS

Living Goods sought to evaluate its CHW selection criteria in 2016 by examining the demographics and performance of 710 CHWs in Kenya. The results revealed a higher proportion of active female than male CHWs and greater levels of health activities among women. Younger CHWs were also found to have high rates of attrition as they often left to pursue higher education, marriage, or better paid opportunities. In Uganda, a study of 1,170 CHWs using program data from 2016-2018 corroborated these findings around age considerations, noting that CHWs below 35 years were three times more likely to drop out than other age ranges. CHWs who received more than five years of post-primary education were twice as likely to drop out versus those with lower education levels. Today, about 90% of Living Goods-supported CHWs in Uganda and 70% in Kenya are women.

CHW Training

After literacy and numeracy exams, assessment of community membership and acceptance, and character assessment interviews, the highest-scoring candidates should be invited to attend a pre-service training using Ministry of Health (MOH)-approved curricula. Trainings allow CHWs to acquire the competencies to effectively deliver frontline health services to their communities. Recommended training topics include use of digital tools, drug and equipment storage and stocking, handling of hazardous materials, and communication and counselling skills. CHW training approaches can include classroom-based learning, clinical practicums conducted at a health facility, and role-playing—in which CHWs partake in simulated health activities to instill confidence before going into the field.

Principles for successful pre-service training include:

Prioritize collaboration: The involvement of government and relevant implementing partners in developing training content and jointly delivering it, as well as in the certification process, ensures that CHW learning is aligned to national community health priorities and the achievement of high-impact indicators. This fosters co-ownership of the results. Government involvement is also motivating for CHWs and validates their role in the community as credible health service providers.

Establish certification processes: Certification enables trainers to assess CHW knowledge acquisition, identify skill gaps, and address issues iteratively so that CHWs are fully prepared and equipped to deliver health services to their communities. Trainers can assess which topics require prioritization and which CHWs require extra instructional support.

Ensure CHW-supervisor interaction: It is important that supervisors interact closely with CHWs during the training sessions to build rapport critical to the supervisory process.

Provide training evaluations: CHWs can provide useful feedback on the quality of the trainers, information provided, and value of the different content delivery methods to guide future trainings and determine whether the training objectives were met.

After becoming active CHWs, regular in-service training sessions are recommended to support knowledge retention and improve service delivery and performance. Training topics should be based on performance gaps observed by supervisors during fieldwork and data analytics provided by the dashboard. In-service training also provides an opportunity for CHWs to refresh their health knowledge, learn about any changes in MOH protocols, and receive application updates. In-service trainings are further used as an opportunity to recognize and reward strong individual performers, re-stock medical supplies, and troubleshoot phone problems. CHWs may also get together to share experiences and testimonials of how they solve problems in the community.

At Living Goods, once CHWs are trained and pass a competency-based certification, they go back to their communities and register all households and reintroduce themselves as CHWs. Graduation is then conducted to celebrate their successful training and to formalize their start of work in the community, bringing together CHWs, their clients, local leaders, MOH officials, and Living Goods staff. CHWs receive their certification at this time as well as a start-up equipment kit, which includes essential medicines, tools such as MUAC tape, and other key supplies such as family planning commodities.

CHW Contracting

It is important to set expectations and clearly define the role of the CHW, who does not replace the health facility worker but rather provides frontline care to households—specifically by assessing, diagnosing, and treating common illnesses while referring complicated cases for care at facilities. Sharing clear job descriptions provides a framework for ensuring CHW compliance and forms the basis of monitoring their performance. At Living Goods, before CHWs begin their work they sign a contract confirming that they understand the demands and time requirements of the role. These agreements are co-signed by a local government leader in the CHW's community, ensuring accountability for performance and confirming the CHW's acceptance and good standing.

SUPERVISE

CHW Supportive Supervision

CHW supervisors play an essential role in supporting CHWs to consistently deliver high-quality health care to their communities. They provide on-the-job training, mentorship, and technical guidance; motivate and closely monitor CHW performance; and interface with government counterparts. Regular quality supportive supervision is positively correlated with strong CHW performance.

