Executive Summary

About Lwala Community Alliance

Founded by a group of committed Kenyans, Lwala strengthens the capacity of rural communities to advance their own comprehensive wellbeing. Lwala believes that when communities lead, change is lasting. We support communities in designing solutions that tackle the multidimensional causes of poor health, and we work with academic partners to generate rigorous evidence. Backed by this evidence, we build coalitions of communities, frontline health workers, civil society, and government to advance high-quality health for all. This bottom-up approach provides solutions that transform the health system.

Key Impact Indicators

COVID-19 Response

- Supported Migori County to vaccinate more than 119,653 individuals with their first dose, including 80% of the county’s community health workers (CHWs).
- 65,000 household visits each month conducted by COVID-19 Response CHWs, who led contact tracing, monitoring, and home-based care across our county of 1.1 million people.
- Increased county capacity to treat critically ill COVID-19 patients by adding 18 critical care and oxygen-enabled first line treatment beds.

Systems Change

- Launched a county-wide assessment of community health committees and used data to design a national curriculum and tools for community-led accountability.
- Strengthened support mechanisms for the community health workforce by registering CHWs, mapping TBAs, and developing national certification guidelines.
- Supported the development of a national system for collecting and using community health data.
- Advanced policies and tools that prevent maternal death and promote nurturing care for early childhood development.

Data & Research

- Completed the third round of data collection for our longitudinal household survey, which measures key indicators in Lwala-supported communities and comparison sites using a quasi-experimental, stepped-wedge design. This was our largest household survey to date, including more than 7,000 households.
- Armed with evidence from the household survey, we expanded into our fourth and final site in Rongo Subcounty, which brings our direct reach to a population of more than 125,000 people.
- Published a peer-reviewed study on contraceptive prevalence in Migori County, which found that women in Lwala communities are 2.6x more likely to use contraception than in comparison sites.
- Published a peer-reviewed study that demonstrated the power of professionalized CHWs to improve health access for children—in Lwala-supported communities, children are 3 times more likely to access health services than in comparison communities.
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**Letter from the Co-CEOs**

This year, **resilience was at the heart of our work**—and we witnessed how community-led solutions **drive that resilience**. Even amidst a pandemic, our community health workers (CHWs) reached more people than ever, and our communities saw improvements in key health outcomes where global experts predicted a decline. Community committees launched initiatives that improved the health and well-being of their neighbors—from community-based referral systems that helped pregnant women and others access health care to stronger infrastructure at health facilities and schools. Our network of health facilities improved their capacity to treat critically ill patients with COVID-19, while maintaining essential health services.

And through it all, we used these lessons to strengthen the health system, **proving that community-led solutions are uniquely positioned to deliver impact and build resilience**.

Scaling community-led health during a global pandemic has meant that we are constantly innovating, creating, learning, and adapting. Leveraging our experience and data, we expanded into our fourth implementation site in Rongo Subcounty, which extends our direct reach from 85,000 to more than 125,000 people. Our key metrics around maternal, newborn, and child health continued to grow—our immunization coverage is above 90%, while our skilled delivery rates are above 97%. In the same way, we enhanced access to contraception, providing more than 27,300 couple years of protection, and because of continued outreach, the rate of patients defaulting on HIV care is nearly 0%.

Using what we learned, we worked to **bridge the gap between communities and policymakers, ensuring that local solutions are translated into policies and systems at the county, national, and global levels**. This year, Lwala supported our Ministry of Health (MOH) colleagues to develop 16 guidelines, policies, and curricula across the key pillars of the community-led health model. Recognizing that policies are not meant to sit on a shelf, we stepped in to test new strategies and guidelines to gain implementation insight. For example, we worked with the MOH to pilot a national curriculum for community-led accountability, which will be used by communities across Kenya to improve health services for their neighbors. We are also amplifying the voices of CHWs at every level—we helped Migori County count and map CHWs as a critical first step toward recognition and payment, we completed national certification guidelines that open doors for the inclusion of traditional birth attendants, and we trained a cadre of CHW Advocates. **Together, we are building a strong, resilient community health system to enable Kenya to achieve Universal Health Coverage.**

Continuous learning is a priority for Lwala. This year, we completed our largest household survey to date, updated our digital data collection tools, and conducted research to evaluate our programming. We published 5 peer-reviewed articles, including 2 articles we co-authored with the Community Health Impact Coalition. These research contributions advance the professionalization of CHWs globally, and they provide a framework for others to expand the community-led health model.

All this progress is not possible without our great collaborators and partners at the community, county, national, and global levels. We go into 2022 fully aware that the challenges of the morphing pandemic are not yet behind us. **However, we remain stubbornly optimistic that with your support, we will continue to serve communities, impact lives, and build resilience with an even greater determination.**

In Solidarity,

Ash Rogers  
Co-CEO

Julius Mbeya  
Co-CEO
Our Impact

STRENGTHENING SYSTEMS FOR COMMUNITY HEALTH

Lwala’s health systems strengthening work aims to ensure that community-led health is incorporated into policy and practice. We partner with national and county governments to advance community health programs, professionalize community health workers (CHWs), and employ digital solutions that improve service delivery and data-informed decision-making. At the core of our model is the incorporation of traditional birth attendants (TBAs) into professionalized CHW cadres, as well as strengthening community structures for effective governance and accountability. At the global level, we work in coalition to advocate for the adoption of high-impact community health practices, in line with World Health Organization (WHO) guidelines.

This year, Lwala supported the development of 16 guidelines, policies, and curricula across the key pillars of the community-led health model: community committees, CHWs, health facilities, and data. This included:

- Launching a county-wide assessment of community health committees and using that data to design a new national curriculum and tools for community-led accountability.
- Strengthening support mechanisms for the community health workforce by registering CHWs, mapping TBAs, and developing national certification guidelines.
- Supporting the development of the Electronic Community Health Information System (eCHIS), a new, national system for collecting and using community health data.
- Advancing policies and tools that prevent maternal death and promote nurturing care for early childhood development.

We also saw a shift in the prioritization of community-led health within the Migori County Ministry of Health (MOH), and an increasing focus on systems thinking. While the county MOH has long recognized the importance of CHWs, there is an increased commitment to ensuring that CHWs are supported by strong community health units (CHUs)—which are made up of community health committees (CHCs), community health worker supervisors, and CHWs. In partnership with the MOH, UNICEF, Amref, and Impact Malaria, Lwala developed an integrated supervision tool for CHUs, which sets out guidelines for oversight of the community health system and sets parameters for development partners wishing to work within the public health system.

Structure of the Community Health System in Kenya.

Community health units (CHUs) are the structures responsible for community health service delivery, which serve approximately 5,000 people within a defined geographic area. Each CHU is composed of:

- 10 community health workers (CHWs), who provide health services
- 1 community health assistant (CHA), who supervise CHWs
- 1 community health committee (CHC), which provides leadership and oversight
“Lwala” and “community health” are synonymous. When the community health system is mentioned anywhere in the county, Lwala immediately comes to mind [because of] the good partnership we’ve had for the benefit of our systems and communities.

- Ken Ombogo, Director of Public Health, Migori County

**Strengthening Accountability Mechanisms for Community Health**

In Kenya, the health system relies on community health committees (CHCs) to provide leadership and oversight for community health services. CHCs are the link between their communities and health providers—they can ensure transparency in how resources are allocated and how commodities are distributed, and they elevate community demands in policy and budgeting processes. CHCs are also responsible for mobilizing community participation in health promotion and disease prevention activities. But CHCs have historically been underutilized and undertrained.¹

Lwala works to strengthen CHCs to engage in the planning, execution, and evaluation of local health initiatives. This creates a constituency with increased expectations for health services, and it ensures that health and community improvement initiatives reflect the needs of the people they serve. These structures also hold government accountable and can be a long-term answer to sustainability. This year, Lwala conducted the first county-wide assessment of CHCs, used these learnings to inform and influence a national CHC curriculum and scorecard, and trained CHCs in Migori County.

**Reaching Full Coverage of Functional Community Health Committees in Migori County**

In alignment with the MOH, our vision is full coverage of CHCs across Migori County—which requires one functional, well-trained CHC for each village. This year, Lwala conducted a baseline assessment of CHCs to understand their current coverage and functionality. We interviewed over a thousand CHC members in Migori County, and we identified key opportunities to further strengthen CHCs, which have informed national tools and county-level strategy.

The assessment found that 83% of the county is represented by an active CHC, with high variability in the level of training. The majority of CHC members (68%) had undergone basic CHC training in community health strategy, which translated to knowledge of their roles and responsibilities. But fewer CHC members (10%) reported being trained on a technical module that dives deeper into governance, support supervision, monitoring and evaluation, or advocacy and social accountability. Additionally, one-third (33%) of CHC members said they were included in hiring of CHWs, and 34% of CHCs members reported having monthly meetings with CHWs to analyze data for action. Eleven indicators² were combined into a composite “functionality score” for each CHC and subcounty. Based on average composite scores, no subcounties were categorized as “fully functional.” Five subcounties were categorized as “semi-functional,” while the remaining 3 subcounties were categorized as “non-functional.”

These findings have informed our joint plans with the Migori County MOH. In the past year, we worked to identify communities without CHCs, recruited and trained new members, and provided refresher training for existing members, reaching 191 CHCs in 2021. After the launch of the National CHC Curriculum expected in early 2022 (see below), we will begin training CHCs across the county. We also worked with the

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² Leadership and governance; technical modules training; CHCs understanding of their roles; availability of detailed implementation work plan; commodity supply; CHCs’ knowledge on availability of CHV kits within CHU; service delivery and supervision; linkage and referrals; monitoring and evaluation; advocacy and social accountability; resource mobilization.
MOH to design a monitoring tool and corresponding implementation plan to improve the function of CHCs and their representation of community voices—this has been adopted as a county-wide tool and will be deployed alongside the CHC Curriculum. By 2025, we will support the MOH in achieving full coverage of “fully functional” CHCs across Migori County, which requires strengthening or establishing 325 CHCs. The result will be CHCs who are equipped to provide leadership and oversight for community health services—and future CHC Assessments will show this improvement over time.

Revising the National Community Health Committee Curriculum

Leveraging the CHC Assessment and experience from Migori County, Lwala supported the revision of the National CHC Curriculum through technical input on competencies and training requirements for CHCs. Once a draft curriculum was developed, the national MOH planned a pilot in 4 counties this year. Lwala took the lead in Migori, where we conducted a training of trainers for 30 CHC members. This allowed us to assess the curriculum content and provide additional feedback. Specifically, Lwala flagged that there was no monitoring and evaluation section or tool for CHCs to use—as a result, components of Lwala’s monitoring tool were included. The National CHC Curriculum has now been finalized and is expected to launch in early 2022. Ultimately, this curriculum will be used across Kenya to strengthen CHCs, and it will prepare communities to engage in policy and budget advocacy and to drive local health initiatives.