Recommended supervision methods include:

- *In-person supervision:* Supervisors shadow CHWs on field visits and evaluate the quality of care delivered, provide feedback for improvement, and review their stock of medicines. The ratio is typically 1 supervisor per 30 CHWs.

- *Remote supervision:* This approach allows for continuity of service delivery in situations where in-person supervision is not possible (remote, hard-to-access locations) or high-risk (as during COVID-19). In some cases it also allows for additional touchpoints and more focused supervision. The pandemic triggered the development of more comprehensive protocols and tools to enable remote supervision to CHWs via mobile phones.

- *Peer supervision:* In this model, CHWs in close geographic proximity form groups of 10 and choose a "peer" supervisor amongst themselves. This individual monitors, mentors, and coaches other CHWs, with the main supervisor checking in on several peer groups weekly. This approach optimizes the main supervisor's time and reduces the number of visits to the communities, and therefore the cost of operations. Living Goods-supported CHWs have expressed preference for peer supervision due to the group incentives and the value of group dynamics where common problems can be understood and solved more practically by peers.

Payment that is a mix of fixed and performance-based is recommended for supervisors. At Living Goods, supervisors are eligible for monthly financial incentives on top of their fixed income based on supervised CHWs achieving health impact targets. Supervisors can also receive a fast-start bonus for supporting CHWs who achieve targets during their first three months, a period found critical to set CHWs up for success and on a path towards successful long-term performance.

Supervisor Qualifications & Skills:

- Proven success as a CHW or health professional with a clinical health degree

- Minimum 2 years' experience in health/community work

- Strong leadership qualities, interpersonal & coaching skills

- Skilled at data analytics

- Excellent written and verbal communications skills, both in national and local languages

- Ability and willingness to work extensively in communities

- General digital proficiency

CASE STUDY

EVALUATION OF A PEER SUPERVISION PILOT PROJECT IN RURAL UGANDA

Although Living Goods' standard in-person supervision approach has been effective in delivering results, it is expensive to implement and scale up nationally. In 2019, Living Goods conducted a peer supervision experiment among 211 CHWs in Mayuge district. This approach was found to drive improved CHW monitoring, motivation, teamwork, and optimization of supervisor time. On all KPIs, the percentage of CHWs hitting targets was higher among those supervised by their peers than those under standard supervision. In particular, in-stock rates and attrition were significantly improved. Additionally, due to the reduced cost of supervision and refresher trainings, the total cost to maintain the peer supervision model for 1 year was $176 per CHW versus $273 for standard supervision. Peer supervision resulted in overall savings of 36% of direct operations costs.

CHW Attrition and Replacement

CHW attrition remains one of the top challenges for community health programs globally due to the resulting disruptions in the provision of care. WHO highlights the major causes of attrition: better job opportunities, low involvement in data collection, burnout due to imbalanced workloads, and poor remuneration. Living Goods has also observed that community support positively affects attrition; CHWs are motivated by the respect they gain in their communities.

Principles for managing attrition include:

Calculate and report CHW attrition rates: If annual attrition rates are over 10%, it is important to understand the types of attrition—for example, if CHWs voluntarily resigned or were asked to leave by the government or implementing partner—to guide the development of effective strategies to address the problem.

Appropriately select and set up CHWs for success: Using evidence-based selection criteria to choose best-suited CHWs can mitigate attrition. Effective supportive supervision especially during the first three months is also essential, as low performers can be coached early on to improve their performance before they become demotivated.

Plan for attrition: Predicting what resources will need to be budgeted to replace exited CHWs in a timely manner will help avoid disruptions in services to clients. (Note a certain degree of attrition should be considered healthy as an indicator that performance is being managed adequately, including the exit of non-performing CHWs).

Key Performance Indicators

Key performance indicators (KPIs) measure progress toward achieving critical health outcomes and help programs continually improve performance. KPI categories can include health impact metrics, such as the number of sick child treatments; program implementation quality metrics, such as CHW in-stock rates; and scale and cost-effectiveness metrics, such as cost per capita. Targets at all levels are essential to drive performance. They can be set by triangulating external and internal data and analysis such as historical trends of CHW performance, households per CHW and household size, burden of disease in the areas of operation, and market share. Living Goods has observed that involving CHWs and supervisors in the development of targets builds ownership and motivation to achieve these, as opposed to sharing instructions to achieve targets without context.

CASE STUDY

DRIVERS OF CHW ATTRITION

Living Goods conducted a study to determine the main drivers of CHW attrition. An analysis of data from 1,170 CHWs in Uganda from 2016-2018 found that 153 per 1,000 CHWs ceased to be active within 12 months of graduation. The top drivers of attrition included:

- *Selection of CHWs younger than 35 years who were more likely to migrate for marriage, further studies, or to seek other employment opportunities.*
- *CHWs with higher education levels were more likely to look for career advancement and better paying opportunities.*
- *Poor performance of CHWs in the first 2 months of their role, which could indicate poor knowledge uptake, inadequate training, low motivation, or inadequate expectations.*
- *CHWs in urban areas were more likely to exit due to the abundance of job opportunities.*

DIGITIZE

Organizations can use mobile technology to deliver higher program performance and drive health impact at scale. A well-executed mHealth workflow creates an enabling environment for CHWs, including improved communication, enhanced supply chain management, more timely and complete reports, and better supervision of CHWs.

Empowering CHWs with a smartphone app enables them to detail every patient contact in the field and allows real-time performance management. A basic clinical decision support system can ensure consistent and accurate diagnoses and smart workflows for various health services. Ideally, these tools will allow CHWs to collect data that is compatible and integrated with government national health information systems for reporting, analysis, and dissemination of data to support decision-making for better and more targeted service delivery.
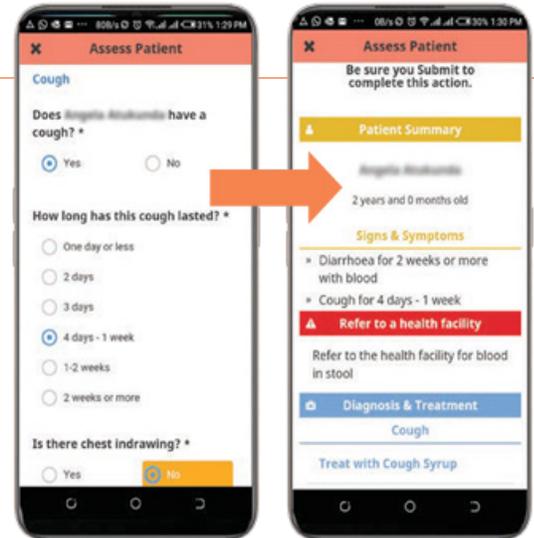
Sick child assessment workflow in Living Goods' Smart Health app

CASE STUDY

MIGRATING TO MHEALTH

Living Goods began transitioning from a paper-based to digital approach in 2014, starting with basic SMS on feature phones to the development of the Smart Health app. Under its former paper-based model, each CHW was issued several 500-page booklets to guide their activities as well as paper forms to refer clients to health facilities. The challenges of the paper-based system were tremendous, including difficulties in linking various health information, poor data quality and records, a nearly two-month timeline to get reports, and inability to track CHW performance over time or measure organizational performance around KPIs.

In partnership with Medic Mobile, Living Goods adopted a user-centric design approach to develop user-friendly apps and dashboards and conducted user-acceptance tests throughout development. Living Goods recruited technology staff to oversee the process and provide support to CHWs in the field, and over time brought technology capabilities in-house.