Developing National Community Scorecard Guidelines

Community scorecards are foundational social accountability tools. They are implemented by communities, empowering them to actively monitor and assess the quality and coverage of health services, as well as provide feedback to decision-makers, often through accountability forums. This year, the national MOH set out to develop National Community Scorecard Guidelines, which will be used by CHCs and Health Facility Management Committees (HFMCs) to assess the quality of services at health facilities, share feedback, and hold decision-makers accountable. Because of our experience working with CHCs, the national Division of Community Health Services requested that Lwala participate in scorecard development. The CHC Assessment we conducted in Migori County provided critical data and insights into knowledge and training gaps.

The national MOH piloted the draft Community Scorecard Guidelines in 4 counties, including Migori where Lwala led. We hosted a training session on the scorecard for 13 CHC members and provided feedback to the MOH on how to support communities in developing action plans. We shared these learnings in a national feedback meeting, and they were incorporated into the final version. The Community Scorecard Guidelines are expected to launch alongside the National CHC Curriculum, and Lwala will support the rollout and implementation of both. In the future, this scorecard will enable CHCs to proactively identify areas for improvement and community-led solutions—ultimately driving community ownership, sustainability, and improved health outcomes.

Ensuring that CHWs are Registered and Counted

A challenge globally is that CHWs are largely unaccounted for. In Kenya, the MOH recognizes that these cadres are providing critical services, but there is not a centralized, up-to-date registry about who they are, where they work, which services they provide, and what training they’ve received. Without this information, it’s difficult to make informed decisions about program planning, recruitment, equipment, and payment. Counting CHWs is a first step in recognizing them as part of the formal health workforce and ensuring they are paid for their services.
Lwala is supporting Migori County to create a registry of CHWs. As a first step, this year we updated the county’s Master Community Health Unit List. This includes an accurate count of CHWs across the county, as well as the number of CHCs and health facilities. We recognize CHWs are linked to a broader community health system—this information tells us not only how many CHWs exist, but how they are linked to CHCs and health facilities. The second step was to register CHWs so that each has a unique number and more detailed information about their location, services provided, and training they have received. Thus far, we have registered 2,000 CHWs in Migori County (out of 2,700 total). Once registration is complete in 2022, we will have an accurate picture of the full community health workforce in Migori County.

The issue of registering CHWs extends far beyond Kenya—a 2021 assessment of Human Resource Information Systems (HRIS) in twenty countries found that few HRIS include any data on CHWs. In partnership with the Community Health Impact Coalition (CHIC), Lwala informed the first-ever global implementation guidance on CHW registries, which included technical input from global bodies like UNICEF, the Global Fund, and WHO. Formally launched on January 20, 2022, this document aims to support national governments—and their technical and financial partners—to create and maintain a CHW master list hosted in a national registry, which is a key next step for professionalizing and paying CHWs.

**Integrating Traditional Birth Attendants into CHW cadres**

Inclusion of TBAs within professionalized CHW cadres is core to Lwala’s model. TBAs have supported at-home births and informal healthcare in their communities for generations. By recognizing the expertise of TBAs—and the trust communities have in them—we help women get the care they want, while driving uptake of key health services like skilled delivery, family planning, and immunizations.

Closely linked to our work to register CHWs, Lwala supported Migori County to map TBAs in 4 subcounties (~500K people) this year. With MOH support, these TBAs hold monthly review meetings, where they gather at their attached facility to discuss their experiences, jointly problem solve, share reports, and receive continuous education. This is a significant learning platform that only exists when TBAs are mapped and incorporated into the formal health system. Lwala also developed a tool with Migori County that enables health facilities to track referrals from TBAs for delivery and pregnancy support, which is being used in the 4 subcounties with mapped TBAs. This referral information paints a clear picture of the value of TBAs in connecting women with health facilities.

As a next step, Lwala plans to support the Migori County MOH to develop a standard mapping tool, which will be used to map TBAs across the whole county. We will also work with the MOH to create county guidance on TBA engagement, which will outline the process of incorporating TBAs into the formal community health workforce as CHWs. Learnings from TBA monthly review meetings will inform this guidance and our recommendations to the MOH.

Lwala is leveraging our experience and evidence to advocate for TBA inclusion beyond Migori. Lwala participated in a convening on human resources for health (HRH), which brought together six counties in Kenya’s Lake Region through the Inter-County Coordination Mechanism for HRH. We advocated for TBA inclusion generally and also talked about the importance of counting TBAs as part of HRH mapping and reporting. Ultimately, our vision for TBAs is that they are recruited, trained, supervised, and paid as CHWs—and that literacy and education requirements, which are not predictors of on-the-job knowledge, are removed as barriers.
Supporting National CHW Certification

Certification and accreditation are also important elements of CHW professionalization. Kenya does not yet have standards for CHW accreditation, but the MOH has convened a taskforce to develop National Certification Guidelines for CHWs. Lwala is participating in this taskforce, drawing on our own evidence and expertise in recruiting, training, and supporting CHWs. For example, we ensured that the certification process includes oral assessments and practical demonstrations that do not exclude less literate groups, such as older women, TBAs, and others who bring incredibly valuable competencies to community health work.

After review by county MOHs, the certification guidelines have been finalized and will be launched alongside The Community Scorecard Guidelines and the National CHC Curriculum. Moving forward, Lwala will support Migori County to adopt these guidelines and make changes to align certification practices. In the future, this process will provide key data about newly certified CHWs for the CHW registry in Migori County.

Reforming Supportive Supervision for CHWs

Lwala is working with the Migori County MOH to reform how CHWs are supervised, supported, and mentored—replicating the success of the CHW support supervision model we have deployed in Rongo Subcounty. This year across the county, we have hosted multiple trainings for Community Health Assistants (CHAs), who are responsible for supervising CHWs, including:

- **Training on CHW supervision:** 237 CHAs were trained on how to successfully supervise and support CHWs, including providing feedback on their work, mentoring, and conducting review meetings.
- **Training of Trainers workshop on CHW supervision:** 35 CHAs and Public Health Officers learned how to deliver the training above, and they built skills in facilitating, developing learning assessments, conducting simulations, and writing reports. By building a pool of trainers, we can ensure sustainability in the county’s ability to deliver supervision training. These highly trained CHAs can also provide mentorship to their peers.
- **360° Supervision Training:** most recently, 237 CHAs were trained on 360° Supervision, adapted from an approach developed by Muso Health and its government partners in Mali. 360° Supervision is unique in that it equips dedicated CHW supervisors with the skills and tools to improve CHW performance management. Through monthly group meetings, observation, and one-on-one meetings to share feedback, supervisors are able to tailor support to each CHW’s strengths and areas for improvement.

Digitizing Community Health

At the national level, the MOH remains committed to the digitization of the health system as a strategy to advance Universal Health Coverage (UHC). This year, Lwala worked with the MOH and partners to advance the Electronic Community Health Information System (eCHIS), an aggregate data system for community health data. As a member of the eCHIS technical working group, Lwala provided input based on our own data system, Lwala Mobile, which is a customization of the CommCare platform. In Migori County, we are currently supporting the development of an eCHIS strategy, which plans for the eventual rollout of eCHIS at the county level. This work will ultimately support UHC by creating a reliable flow of CHW data between community, county, and national levels. It also has the potential to greatly help scale community health service delivery.
Launching CHWs Advocates

Lwala CHWs, alongside CHW counterparts across the globe, worked with the Community Health Impact Coalition (CHIC) and Digital Medic to launch CHW Advocates. Together, we developed and piloted an advocacy training course that equips CHWs with the skills to share their stories, promote the health issues most important to their communities, and advocate for better working conditions. The resulting resources—a CHW Advocacy Training Facilitator Guide and accompanying Student Workbook—are now publicly available. The training includes modules on the history of CHW programs, advocacy skills, storytelling, and tips for organizing and participating in meetings and events. Lwala piloted the training in Migori—thus far, we’ve trained 76 CHW Advocates in Rongo Subcounty. These CHWs will then train their peers on advocacy. Through this training, we are building a coalition of CHWs in Migori County who are poised to advocate for investments in their professionalization and improvements in the health systems.

In October, newly trained CHW Advocates were able to put their skills to use by participating in the global #PayCHWs campaign in collaboration with CHIC. Their calls for fair pay were included in this video, as well as through quotes amplified on social media. In December, Lwala-supported CHW Euniter Adoyo was invited to speak on a high-level panel during a World AIDS Day webinar, Incorporating Health Worker Voices to End HIV, organized by USAID and HRH2030. Euniter’s call to action was widely shared on social media: “CHWs are on the frontline to end AIDS... but only 14% of CHWs in Africa are paid. So I advocate for them to be recognized and paid by governments and organizations.”

Supporting Community Health Services Legislation

Lwala informed Migori County’s Community Health Services (CHS) Bill, a foundational piece of legislation that provides a framework for recruitment, pre- and in-service training, accreditation, payment, and supervision of CHWs. We provided information based on our own research and expertise, leveraging the Community Health Worker Assessment & Improvement Matrix (CHW-AIM), a tool for designing and investing in high-performing CHW programs, to inform the bill’s development. We also coordinated stakeholder engagement on the draft. The CHS Bill was passed by Cabinet, and now requires approval from the County Assembly, which reconvenes in early 2022. This process includes a period of public participation and feedback—Lwala will support the County Assembly’s Health Committee in gathering feedback and will prepare CHWs and CHCs to engage in the process. When passed, it will codify key community-led health principles into law and advance the professionalization of CHWs.

A National Community Health Services Bill, which has similar objectives to county legislation, is also moving through the approval process. It was recently passed by the Senate, and now sits with the National Assembly where it is tabled for debate. During the public participation process, Lwala worked with CHU4UHC, a coalition of community health actors in Kenya that we co-founded, to submit a memo with recommendations for strengthening the legislation. Recommendations included:

- Adding language about government obligation to safeguard and protect CHWs, as they are the first line of response for disease prevention and treatment.
- Adding a section on the responsibility of the national government to allocate sufficient funds to county governments to deliver high-quality community health services.
Merging this legislation with the Community Health Workers Bill. Currently, both pieces of legislation contain information, which is sometimes conflicting, on minimum qualifications and regulation.

Through CHU4UHC, we are tracking the Bill’s progress and identifying opportunities to encourage counties to adopt the legislation’s framework for community health services.

**Advancing Nurturing Care for Early Childhood Development**

Lwala is supporting the national MOH to integrate Nurturing Care for early childhood development (ECD) into existing health systems. In Migori, Lwala began pilot delivery of Nurturing Care through CHWs and health facilities in 2020 after conducting a baseline study of ECD knowledge and parenting norms. Our work gained the attention of UNICEF and the MOH, and we were asked to join the national Nurturing Care Technical Working Group (TWG).

Through the TWG, Lwala is supporting the Division of Neonatal and Child Health to develop three documents, which will operationalize the approach to ECD laid out in the National Community Health Policy 2020-2030. Lwala is excited about this opportunity because it allows us to apply what we’ve learned about ECD through our pilot in Migori to national-level policy.

- **National Integrated ECD Policy:** this draft policy now includes feedback from Kenya’s 47 counties. Lwala and the Migori County MOH participated in a regional review workshop hosted by WHO, where we helped to define the role of CHWs in delivering nurturing care, as well as ensure alignment with relevant policies and strategy documents including Kenya Community Health Strategy.

- **National CHW Curriculum on Nurturing Care:** during the drafting process, we shared the manuals and tools we developed for Lwala-supported CHWs, as well as our experiences and evidence. We expect to support a pilot of this curriculum in Migori County in 2022, in partnership with UNICEF.

- **Advocacy Strategy on Nurturing Care:** the final draft of this document includes multiple inputs from Lwala, including language around the need to allocate funds for the payment of CHWs and the role of other ministries in supporting nurturing care.

We see a lot of momentum around advancing Nurturing Care from the MOH, WHO, UNICEF, and other partners, and we know that this work has the potential to significantly improve access to ECD services and development outcomes for children.

**Expanding Interventions to Prevent Obstetric Hemorrhage**

At the national level, Lwala continues to advocate for adoption of high-impact innovations that can prevent maternal death, including the non-pneumatic anti-shock garment (NASG) for postpartum hemorrhage. The NASG is a simple, reusable tool that constricts blood flow to lower extremities while redirecting blood to vital organs, giving hemorrhaging women an additional 72 hours to get treatment. Lwala led the first county-wide scale-up of the NASG in Migori, and we were selected as the Kenyan government’s national

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**What is Nurturing Care?**

Nurturing care—comprised of good health, adequate nutrition, responsive caregiving, opportunities for early learning, and safety and security—is the set of conditions needed to support a child’s physical, emotional, social and cognitive development. In 2018, the WHO released the [Nurturing Care for Early Childhood Development Framework](https://www.who.int/news-room/fact-sheets/detail/nurturing-care-for-early-childhood-development), which outlines robust scientific evidence behind Nurturing Care, and encourages countries to integrate Nurturing Care for ECD into health systems to reach children under 3.
training partner. We have trained 160 health workers and clinical trainers at the national level on the use of the NASG.

This year, we advocated for the inclusion of the NASG, and other proven technologies, in the national list of essential maternal and neonatal health commodities, which would unlock doors for government procurement and widespread distribution. Through a national steering committee, we recently developed a checklist for product introduction and drafted guidelines on the use of this checklist—both necessary for introducing new products into the health system. We also participated in the development or revision of three key obstetric hemorrhage documents, and we ensured the inclusion of the NASG and other OHI technologies in each: National Emergency Management of Obstetric Care (EMOC) Mentorship Guide; National EMOC Curriculum; and the National Guidelines for Quality Obstetric and Perinatal Care. The EMOC Mentorship Guide and National Guidelines for Quality Obstetric and Perinatal Care are expected to launch in early 2022 and will be used by counties, facilities, and health workers to respond to obstetric hemorrhage. Building on this momentum, Lwala is working with partners to explore expansion to additional Kenyan counties—with the ultimate goal of ensuring every mother across Kenya has access to lifesaving technologies.

Engaging Globally to Advance Community-Led Health

Lwala is an active member of the Community Health Impact Coalition (CHIC), a coalition of 26 leading expert organizations implementing CHW models around the world. Together, we have co-authored several tools on optimizing community health systems that have been published and made available to a global audience. In addition to development of CHW registry guidance, CHW advocacy training, and the #PayCHWs campaign mentioned above, in 2021 we worked with CHIC partners to:

- Co-author a top-ten most downloaded preprint in The Lancet on the continuity of community-based health service provision during COVID-19, which analyzes routine program data (including data provided by Lwala) to assess CHW services during the pandemic. We found that CHWs who were equipped and prepared for the pandemic were able to maintain speed and coverage of community health services—which points to the professionalization of CHWs as critical for pandemic preparedness and response.
- Contribute to WHO/UNICEF guidance for national governments in developing vaccination plans for COVID-19, outlining the roles and needs of CHWs.
- Co-author an op-ed in Think Global Health showcasing the vital role played by CHWs in the pandemic response and other global health efforts. We called for targeted investments in community health systems to ensure CHWs are well-supported.
- Co-author a journal article that analyzes CHW compensation models across 5 countries. This analysis—and the accompanying #PayCHWs Campaign—aims to move the global conversation from whether to pay CHWs to how to do so.
- Publish an article in Apolitical that questions the use of dual cadre CHW programs, which combine salaried and volunteer CHWs, and their risk of entrenching gender inequality.
- Document how Lwala and Living Goods partnered with the MOH in Kenya to use the Community Health Worker Assessment and Improvement Matrix (CHW-AIM). A new case study provides more detail on the Community Health Services Bill and how Lwala used CHW-AIM to inform specific provisions related to payment and supervision for CHWs.
- Co-author an article, published in Global Health Action, on what we have learned from CHIC’s work to pool routine data across a network of health practitioners delivering community-based healthcare in dozens of countries.
**RESPONDING TO COVID-19**

The second year of the COVID-19 pandemic brought new challenges—like more acute illness associated with the Delta variant, the need to rapidly deploy vaccines, and an exhausted workforce constantly asked to do more. In mid-December, the first case of the Omicron variant was detected in Kenya, and cases increased quickly. The percentage of Kenyans testing positive was less than 1% in early December—by the end of the month, it was **more than 30%**.

Throughout the pandemic response, Lwala has been unwaveringly focused on protecting health workers, stemming the spread of the virus, maintaining essential services, and providing the best treatment to community members who fall ill. We also recommitted to maintaining essential health services—because a pandemic doesn’t stop the need to immunize children, ensure safe pregnancy and delivery, treat illnesses like HIV and malaria, and deliver routine care. As a result, we saw advances in reproductive, maternal, newborn, and child health services where global experts predicted a decline.

**Migori County COVID-19 Response**

Lwala has been a trusted ally of the Migori County MOH throughout the pandemic response. We supplied rapid diagnostic tests (RDTs) and personal protective equipment (PPE), expanded testing, trained and supported COVID-19 Response (CR) CHWs, and provided input on county communications campaigns to ensure accurate public health messages reach communities. We also promoted and distributed vaccines and improved the capacity of health facilities to handle critical care cases.

**Distributing Vaccines and Promoting Uptake**

Through our work on the COVID-19 vaccine—from planning and distribution to community outreach and vaccination campaigns—Lwala helped change the course of the pandemic in 2021. When vaccines first became available in Migori County in March, the MOH sought support from Lwala to mobilize people and address vaccine hesitancy. Lwala was instrumental in designing a vaccine distribution strategy for the county, and we emphasized the need to protect front-line workers and CHWs. We launched community sensitization and mobilization campaigns and began administering vaccines directly at Lwala Community Hospital and through outreaches. We also filled gaps in the county supply chain—vaccines are distributed from national medical stores to the county headquarters, but Lwala routinely stepped in to support transportation of vaccines from the county to subcounty distribution points and facilities.

After a stockout in August, Migori received additional vaccine doses in September. We continue to reach frontline health workers, including CHWs—80% of Migori County’s CHWs have received their first dose, including 96% of Rongo Subcounty CHWs. In line with government protocol, we also began vaccinating anyone above age 18. With Lwala’s support, by the end of 2021, Migori County had provided over 119,653 eligible people with one vaccine dose, and 36,657 people have now received their second dose. Over the course of the year, 156,337 COVID-19 vaccine doses were administered. Among Lwala staff, 99% are fully vaccinated, with just a few staff members awaiting a second dose.

Through the year, we adapted and deployed new strategies to continually increase vaccine uptake. While mistrust is high—between 39% and 51% of Lwala’s household survey respondents say they believe COVID-19 is a global conspiracy—the majority of people (68%–78%) say they would get the vaccine if it were available. Lwala worked to combat misinformation, build trust, and make it as convenient as possible for community members to get the vaccine. Our team continued to disseminate information about vaccine safety, efficacy, and benefits through door-to-door outreach and community group meetings, and we began working with community and church leaders as champions.
Between October and December, we doubled down on community outreach, and we hosted mass vaccination campaigns at churches, markets, and universities. The Migori County MOH also requested that we extend outreach activities beyond Rongo Subcounty, and we saw the highest number of vaccinations in December. But with less than 10% of the county’s population fully vaccinated, we recognize that significant work lies ahead to reach half a million adults in Migori—and our main bottlenecks continue to be supply and distribution.

**COVID-19 Testing and Contact Tracing**

Earlier this year, Lwala worked with the county MOH to procure RDTs, organize training sessions on their use, and implement routine testing for all CHWs in Rongo Subcounty, as well as CR-CHWs across Migori County. But the surge in cases driven by Delta meant there was a desperate need for additional testing kits. Lwala called for support, and as a result of a generous ally, we were able to procure an additional 7,500 RDTs. This has allowed us to continue testing hundreds of health workers, as well as community members identified through contact tracing.

Additionally, Lwala continued to provide mentorship, equipment, and compensation to 418 CR-CHWs who provide COVID-19 contact tracing, monitoring, and home-based care across Migori County. Since the beginning of the year, CR-CHWs have conducted an average of 65,000 household visits each month. At our network of health facilities, 155,000 people have been screened for COVID-19 at the facility gate. In 2021, Lwala administered 16,802 COVID-19 tests, resulting in 956 positive cases. Through the combined use of rapid tests and PCRs, we have created more access to COVID-19 testing, protecting health workers, and slowing the spread of the virus.

**COVID-19 Treatment**

This year, Lwala has strengthened facility-based and home-based care for COVID-19. When the Delta variant caused a surge in cases, health facilities were overwhelmed, and bed capacity and oxygen availability were extremely limited. At the subcounty facility in Rongo, for example, there were no critical care beds, requiring patients to travel long distances to higher-level facilities for critical care. Lwala worked closely with Migori County MOH to map the bed and oxygen gap and to align with the human resources necessary to make use of additional supplies.