Digital tools to support performance management include:

CHW App

- Records client household data and details of all members assessed, treated, or referred
- Offers education guidance and diagnostic support for select illnesses like pneumonia, malaria, and diarrhea
- Manages complex caseloads by focusing on high-impact visits prioritized by the algorithm
- Monitors CHWs' performance with a target tab that motivates them to work harder

Supervisor App

- Optimizes supervisors' workplan by focusing on high-priority and impact touchpoints
- Guides supervisors through visits with a checklist
- Monitors historical CHW performance and records all visits via phone or in-person

Dashboards

- Support supervisors and government officials to monitor KPIs, compare historical performance, and spot trends—driving more systematic and logical decisions to focus on improving performance

- Eliminate labor-intensive, costly, and inaccurate paper-based data entry while ramping up the scope of data available—enabling the quick identification of potential service anomalies or disease outbreaks
- Provide a summary of CHW performance across groups and over time, helping to identify high-performing CHWs who can mentor others and those who need the most support, including key areas for improvement

SMS

- Drives behavior change by providing automated messaging to clients after visits for reminders or health education
- Provides informational updates to CHWs and supervisors including knowledge reminders, outbreak stats, or government policy updates.

Principles for effective digital health include:

Put the user at the center: Designing digital solutions that are user-friendly, simple, and adapted to the context is critical for solutions that will be adopted and drive impact.

Train, mentor, and coach users: Ensure users understand how the technology helps them work more efficiently; those who do not understand the value of the technology will underutilize it. Training must also be done continuously to ensure success, not just during onboarding.

Plan for scale: This means budgeting for all resources needed to maintain a digital solution. Developing workable technology systems is arduous, challenging, and often costly. Teams must leave room for "extreme success," in which there are significantly more users than expected.

Enable cloud storage: This allows quick, global access to real-time data for decision-making and strategizing, especially in low-resource locations where power may not be readily available.

Ensure interoperability: Ensuring the digital platform is interoperable with other systems is important since community health is supported by government and other partners.

Align with regulatory standards: Regulations may prohibit the use of certain technologies; performing due diligence beforehand will ensure that digital tools are acceptable for use.

Embed quality control: Quality control must be embedded for every digital activity on the platform to ensure the technology supports performance management in community health.

CASE STUDY

EVIDENCE GENERATED BY THE USE OF TWO-WAY SMS FOR COVID-19 SURVEILLANCE

Living Goods tested a two-way SMS tool (RapidPro) that allowed households to screen themselves for COVID-19. It permitted Living Goods to continue to reach large pools of individuals during the pandemic, enabling instant sensitization and information sharing. Clients answered a series of health-related questions and the platform predicted their likelihood of having COVID-19. Suspected cases were directed to the government emergency unit and a follow-up request was submitted to the CHW. A challenge was information overload, as many organizations now use SMS to communicate multiple messages to communities, which can create confusion for households. Recommendations include:

- *Conduct market intelligence surveys to determine factors affecting text opening rates.*
- *Develop a KPI to assess the percentage of clients that actually read the sent messages.*
- *Complement SMS with other communication methods to reinforce key messages.*
- *Share a text alias (using, for example, "Living Goods" with the short code 2121) reduces doubts among recipients about the authenticity of the sender.*

COMPENSATE

Compensation to motivate CHW performance is globally accepted as a trigger for quality health service delivery. Poor compensation structures are a common problem in CHW programs and contribute to demotivation and turnover. WHO recommends a financial package commensurate with the role, capacity, level of effort, and hours of work, in addition to allowances that cover expenses incurred in delivering services.

Incentives can be monetary or non-monetary. CHWs traditionally receive monetary incentives based on activities or achievement of targets driving critical KPIs. Having a performance-based incentive scheme can help CHWs to focus on key areas requiring attention or improvement, motivate them to deliver greater results, and enhance accountability. Compensation frameworks must be managed carefully, however. WHO cautions that while financial incentives can improve CHW performance, linking data collection to rewards may result in misreporting or cause non-incentivized activities to be neglected. Non-monetary incentives such as a conducive work environment, tools to aid effective work, respect, recognition, and opportunities for career growth are also important.

Principles for developing compensation frameworks include:

Design carefully: Compensation mechanisms should factor in local fair market labor standards, time commitment required, other sources of CHW income, and community health systems' ability to drive performance.

Consider pay threshold: Higher compensation and incentives increase health outcomes; however, compensation alone can only drive impact up to a certain point (see case study).