Thanks to our committed community of supporters, we were able to fill these gaps. We procured and placed equipment for 7 critical care beds for Rongo Subcounty Hospital and Migori County Hospital. This equipment was handed over to facility leadership in November. At Lwala Community Hospital, we now have 10 additional oxygen-enabled first-line treatment beds and 1 critical care bed that serve as an emergency unit for surge capacity, to be deployed when we have overflow cases. This will significantly strengthen the capacity of facilities to treat patients with COVID-19, as well increase their ability to treat other patients in need of critical care beyond the pandemic.

Lwala also increased the capacity of CHWs to provide care for COVID-19 patients in their homes. In July, we trained 78 CR-CHWs in community surveillance and home-based isolation and care (HBIC). This has prepared us for a potential increase in Omicron cases, which tend to be less severe and well-treated at home.
Protecting Community Health Workers

Lwala’s COVID-19 response has continually prioritized the protection of health workers, including CHWs. We were early advocates for CHWs to be eligible for the first round of vaccines, and we provided routine testing and mental health counseling to all Lwala-supported CHWs and CR-CHWs. We also provided 139,495 facemasks to 2,700 CHWs in Migori County.

Additionally, CHWs now use mobile COVID-19 tools, custom-built by Lwala, to conduct self-wellness checks, PPE supply checks, and household COVID-19 screenings. If any CHWs report experiencing symptoms, a COVID-19 exposure, or a shortage of PPE, their supervisors are alerted via text to provide support. On average, in 97% of daily checks, CHWs reported being fully equipped.

National COVID-19 Response

As a continuation of Lwala’s work on national policy and guidelines on COVID-19, the national MOH asked us to support the development of COVID-19 messaging for CHWs. This builds off the CHW training curriculum on COVID-19 which we developed with our collaborators last year. The messages will be used for health promotion with CHWs nationally.

Lwala has also contributed to global efforts to procure PPE for CHWs through the COVID-19 Action Fund for Africa (CAF-Africa). The most recent round of donations included 8 million masks and will protect CHWs for 5 months. In September, Lwala and Living Goods met with the Kenya Council of Governors Health Committee Chair to discuss details around this donation, which is being distributed to 47 counties. This builds on our joint success in 2020 to secure PPE for over 100,000 CHWs in Kenya, including 10.8 million face masks and 168,000 face shields. This enabled protection of CHWs as they provide and ensure continuity of essential services.

“The oxygen equipment and ventilators donated today will be key in boosting our intensive care unit for not only COVID-19 [patients], but other patients also.”

- Dalmas Oyugi, Migori County Health Chief Officer
DELIVERING HEALTH SERVICES

Despite the challenges associated with the surge in COVID-19 cases, resumed lockdowns, and a national government health worker strike that closed public facilities for much of the first quarter, Lwala continued to deliver essential health services and sustained gains in health outcomes. This was enabled by our teams of CHWs and nurses, who leveraged individualized, mobile data to effectively target high-need areas for additional clinical outrances and home-based services, bringing services closer to communities during COVID-19.

We are also piloting several innovations in our CHW service package to improve child health and development outcomes. Through these pilots, we are gleaning lessons to determine whether to integrate these innovations into our standard community health services, as well as contributing to MOH guidelines and curriculum.

Lwala completed the third round of data collection for our robust population-based household survey, which measured key indicators over time in Lwala-supported communities and comparison sites using a quasi-experimental, stepped-wedge design. This was our largest household survey to date, including more than 7,000 households across 3 subcounties in Migori. We used the evidence and learnings from this data to inform government decision-making and drive local, national, and global advocacy.

With this data collection complete, we expanded into Central Kamagambo, our fourth and final implementation site in Rongo subcounty. This extends our reach from 85,000 people to more than 125,000. After entry activities, CHWs began registering households and are now conducting household visits. Youth-peer providers (YPPs) are also conducting outrances for family planning, and communities are leading Quality Improvement initiatives at Rongo Subcounty Hospital, a high-volume facility located in Central Kamagambo. This expansion will enable Lwala to implement and adapt our community-led health model in a more diverse, peri-urban location—and advance our vision of Migori County as a “model” county for community-driven health solutions in Kenya.

This year, the cadre of Lwala-supported CHWs grew to 397, one-fourth of whom are professionalized TBAs. CHWs provide critical health services and connect community members to local clinics. CHWs served more households than ever in 2021—on average, the percentage of enrolled households visited by a CHW each month increased from 64% in 2020 to 82% in 2021.
Through the work of community committees, CHWs, and health facilities, Lwala saw an improvement in maternal and child health outcomes, including increases in skilled delivery rate, immunization, and well-child visits.

**Childhood Immunization**

One of our proudest achievements this year is high coverage of childhood immunization, despite the national health worker strike that closed public facilities earlier this year and the disruptions of the pandemic. The percentage of children fully immunized was 99% in North Kamagambo, 98% in East Kamagambo, and 90% in South Kamagambo—exceeding our targets for each ward. Since 2020, this represents an 11% increase in coverage in East Kamagambo and 27% increase in South Kamagambo.

**Lessons from our expansion to Central Kamagambo**

Central Kamagambo has a different demographic profile from Rongo’s other 3 wards where Lwala has worked in the past. It’s more urban, populous, and diverse. These are some of the lessons we’re learning, which will strengthen our understanding of scaling community-led health in a variety of settings across Kenya:

1. **Registering and visiting households:** Urban populations are more transient and are more likely to work away from their homes during the day. Our team is finding that weekend registration and household visits are important for catching people while they are at home.

2. **Community acceptance of CHWs:** In a rural setting, people are more closely connected to local leaders, neighbors, and friends, and they are likely to personally know their CHW. This provides built-in legitimacy. In Central, however, only 18% of households we surveyed have been visited by a CHW, and people are less familiar with Lwala. We are working with the MOH to raise awareness of the CHW program and emphasizing to CHWs the importance of explaining their role to households.

3. **Adapting our programming:** We learned that by approaching quality improvement initiatives as a network of facilities, we can solve systemic challenges—like reducing drug stock-outs or improving facility reimbursement rates.
These increases were driven by the use of individualized mobile data to target high-need areas for outreach and home-based services, and CHWs increased door-to-door vaccination for defaulters. We integrated maternal and child health services into parenting sessions focused on early childhood development (ECD) and other community activities. Lwala was also asked to participate on the supervision team for a county-wide measles vaccination campaign, which further increased vaccination coverage. In the context of COVID-19, we have worked diligently to maintain momentum on this essential indicator of child health.

Well-Child Visits
Lwala-supported facilities\(^3\) saw a 10% increase in well-child visits between 2019 and 2021, compared to a 7% decrease in Migori County as a whole. When cases of COVID-19 surge, it can be difficult for caregivers to take children to health facilities for well-child visits, which are important for tracking a child’s growth and development and providing scheduled immunizations. To combat this, we’ve prioritized community-integrated outreach activities—including child immunizations and ECD services—as a way to bring services closer to communities, and CHWs play a critical role in encouraging caregivers to seek care. As a result, well-child visit numbers are increasing at our partner facilities, and visits at Lwala Community Hospital are outpacing previous years. This means children are receiving core services and are on-track for better health outcomes.

Skilled Delivery
Skilled delivery rates were also high—between 97% and 99%—across North, East, and South Kamagambo. We worked to increase skilled delivery, despite the pandemic, through community solutions. We supported facilities to host open maternity days, which are an opportunity for pregnant women and their families to interact with health care providers and visit the maternity unit. This demystifies birthing practices and mitigates fears about delivering at a health facility. CHWs, many of whom are professionalized TBAs, support women to develop birth plans and accompany them to facilities to deliver. These activities mobilize women to seek care at a health facility, both for antenatal care and delivery.

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\(^3\) Excludes Rongo Subcounty Hospital, newly enrolled in our quality improvement program.
Additionally, we are supporting communities in South Kamagambo to develop community referral systems using local resources, and we donated an ambulance to the county, which is attached to Rongo Subcounty Hospital. As a result, skilled deliveries at Rongo Subcounty Hospital increased by 17% from 2020 to 2021.

Improving Antenatal and Postnatal Care

In addition to skilled delivery, Lwala works to improve care for women during pregnancy and after childbirth. Evidence shows that receiving antenatal care (ANC) at least 4 times is critical for tracking the health of mother and baby, as well as delivering key interventions. Through our household survey, we surveyed women with children under five. Between 2018/2019 and 2021, there was a 16% increase in women who attended at least 4 ANC visits in Lwala-supported communities. Additionally, Lwala-supported communities saw high 4+ ANC rates than comparison sites in 2021–79% compared to 68%.
Increasing Early Antenatal Care

Receiving early ANC from a skilled provider is also important to monitor pregnancy, reduce risk, and enable providers to offer information and build trust. Though Lwala has driven consistent increases in ANC completion in our communities, data revealed that more than two-thirds of women were not accessing ANC in the first 14 weeks of pregnancy. Across respondents in our household survey, we found that women were pregnant for an average of 4 months before completing their first ANC visit.

To learn more about the barriers to early care, we conducted a qualitative assessment—including interviews and focus group discussions with 336 mothers and 88 CHWs. The most commonly reported barriers were long distances to a health facility, long wait times, and feeling unsure of the benefits of early pregnancy care. As part of this qualitative report, Lwala launched a community-led design process, through which communities, CHWs, and facility staff discuss new approaches to improve ANC access. A number of improvement projects emerged:

- To prevent unnecessary referrals, we have worked with the subcounty to secure consistent access to ANC profiling and ultrasound services. This gives women confidence that they can get the care they need, rather than being referred to a different facility.
- Linda Mama, Kenya’s free health insurance for pregnant women, covers the costs of maternal health care, but many women are confused about their eligibility. We are actively mobilizing to explain how Linda Mama works and get them enrolled. Linda Mama is a relatively new program, launched in 2018, so we believe this might yield useful lessons to share outside of Migori.
- To most effectively mobilize women for ANC, CHWs develop a household visitation work plan at the beginning of each month, which prioritizes proactive case finding for this target group. This work plan is reviewed collaboratively at weekly CHW review meetings.
- CHWsa now systematically recommend pregnancy tests during household visits. We updated our Lwala Mobile digital platform to integrate a line of questioning about the date of the last menstrual period and use of contraceptives.
- Two communities designed a community-based referral system using motorbikes they collectively purchased. This enables remote households—especially pregnant women—to receive lifesaving care at health facilities. We facilitated a learning visit with representatives from 3 other communities to learn how this referral system has been implemented, including lessons on income-generating strategies.
- Through quality improvement efforts, we have seen a decrease in patient wait times and an increase in patient satisfaction across our network of partner facilities (see Quality Improvement section).

Expanding Antenatal Care Profiling

ANC profiling, a key component of early antenatal care, assesses the health of the pregnant woman and determines if she has any underlying conditions that put her baby at risk. But not all facilities in Rongo Subcounty were able to conduct full ANC profiling because of laboratory limitations, commodity stockouts, and lack of training. Pregnant women were therefore avoiding these facilities, knowing they may be referred elsewhere—a perception similar to those from the qualitative ANC assessment. Additionally, during maternal perinatal death review meetings, it was found that some complications could have been managed if a complete ANC profile was conducted.

In response, Lwala and the subcounty MOH agreed to close gaps in ANC profiling, and we worked together to distribute missing supplies, mentor nurses, and encourage all facilities to complete a full ANC profile. Ngere Health Center also converted space for ANC profiling and asked the county to supply them with a lab technician—resulting in generalized lab capacity improvements. With ANC profiling now available across facilities, mothers can access this service at their closest health care center.
Increasing Postnatal Care

Most maternal and infant deaths occur soon after birth—almost half of postnatal maternal deaths occur within the first 24 hours, and 66% occur during the first week. Timely, high-quality postnatal care is crucial for preventing these outcomes. They are also an important platform for health workers to support breastfeeding, monitor the newborn’s growth, screen for postpartum depression, offer family planning, and make referrals to higher levels of care when needed. To improve postnatal care attendance, Lwala coordinated with CHWs to encourage women to visit the health facility, and we worked with facilities to improve tracking of postnatal mothers. As a result, Lwala-supported facilities saw a 50% increase in postnatal care visits between 2019 and 2021, compared to a 38% increase across facilities in Migori County.

CHW Service Package Learning Pilots

We are piloting several innovations in our CHW service package, including Nurturing Care for Early Childhood Development (ECD), family-led MUAC, possible serious bacterial infection, and pneumonia management. We are interested in understanding feasibility, acceptability, and scalability across these four interventions, and we’ll use data to make recommendations to the MOH on integration into the package of services offered by CHWs.

Nurturing Care for Early Childhood Development

In alignment with WHO’s framework, Lwala is piloting the delivery of Nurturing Care for ECD through CHWs and health facilities. This approach brings together 5 interrelated conditions children need to survive and thrive—good health, adequate nutrition, safety and security, responsive caregiving, and opportunities for learning—and enables us to reach children during their earliest and most developmentally formative years.

Lwala mobilizes CHWs to visit households and provide training and support to caregivers on child health, nutrition, and responsive and skillful parenting. Through parenting support groups, CHWs provide information on child protection and support caregivers to use locally available materials to develop toys and picture books as tools for early learning. We also supported the development of child-friendly spaces at 9 facilities in Rongo Subcounty, where CHWs spend time with parents and children to promote developmentally appropriate, safe play.

We recently conducted a midline survey to understand the impacts of the program on caregivers and children after 1 year of implementation. We saw a 78% increase in the proportion of caregivers who received knowledge and practices on child development. This knowledge is translating to action, as caregivers are increasingly engaging with children through play, storytelling, reading, and other activities. We saw a 60% increase from baseline in caregivers who are engaging in storytelling, a 146% increase in counting and drawing, and a 106% increase in reading books with children. These results show that CHWs are effective at educating caregivers on how to provide nurturing care.

Family-led MUAC

Family-led MUAC (middle-upper arm circumference) is a community screening approach that empowers mothers, caregivers, and other family members to screen children for acute malnutrition using color-coded measurement tapes, which require neither literacy nor numeracy skills. Recommendations from UNICEF made a compelling case for family-led MUAC’s ability to improve growth monitoring. Through this pilot, we are evaluating the feasibility and acceptability of family-led MUAC in our context, as a supplement to CHW home-based malnutrition screening.
So far, we have sensitized and trained CHWs on family-led MUAC, who in turn trained 6,723 caregivers. We found that most CHWs successfully grasped the curriculum content, with 81% passing the competency test after the first round of training. We expect to reach 90% competency after a follow-up training in early 2022.

During the pilot, we learned we could drastically reduce our costs and accelerate the scale of this intervention by procuring locally. We source locally manufactured MUAC tapes at half the price of the lead distributors. We’ve now distributed 3,220 MUAC tapes to families, and plan to distribute more to the remaining caregivers who have been trained. So far we’ve seen positive reception by CHWs and caretakers, as well as good uptake by families who have received the MUAC tape.

**Possible Serious Bacterial Infection**

Migori County has a high neonatal mortality rate of 24 per 1,000 live births. Neonatal sepsis contributes to up to 20% of those deaths (KDHS 2014). Only 41% of births received a postnatal check-up within two days of birth. COVID-19 has threatened to further reduce coverage of essential neonatal interventions, which could lead to excess neonatal deaths. As a result, the need for and potential impact of strong management of possible serious bacterial infection (PSBI) is high.

With support from the Bill & Melinda Gates Foundation, we are partnering with Living Goods and Population Council to evaluate health system innovations and adaptations aimed at improving PSBI implementation and scale. Despite being entrenched in existing policy and Integrated Community Case Management guidelines, PSBI protocols are not routinely integrated into community health service delivery.

We trained 395 CHWs and 50 health care providers from 10 facilities in Rongo Subcounty, distributed education and communication materials, and developed ongoing refresher training for CHWs and their supervisors. We are also providing mentorship to health facilities on data and commodity management—leveraging integrated supportive supervision with the county team—so that when CHWs refer cases to the facility, they can receive proper support. By the end of 2021, CHWs began identifying cases of pneumonia, referring cases to facilities, and following up with clients using the PSBI protocol.

Through implementation, we identified 3 key ways to improve delivery of PSBI related to the community-facility referral system. These changes institute a feedback loop for referral and ensure better communication for any home follow-ups that a CHW completes.

1. We provided all facilities with an updated CHW contact list in their respective coverage areas to improve the flow of information between CHW and facility.
2. We produced triplicate referral slips: the CHW keeps one for her records, and 2 are given to the patient to take to the facility. The facility-based provider adds recommendations to those slips—one is kept for facility records, and one is taken by the patient back to the CHW.
3. We leveraged the “CHW desk” at facilities, where patients referred from the community-level are greeted by a CHW, and their community referral is tracked.

**Community-based Pneumonia Management**

Pneumonia is one of the leading killers of children under 5 in Kenya. We are piloting an addition to the CHW service package to support the identification of cases, delivery of treatment, and clinical referrals for pneumonia. By piloting this service package addition, which will be incorporated into Kenya’s new Integrated Community Case Management protocols, we are accompanying the MOH to bridge policy and
practice, informing rollout of the protocol in Migori County and nationally. We are excited to join the 6th cohort of the Pfizer Global Health Innovation Grant in this work.

In 2021, we trained 37 CHAs and 233 CHWs within Rongo Subcounty on pneumonia management. CHWs in South Kamagambo and North Kamagambo were trained and equipped with pulse oximeters, while CHWs in East Kamagambo CHWs, enabling us to examine whether pulse oximeters will enhance diagnosis of pneumonia in the community. Over the next year, we are developing a digital decision support tool for CHWs; training CHWs, their supervisors, and facility health workers; and testing implementation of this workflow. These activities aim to reduce under 5 mortality and morbidity, combat antimicrobial resistance, and document learnings for government implementation.

**Malaria Care and Treatment**

This year we saw an alarming increase in malaria cases throughout our communities. Lwala combats malaria through facility-based testing and CHW-led community case management. Early in the year, Lwala supported the county’s malaria prevention program by sensitizing communities before mass indoor residual spraying. While indoor residual spraying has been very effective at controlling mosquito populations in years past, it has proven less impactful this year. In response, we worked to ensure that our CHWs are equipped with bed nets, rapid tests, treatment, and training to deliver effective malaria case management at the household level. We also mobilized CHWs around an insecticide-treated bednet distribution campaign earlier this year, and in partnership with TamTam Africa, we distributed 4,500 bednets and will distribute 2,650 more.

Additionally, we improved commodity management of antimalarial medication by having CHWs replenish commodities from their respective facilities. By feeding into the same commodity management system as facilities, Lwala avoids unnecessarily purchasing commodities that the subcounty already has in stock. As a result of these efforts, 2,819 children under 5 were treated for malaria in 2021, more than 3 times the number of children in 2020.

![Under 5 Treated for Malaria by location](image-url)
**Nutrition**

Lwala works to ensure adequate nutrition for pregnant and breastfeeding women, young children, and people living with HIV. We screen individuals for vulnerability and provide a holistic package of support to get families on a long-term path to nutrition security. This includes growth monitoring, vitamin supplementation, breastfeeding support, complementary feeding, therapeutic food, gardening training, seeds inputs, cooking demonstrations, and meal planning.

In order to promote optimal nutrition at an early age, the WHO and UNICEF developed the Baby Friendly Hospital Initiative (BFHI) to address poor breastfeeding practices in maternity wards. We’ve found that 96-100% of lactating mothers initiated breastfeeding at delivery in Lwala-supported communities. The MOH in Kenya adopted an extension of BFHI called the Baby Friendly Community Initiative (BFCI), which creates a comprehensive support system at the community level through the establishment of mother-to-mother and community support groups. We are now implementing BFCI alongside our existing nutrition program. To date, Lwala has enrolled 1,903 mothers in our nutrition support groups, including 88 adolescent mothers. We formed separate teen mother care groups when we learned that adolescent girls were hesitant to join the mother care groups because of stigma around teenage pregnancies. Cumulatively, we’ve enrolled 2,685 households in our kitchen garden program, where families receive training and seeds to start home gardens with nutrient dense foods. We found that adoption of kitchen gardens was low at graduation from the program, but by actively following up with families, we were able to improve adoption at 6 months following the training.

Additionally, Lwala CHWs conducted 33,110 malnutrition screenings across Rongo Subcounty. Twice in 2021, we supported mass deworming and mass Vitamin A supplementation in Rongo alongside the Ministry of Health. Together, we administered 16,445 doses of deworming medication and 38,133 doses of Vitamin A supplementation.

**Sexual & Reproductive Health**

Lwala aims to increase confidential, voluntary access to SRH services, including family planning, while challenging harmful gender norms and increasing buy-in for reproductive rights. We start this work by training community committees, men’s groups, CHWs, and youth advocates. We provide a full range of contraceptive options through a variety of access points, including health facilities, youth centers, village-level outreaches, and directly to homes.

Couple Years Protection (CYP) is a measure of contraceptive uptake that estimates the protection from pregnancy provided by contraceptive methods during a one-year period. Lwala provided more than 27,300 couple years of protection in 2021, a 66% increase over 2019. This progress is particularly notable given the impact of COVID-19 and the national health worker strike. The strike lasted from December 2020 through February 2021, and few contraceptive services were provided at any government health facility in Rongo Subcounty during this time.