Establish incentive structure: A combination of stipend and activity-based incentives work best for increasing CHW motivation around RMNCH work.

Ensure simplicity: Simple incentive structures enable CHWs to easily interpret how their work translates into compensation than more complex structures with multiple metrics. Visualization of CHW performance against the target and how much incentives they can earn is also important; this is assisted by performance data in their digital tools.

Guarantee timely and electronic pay: Ensuring that CHWs receive their incentives in a timely and accurate manner is critical. If not done well, it can demotivate CHWs. Paying CHWs electronically also results in more timely payments and lessens the risk of fraud.

CASE STUDY

INCREASING CHW INCENTIVES & THE RESULTING IMPACT ON SERVICE DELIVERY

Living Goods conducted an interrupted time series analysis to examine the effect of a new incentive structure on CHW performance from 2018 to 2020. It found that raising maximum potential incentives from $2-$3 did not greatly affect household visits, but larger increases ($5-$16) at higher rates did. Meanwhile, an increase of $16-$23 did not significantly affect KPI performance, suggesting an optimum threshold beyond which there are no additional benefits.

In mid-2020, Living Goods sought to ensure that CHWs remained motivated amidst operational and economic constraints due to COVID-19. It found that significantly simplifying its multi-matrix performance-based incentives for CHWs helped drive improved performance. All active CHWs received a monthly stipend of $10 for registering at least one activity during the month, as well as a weekly activity-based incentive of $2.50 for additional activities registered during the week. The average incentive per CHW nearly doubled from March to June 2020, and total income grew from $12.50 to $19.70.

PROGRAM FIDELITY

Quality Assurance & Improvement

Quality assurance and improvement enables organizations to consistently deliver at high standards. This supports CHW achievement of targets. Problems in service delivery can be quickly detected, analyzed, and resolved before they escalate and become embedded in systems and processes. Recommended quality improvement processes include regular data verification calls to clients, such as checking that CHWs conducted the visits they claimed and that the quality of the services was high, and annual CHW recertification exams to test their competence. Supervisors can then develop quality improvement plans based on the gaps identified. At Living Goods, these processes helped steadily reduce the level of unverified data from 26% in December 2018 to 8% two years later.

Impact Evaluation

External evaluations, such as randomized controlled trials, allow organizations to evaluate impact and drive continuous improvement and learning. Internal impact optimization plans (IOPs) also facilitate learning and course correction. The value of IOPs is to quickly test new approaches, fail or succeed, and adapt what works. Success is based on rigorous monitoring and effective operationalization to ensure KPIs are being achieved.

Principles for quality assurance and improvement include:

Collaborate and improve continuously: Testing changes to determine whether they yield the required improvement and emphasizing the timely use of data to analyze processes, identify problems, and determine whether the changes have led to improvement are key. Success hinges on a team approach to problem solving and involvement of all key actors, monthly stakeholder dissemination meetings, strategic planning, and implementation that enables required improvements.

Engage the community: Services should be designed to meet clients' needs and expectations, and thus regular interface with the community is required to inform them of quality improvement efforts. Sharing clear information about the purpose of engagement efforts and addressing immediate concerns or information gaps, all using the local language, affirms clients' confidence that they are providing the information to the right people and the sense that they are involved in the improvement process.

Make it a culture: Organization-wide buy-in from CHWs to management helps create a culture of continuous improvement, building a workforce that is constantly innovating for greater impact.

CASE STUDY

DEVELOPING IMPACT OPTIMIZATION PLANS

In 2019, Living Goods launched an IOP in its Uganda operations. It included a focus on going "back to basics," specifically emphasizing improved CHW supervision, strictly enforced data quality agreements, and new behavior change campaigns. The IOP registered unprecedented performance improvements. It also found that two elements introduced in the IOP—family planning services and an experiment testing free medicines for those most in-need—drove higher CHW performance; Living Goods later introduced family planning across its operations and free medicines during COVID-19. Learnings from the IOP development process include that when procedures are proven to work, it is critical to implement them consistently and proficiently.

LivingGoods