We were able to rebound service provision by increasing targeted SRH outreach, especially in hard-to-reach areas, and by integrating family planning services into other community-based outreach activities, like childhood immunization events and parenting groups. We also enabled Youth Peer Providers (YPPs) to
offer emergency contraceptives and oral contraceptive pills as part of their service package (which already included condoms). Through improved supply chain management, CHWs and YPPs can now replenish their stock of commodities from pharmacies at their closest link facilities—resulting in a more consistent supply of family planning commodities. Finally, through our expansion to Central Kamagambo, we are now providing SRH services through CHWs, YPPs, and 3 new facilities, including 2 high-volume facilities (Rongo Subcounty Hospital and Royal Hospital).

![Couple Years Protection Provided Annually](image)

**Clinical Excellence**

Through our clinical excellence work, we support quality improvement at 10 partner facilities, including Lwala Community Hospital. We also advance two clinical training initiatives at the county level—the Obstetric Hemorrhage Initiative (OHI) and Helping Babies Breathe (HBB). To date, we’ve trained a total of 167 facilities on OHI and 82 facilities in HBB.

A notable achievement this year is our cross-cutting effort to improve maternal health services, including antenatal care profiling, obstetric ultrasounds, expanding the obstetric hemorrhage bundle, and ambulance services. We believe that mothers not only have the right to high-quality care, but that improving maternal health services has an outsized impact on the health system at large, raising the standard of care and access for all.

**Facility Quality Improvement**

Lwala unites community members, facility-based health providers, and community health workers across a network of 10 public facilities. Together, we continuously improve the quality of care across the 6 building blocks of the health system: service delivery, health workforce, information systems, supply chain, finance, and governance.

This year, facilities approached quality improvement in the midst of the COVID-19 pandemic, which continued to strain the health system, disrupt supply chains for medicines and supplies, and overwhelm health workers. Our network of facilities responded to
the pandemic—providing screening, testing, treatment, and vaccination—while maintaining essential health services.

Health Facility Assessments

Twice a year, Lwala works with Health Facility Management Committees (HFMCs) to conduct Health Facility Assessments (HFAs), which assess facilities across the 6 health systems building blocks. Findings from the HFA help identify areas where facilities are doing well, and where they have room for improvement. Armed with this information, HFMCs develop and implement improvement plans, review the outcomes, and make adjustments—ultimately improving the quality of health care.

Over the course of the year, we saw a number of improvements across our health facilities, catalyzed by HFA findings:

- **Information systems**: High-quality data is crucial for decision-making about individual patient care, as well as for improving health services. The first assessment of the year, however, showed room for growth in data quality and completion across facilities—likely because we had pivoted to provide more services through outreaches. Additionally, during the national health worker strike, facility staff were not routinely entering data into DHIS. Lwala worked with facilities and the county MOH to clarify the protocol for data entry for outreaches and support facilities to complete daily reporting summaries. In the most recent HFA, we saw significant gains in data completion—the majority of our partner facilities had 100% completion of registers and reports.

- **Service delivery**: Another measure of quality of care is how well health workers adhere to clinical standards and guidelines, which ensure evidence-based, consistent care for each patient. Previous assessments highlighted opportunities to improve adherence to clinical standards. Lwala organized clinical staff rotations, mentorship, and training sessions for health providers across our network of facilities. As a result, average clinical standard scores rose from 73% at baseline to 98% in 2021.

- **Finance**: One challenge our partner facilities encounter is financial planning and maintaining accurate financial records. Based on HFA results, Lwala provided mentorship to the HFMC at Kochola Dispensary on financial decision-making, with a focus on investments that will improve service outcomes. The HFMC used funds to pay staff salaries, stock the laboratory, and purchase cleaning products. As a result, Kochola has seen a 20 percentage point improvement in financial performance since the first HFA.

All partner facilities have seen tremendous improvement, with an average 85% increase since baseline.
Patient waiting time: From our assessments, we have seen a correlation between patient satisfaction, average patient waiting time, and the likelihood of patients to recommend a facility to others. The image below shows that in 2019, patients had to wait for an average of 16 minutes to be attended, which reduced patient satisfaction and the likelihood of recommending. When you compare the same data points in 2020 and 2021, it’s clear that lower wait times results in higher patient satisfaction and higher recommendations. These improvements are attributed to onsite mentorship sessions on adherence to clinical standards, which improve efficiency in service provision, triaging, and patient flow. They are particularly impressive in the face of COVID-19.

Rongo Subcounty Hospital Induction: As part of our expansion into Central Kamagambo, we have now enrolled Rongo Subcounty Hospital into our Quality Improvement program as our tenth facility, and we conducted a baseline HFA. An early success in working with Rongo Subcounty Hospital includes expanding inpatient services. Working with hospital staff and the Board of Directors, we found that the inpatient department lacked staff and funds to provide adequate services. The facility worked to reallocate human resources and funds, restock supplies, and plan a schedule for the inpatient department. As a result, we’ve seen inpatients nearly double since the end of 2020.

Ambulance Donation to Improve Emergency Medical Services

When it comes to life-threatening health conditions, every second counts. Emergency medical services are one of the most important tools to ensure people get the care they need—including women experiencing pregnancy complications. But Migori County’s public emergency infrastructure consistently faces challenges in funding, maintenance, and coordination. Complementing our community-led referral work, Lwala donated an ambulance to Migori County, which is now placed at Rongo Subcounty Hospital. This is an important step to prevent delays in reaching care at our network of 10 facilities, now including the subcounty’s main referral center. Since the donation, the subcounty has been able to complete 117 referrals with this ambulance.

“Today is a very special day for us as a Migori community. We are receiving an ambulance... that’s going to move us miles and miles to save lives in Migori.”
- Migori County Health Chief Officer Dalmas Oyugi

Cervical Cancer Prevention, Early Detection, & Treatment

Cervical cancer is a leading cause of cancer death for women in Kenya, claiming the lives of over 3,200 women every year. With early detection and treatment, cervical cancer is nearly 100% preventable, and a woman who is screened even once in her lifetime can significantly reduce her risk of developing invasive cervical cancer. Through partnership with Cure Cervical Cancer, KMET, and the John Gould Foundation, we trained providers across Rongo Subcounty on cervical cancer screening and treatment and distributed a portable and low-cost thermal ablation machine to each of the 4 wards. Lwala and our partner facilities
will now be able to screen and treat precancerous lesions to prevent cervical cancer development without unnecessary referrals. We also worked with local schools to mobilize HPV vaccinations for more than 3,800 girls and deployed CHWs to counsel their caregivers on the importance of the vaccine in preventing cervical cancer.

**Clinical Training**

Lwala Community Hospital serves as a training ground for high-quality comprehensive primary care. We conduct training across a wide range of subjects, hold clinical rotations with our partner facilities in Rongo, and host students for clinical mentorship from across the region. This not only improves services at other facilities, but also benefits Lwala Community Hospital by welcoming and learning from other practitioners. Lwala is also scaling up training on two high-impact, low-cost interventions that have been proven to reduce maternal and infant mortality—the Obstetric Hemorrhage Initiative and Helping Babies Breathe—across Migori County and beyond.

**Helping Babies Breathe**

*Helping Babies Breathe* (HBB) is an evidence-based approach to improve neonatal resuscitation in low-resource settings. Lwala has used the HBB curriculum to train health providers since 2019. To date, we have trained 1,224 healthcare providers at 82 facilities. Ultimately, we aim to ensure that every facility across Migori County has the supplies and training to evaluate newborns and stimulate breathing in the first minute of birth. This year, we recorded 30,076 deliveries at the facilities trained on HBB.

**Obstetric Hemorrhage Initiative**

The Obstetric Hemorrhage Initiative (OHI) is a set of protocols and tools that can treat postpartum hemorrhage and prevent maternal death. OHI relies on like-saving supplies—like misoprostol, the uterine balloon tamponade (UBT), the non-pneumatic anti-shock garment (NASG)—to stop bleeding, but it also requires trained health care providers to know which tools to deploy and when.

In addition to advancing national policy to prevent obstetric hemorrhage, Lwala is expanding OHI across Migori County. Since the start of the program, we have provided training and mentorship to 2,173 health care providers at 167 facilities. We are conducting an evaluation of OHI, in partnership with the Kenya Ministry of Health and University of California San Francisco’s Safe Motherhood Program, to track health outcomes for women experiencing obstetric hemorrhage and to evaluate the efficacy of our training. Of the 263 women who experienced a severe hemorrhage in our partner facilities, 81% received the NASG. For comparison, in a similar project in Tanzania, 74% of women experiencing a severe hemorrhage received the NASG.

In order to expand this work, we collaborate with other organizations advancing OHI, including 2 partners who are implementing the UBT. We now conduct joint planning, and in the future, we will collaborate on supervision, review meetings, and supply chain issues. This collaboration is especially important for our expansion into additional counties in 2022 and beyond.

**Lwala Community Hospital**

This year, Lwala Community Hospital faced the immense challenge of COVID-19 and an increased patient load during the national health worker strike. In the first quarter of the year, we saw our highest numbers of patients ever as people sought care from other regions. This year, Lwala’s patient load increased by 19% over 2020 and 7% over 2019, with 55,819 patient encounters at the hospital. As of July, more than half of all patients came from outside our immediate area of North Kamagambo, representing a shift in our patient
population since the same time last year, and an even bigger shift since before the pandemic. As our team served this influx of patients, they also served as a COVID-19 vaccination site.

Lwala met the challenge and ensured that hospital services continued despite the pandemic. We prioritized staff safety, ensuring continuous COVID-19 testing, staff vaccination, and PPE are always available—maintaining overall staff satisfaction rates. Despite the pandemic, we were able to make improvements in quality of care, maternal health services, blood supply, and HIV care.

Lwala Community Hospital Achieves Level 4 SafeCare Certification

We’re proud to share that Lwala Community Hospital achieved Level 4 SafeCare certification this year! SafeCare is a third-party certification system that enables healthcare facilities to measure and improve the quality, safety, and efficiency of their services. SafeCare assessments look at 13 indicators, including outpatient services, human resources management, patient and family rights and access to care, diagnostic imaging services, and inpatient care.

In 2021, Lwala Community Hospital received a SafeCare HealthCare Standards score of 72, showing that Lwala maintained quality even in the midst of the pandemic and the national health worker strike. This was Lwala’s fourth SafeCare assessment, with a baseline score of 57 received in 2017. The average score of facilities in the SafeCare program in Kenya is 55. SafeCare awards healthcare facilities with certificates reflecting the quality level, ranging from 1 to 5. Our most recent assessment resulted in Lwala Community Hospital moving up to Level 4, indicating that our continuous quality improvement efforts result in safer and higher quality care for our patients.
Lwala Community Hospital’s highest-scoring service elements were primary health care services, laboratory services, and inpatient care. Our most improved service elements were Management of Information, Medication Management, and Inpatient Care. We have incorporated feedback from the latest assessment into our plans for future improvement, particularly in the following key areas for growth: Support Services, Risk Management, and Diagnostic Imaging Services. With COVID-19 and an increase in demand for patient services, a major challenge has been space.

Blood Supply Maintained

Through 2020 and early 2021, we faced a blood shortage across the county, and blood drives were halted during COVID-19 and the health worker strike. Closing the gap in blood supply is crucial in averting deaths, especially maternal deaths, that could be prevented with a blood transfusion. To address this barrier, Lwala works closely with the regional blood bank and Zana Africa to conduct blood campaigns across the county. By the end of 2021, we collected 3,893 units of blood, which met the county’s projected annual need. At Lwala Community Hospital, we provided more blood transfusions in 2021 alone than we did in 2018, 2019, and 2020 combined.

People Living with HIV

Lwala supports community members living with HIV by providing comprehensive HIV care through health centers and CHWs. We also partner with support groups of people living with HIV and their allies as they launch community initiatives promoting health and development. Currently we have 1,434 clients enrolled in HIV care and support. With the ongoing COVID-19 pandemic as a particular threat to immunocompromised populations, we continue to expand the number of clients receiving HIV drugs and to increase clinician visits directly to their home and through telehealth sessions. As a result, we have nearly eliminated appointment defaults and are seeing all-time high rates of viral suppression at 98%, above the target of 95%. Given this success, we will continue to provide these options for care even after the threat of COVID-19 subsides.

Another major challenge this year has been a nationwide shortage of viral load testing reagents, which persists to date. Due to this, Migori County has only been allowed to take 1,000 viral load samples in a month, giving priority to expectant mothers and adolescents. For the rest of the population, monitoring is being done through clinical assessments and immunological (CD4) testing.
Maternal Health

Lwala Community Hospital made significant improvements in obstetric ultrasound services, an essential component of comprehensive ANC that had not been consistently accessible in the subcounty. In fact, from March 2020 to January 2021, ultrasound services had largely been suspended due to COVID-19, except for emergency cases.

For 3 years, Lwala Community Hospital was the only facility in Rongo offering free ultrasound services to mothers attending ANC at least twice during pregnancy. Now, we are now working with our partner facilities to provide free ultrasound services. We recruited a sonographer, distributed 2 ultrasound machines in Rongo Subcounty Hospital, and are deploying portable ultrasound machines so a sonographer can travel to partner facilities to screen pregnant women. We conducted 1,438 ultrasounds in 2021, more than two times the number conducted in 2019. To meet demand and solve logistical challenges, we are now training midwives at partner facilities in sonography.

Because ultrasound scans increase our ability to identify danger signs in pregnancy, we are better able to provide specialized care to at-risk mothers and babies. The availability of ultrasounds in other facilities in Rongo Subcounty has reduced ultrasound referrals to Lwala Community Hospital, which means that women are able to access this service at the facility most convenient for them.

Youth & Adolescents

Lwala advances the health and wellbeing of youth and adolescents through a combination of in-school and community-based activities. From our community research, we know that young people face barriers to accessing SRH services alongside the general population or through CHWs. We promote high-quality comprehensive sexuality education in schools, and we support young mothers in returning to school post-pregnancy. We also provide information and access to a range of modern contraceptive methods, delivered through youth-friendly access points.
Youth Peer Providers

As the youth parallel to CHWs, our 113 youth peer providers (YPPs) equip youth and adolescents with access to and information on a range of contraceptive options. YPPs also provide referrals for long-acting reversible contraceptives (e.g. IUDs, implants, injectables) and STI screening. For years, YPPs have implemented Dial-a-Condom, where peers can order condoms on-demand without having to travel to a health facility. More recently, after a learning pilot and extensive focus group discussions to understand youth preferences, Lwala added emergency contraceptives and oral contraceptive pills to YPPs’ service package.

This year, our YPPs have provided more contraceptives than ever before. YPPs distributed 121,654 condoms in 2021, a 50% increase over 2020. Additionally, emergency contraceptive and oral contraceptive distribution have both doubled since Q1 of this year. By the end of the year, we saw an upward trend in uptake of all oral contraceptive methods by young women ages 20-24, as well as an increase in uptake of emergency contraception and combination oral contraception for girls ages 15-19.

![Youth Peer Provider Emergency Contraception Distribution by Age](image)

Youth Advisory Boards

One of Lwala’s priorities is that young people understand and act on their rights related to sexual and reproductive health. We work with youth to create Youth Advisory Boards (YABs), which identify the health priorities of their peers and drive programming for young people in the community. In 2021, we recruited 39 young people across Rongo Subcounty to serve on YABs. They were trained on an adapted version of Advance Family Planning’s SMART Advocacy curriculum to prepare them to engage in advocacy with community leaders. Using these skills, YABs met with the Assistant County Commissioner to champion issues of sexual and gender-based violence and school dropouts in South Kamagambo. YABs have also introduced adolescent-and-youth-only dialogues, where they hear the views of their peers and are able to collect feedback. YABs use this feedback to represent their peers during community engagement forums and to advocate at government decision-making tables.
Youth Friendly Corners

After nearly a year of closures due to COVID-19, we reopened Youth Friendly Corners (YFCs), a key health service point for young people, in January 2021. We renovated 3 YFC spaces this year at Lwala Community Hospital, Rongo Subcounty, and Rosewood Hospitals—the latter two as part of our expansion to Central Kamagambo. In 2021, we hosted 15,101 Youth Friendly Corner visits, which is an 11% increase over 2019 visits. Since opening the first YFC in 2017, the gender composition of visitors has shifted. Today, girls and young women make up over 50% of service visits, compared to 29% in 2017. This illustrates a positive trend that girls and young women find YFCs to be a safe and confident space to access SRH services and information.

When we look at the ages of youth visiting YFCs, we see a fairly even distribution, ranging from 22% to 28% across age cohorts. We were encouraged to see a 190% increase in visits for girls aged 10-14 across the year, showing that this particularly high-need group is accessing sexual and reproductive health information and services in a safe environment.

Youth Friendly Outreaches

In 2021, we hosted more youth-friendly clinic days and outreaches to mitigate service disruption, and we also targeted hard-to-reach areas identified by YPPs and CHWs. Over the year, we supported 81 youth-friendly clinic days, reaching 6,043 people with SRH information, contraceptive methods, and STI/HIV screening. We also conducted 39 youth-focused outreach events, reaching 6,108 people with information and services.

Through Better Breaks, we create a space for adolescents and youth to participate in leisure, leadership, and life skills activities during school holidays. They can also access health counseling and health services, such as pregnancy tests, contraceptive methods, and test kits for HIV. We had 2 Better Breaks sessions across 13 primary schools in North Kamagambo, and we introduced new activities—including a home science competition, public speaking training, drama, and environmental conservation lessons. This resulted in the highest-ever attendance in December.

Additionally, in December we partnered with the Pamoja Peace Organization (PPO), a community-based organization that aims to promote peaceful coexistence among different communities through sports. During their sporting events and tournaments, Lwala provided health services to youth and adolescents. In addition to SRH services, we also leveraged the opportunity to dispel myths and misconceptions about the COVID-19 vaccines and administer doses. We intend to continue working together in the future.

Over time, we are seeing an increase in CYP, especially by 15-19 years olds, who made up 19% of total contraceptive uptake in early 2017 to 28% by the end of 2021. Improved contraceptive uptake for this age group leads to fewer teen pregnancies, better school completion rates, and better birth outcomes.
School-Based Programming

Efforts to keep girls in school have long-term health and development benefits for girls. Lwala’s Broadened Horizons program supports adolescent girls who have dropped out, largely due to teen pregnancy, to re-enroll in school by providing mentorship, scholastic support, school materials, and a small cash transfer to subsidize costs. This year, we maintained school enrollment and mentorship of 240 girls, including 77 newly enrolled girls. We also adapted to COVID-19 and busy school calendars by beginning to offer phone mentorship sessions for Broadened Horizons participants.

Lwala has also provided support to school Boards of Management to mobilize resources and implement infrastructure projects in 4 schools this year. These projects include opening 1 additional class at a primary school, erecting a gate and fencing at 2 different schools, and constructing a new school laboratory. Lwala also supported 13 Boards of Management to prepare a safe learning environment for teachers and students following the closure of schools in 2020 due to COVID-19. We have conducted capacity-building sessions for 14 school community committees.

Finally, Lwala aimed to reduce the gender gap in school completion by increasing access to school uniforms and feminine hygiene products. We distributed uniforms to 765 girls, and for the first time, we distributed uniforms to 299 boys, reaching 1064 students across 13 primary schools. We also distributed 3873 sanitary pads.

WASH & Vulnerable Populations

Research shows that HIV-positive individuals are more susceptible to malaria, diarrhea, and other enteric diseases. To address this, Lwala implements an integrated program that improves water, sanitation, and hygiene (WASH) for people living with HIV and other vulnerable populations. We support communities to lead their own WASH initiatives, improving health outcomes for vulnerable populations, as well as the community as a whole.

Community-Led Sanitation

Much of this work is led by WASH committees, which are groups of community leaders who work to identify WASH-related challenges and find solutions. WASH committees sensitize their communities on the importance of WASH—including handwashing, latrine use, and clean water—and address behavioral and cultural constraints that prevent communities from adopting good sanitation. They also organize action
days during which community members come together to build latrines and handwashing stations and to rehabilitate water sources. This year, we supported our communities to:

- Build 4,918 handwashing stations, more than 2 times the number built in 2020, which is particularly important in the context of COVID-19.
- Build 1,617 new latrines, nearly 5 times the number built in 2020, which supports our communities in maintaining their Open Defecation Free status.
- Improve existing latrines, including making them safer through the installation of new technology that combats the transmission of communicable diseases. This year we’ve worked to improve 930 latrines, compared to 44 in 2020.
- Mobilize resources and labor to rehabilitate 7 water sources in 2021.
Making WASH Accessible for People Living with Disabilities

The varied needs of people living with disabilities are central to designing equitable WASH activities. During community discussions on sanitation issues, we found that latrines are inaccessible for many people living with disabilities. In response, CHWs worked to identify all vulnerable people in their communities and ensured they were prioritized for accessible latrines and water. Community members stepped in to construct accessible latrines during action days, and Lwala also distributed 52 water tanks to reduce the walking distance for people living with disabilities to other water sources.

Economic Empowerment

Savings and Loan Cooperative

In 2021, Lwala village’s savings and loan cooperative served 242 members, including 25 new members recruited during the year. The combined member savings held by the cooperative in 2021 is $254,991. This cooperative operates independently and provides pro-poor financing to staff and community members. We were encouraged to see membership and total savings increase during the pandemic.

Rosemarie* is a member of her community’s WASH Committee who wanted to ensure that her local water source—a well with a hand pump—could always provide water for her community. She attended a training, where she learned about the operation and maintenance of a hand pump, and how to diagnose and solve a problem. She quickly became the most skilled operator in her community. Now she is responsible for monitoring multiple water points and replenishing chlorine every day, and she closely collaborates with other members of her WASH committee. Because of Rosemarie’s work, water sources can be fixed more quickly, and her community has a consistent source of water.

*Name has been changed.
Lwala also partners with Village Enterprise, which equips and empowers first-time entrepreneurs with resources and skills to start sustainable businesses and savings groups. When community members participate in Village Enterprise’s program, they undergo training led by Business Mentors, form business groups, and are given a seed capital grant to start their businesses. Throughout the program, business groups receive mentoring and guidance from their Business Mentor.

In 2021, Village Enterprise established 504 business groups and 48 business saving groups in the region. Despite economic challenges stemming from COVID-19, Village Enterprise businesses have addressed the income needs of the extreme poor in these communities. Village Enterprise participants saw an average 156% increase in average weekly household animal protein consumption. Participants also increased the value of their household assets by $77 on average from baseline to endline. Additionally, business savings groups—which meet regularly to pool their savings and are able to access loans—have instilled a culture of saving among the members. The average total savings are 135,089 KES per business savings group. Additionally, household savings of Village Enterprise participants increased by an average of $40 from baseline to endline.
Research & Learning

Throughout 2021, Lwala systematized our data systems and feedback loops, and we overhauled our data quality monitoring. To manage this, we grew our Research & Learning team and partnered with other organizations to ensure high-quality, timely data as we scaled our model to new geographies, adapted programs, and tested new protocols. We also completed our largest household survey to date, updated our digital data collection tools, and conducted research to evaluate our programming.

Peer-Reviewed Publications

In 2021, Lwala published 5 research papers in peer-reviewed journals:

- **Determinants of modern contraceptive prevalence and unplanned pregnancies in Migori County, Kenya: results of a cross-sectional household survey** (read [here](#)) in the African Journal of Reproductive Health. We found that women in Lwala communities are 2.6x more likely to use contraception than in comparison sites.

- **Population-based socio-demographic household assessment of livelihoods and health among communities in Migori County, Kenya over multiple time points (2021, 2024, 2027): A study protocol** (read [here](#)) in PLOS ONE. This article describes our repeated cross-sectional survey study to evaluate key health metrics in both areas served by the Lwala Community Alliance and comparison areas, including protocols for the COVID-19 context.

- **Characterizing multidimensional poverty in Migori County, Kenya and its association with depression** (read [here](#)) in PLOS ONE. This article describes a cross-sectional survey of 4,765 households that examined the association of poverty with depression. The survey used a multidimensional poverty index, which looks beyond standard measures of poverty (e.g. $1.25 a day), and includes metrics across education, health, and living standards to create an aggregate measure of poverty. The results can help Lwala better target interventions to the needs of communities to decrease multidimensional poverty and improve mental health.

- **Compensation models for community health workers: Comparison of legal frameworks across five countries** (read [here](#)) in the Journal of Global Health. Co-Authored with CHIC partners, this study examines the legal framework on CHW compensation in five countries. This analysis aims to move the global conversation from *whether* to pay CHWs to *how* to do so, and a strong legal framework is the first necessary step to high-quality implementation of compensation practices.

- **Continuity of Community-Based Healthcare Provision During COVID-19: A Multi-Country Interrupted Time Series Analysis** (read [here](#)) in Preprints with the Lancet. Pooling programmatic data with other CHIC members, we found that adequately-supported CHW programs (i.e. those abiding by the WHO Guideline and equipping CHWs with PPE and COVID education in a timely manner) may blunt the impact of health system shocks like pandemics.

Lwala Household Survey

This year we carried out our largest household survey to date, surveying over 7,000 households across 3 subcounties. Lwala will use the data collected to test our model and to inform decisions in health sectors, thus advancing community-led health. COVID-19 made our data collection efforts particularly challenging, but we completed the survey with adaptations to diminish the risk of transmission and to protect both household participants and enumerators, which we documented and published in [this protocol](#). Our repeated cross-sectional survey protocol can be used in other low-resource settings to evaluate key health metrics in both areas served and comparison areas.
Lwala Mobile Updates

To better align with the Ministry of Health, Lwala updated our digital data collection tools this year. This aligns with our efforts to digitize CHWs across Migori County and support the rollout of the Electronic Community Health Information System (eCHIS), an aggregate data system for community health data being developed by the national MOH. We’ve also updated our CHW household enrollment strategy to include every household in our service area, so that all community members can receive support from a CHW directly in their homes.

Data Quality Improvement

Every month, Lwala’s CHWs log thousands of patient interactions on the CommCare platform, the most widely used digital case management platform for frontline health workers in the world, and many types of inconsistent or problematic data can find their way into mission-critical datasets. In 2021, we partnered with DataKind to develop and deploy a data integrity solution to help automatically find, categorize, and summarize errors and help Lwala benchmark the data quality issues and develop remediation strategies. Being able to identify and resolve data issues in a timely manner will help us better respond to the needs of our frontline workers and will enable our staff to center data-driven decision making in their work, which will ultimately lead to better service provision.

Key Research Underway

**Obstetric Hemorrhage Initiative Study:** We are conducting an evaluation of Lwala’s obstetric hemorrhage initiative in partnership with Kenya MOH and University of California San Francisco’s (UCSF) Safe Motherhood Program. The study will track health outcomes for women experiencing obstetric hemorrhage and evaluate the efficacy of the trainer-of-trainers (TOT) model coupled with NASG technology. Final data is being cleaned and analyzed, and we expect to share results in 2022.

**Helping Babies Breathe Study:** We are currently designing a study protocol examining the Helping Babies Breathe (HBB) program. We will evaluate HBB implementation using a scalable TOT model, looking at successful resuscitation before and after program rollout across 16 facilities, and surveying health care workers. We are finalizing the design and timeline of this study and planning IRB submission.

**Nurturing Care for Early Childhood Development Survey:** This quantitative survey, developed in collaboration with students at Vanderbilt’s Institute for Global Health, measures the status of developmental and growth indicators for children 0-4 years old in North Kamagambo. We completed midline data collection in 2021. We will track these indicators over time to understand the impact of our Nurturing Care program on comprehensive child wellbeing.
Leadership

- Lwala joined the steering committee of Communities at the Heart of UHC. Together, we are working to advance quality health care and services for all.
- Lwala partnered with Resolve to Save Lives and others on an urgent call to action to protect health care workers, including fully implementing Infection Prevention and Control standards, investing in training and training to protect health workers, and increasing donor support.
- Co-CEO Julius Mbeya and CHW Euniter Adoyo joined the Skoll World Forum to speak about the success of a cross-sectoral NGO collaboration in the fight against COVID-19.
- Through Blood:Water Mission, Co-CEO Julius Mbeya was honored as 2020 Leader of the Year. Julius was described as a “leader of leaders,” attributed to his invaluable experience and voice among the community of leaders.
- In response to the exciting announcement that MacKenzie Scott would be including Lwala in her latest round of distributions, Fred and Milton Ochieng’ co-authored an open letter to express gratitude for Scott’s “ceding” space for community voices.
- Lwala presented on Delivering Nurturing Care through Community Health Workers (CHWs) at the Fourth Annual National Early Childhood Development Conference in Siaya County, Kenya.
- Head Nurse Carren Siele and Nurse Mentor Winny Cherono presented at the 63rd Annual Nurse’s Scientific Conference in Mombasa. Their presentations covered both the impact of clinical rotation on Kenya’s health workforce and decreasing maternal mortality through the Obstetric Hemorrhage Initiative in Migori County.
- Co-CEO Ash Rogers spoke on a panel titled “Measuring Real Outcomes and Effectiveness” at the Unite for Sight’s Global Health Idea Lab Virtual Summit.
- To mark World Pneumonia Day, Co-CEO Julius Myeba spoke on a webinar hosted by Australian International Development on the double burden of pneumonia & COVID-19 and increasing access to oxygen.
- Mothers and Children Coordinator Steve Okong’o & Research, Learning, & Impact Director Daniele Ressler co-presented on a panel at the Global Digital Health Forum, discussing how Lwala is pursuing innovations in high-quality community health digital data, along with Dimagi and Medic Mobile, and facilitated by DataKind.
- CHW Euniter Adoyo was invited to speak on a high-level panel during a World AIDS Day webinar, Incorporating Health Worker Voices to End HIV, organized by USAID and HRH2030. Euniter’s call to action was widely shared on social media: “CHWs are on the frontline to end AIDS... but only 14% of CHWs in Africa are paid. So I advocate for them to be recognized and paid by governments and organizations.”
People & Culture

This year, the Lwala Human Resources (HR) department focused on supporting all staff through the COVID-19 pandemic. As cases surged this year, Lwala migrated many of its HR services and functions online, and secured necessary resources for staff—including additional airtime, home workspaces, and connectivity at people’s homes. Employee wellness was a top priority during the surge in cases from Omicron, as some Lwala staff members and their families tested positive. Lwala provided care and support, and also prioritized routine testing and vaccination for all staff—99% of our staff are fully vaccinated.

In line with the 2025 Strategy, Lwala undertook an organizational restructure in early 2021, which created new opportunities to clarify staff roles and responsibilities. We realigned job descriptions and implemented new salary and benefits structures. We also reestablished the organization’s gender equity committee and trained members on their role in the overall gender equity framework. We completed a gender analysis of our salary grades, then re-aligned salaries to be more equitable, transparent, and competitive. A gender mainstreaming training, implemented this year, emphasized internal gender policies, as well as strategies for integrating gender in all sectoral programming areas.

We continue to offer skills building opportunities for staff. Earlier this year, we conducted a communication training focused on improving program documentation and written communication skills. This quarter, we hosted a training session on basic life-support and advanced life-support for front line workers, with about 30 health care workers attending.
Community Spotlight

When Euniter, a community health worker, visited Doris, she could tell something was wrong. After a long conversation, Doris eventually opened up and told Euniter that she recently had two miscarriages. This had created a rift between her and her husband, and her mother-in-law had declared her unable to carry a baby, which devastated Doris. Doris also said that both miscarriages had happened at home—she had never considered seeking medical care at a facility.

After encouragement from Euniter, Doris agreed to visit Lwala Community Hospital, where she hoped she would learn the cause of her miscarriages. During the visit, Doris agreed to take an HIV test—and it came back positive. She was immediately initiated on antiretroviral treatment, and she also received counselling and was connected to an HIV support group. While it certainly wasn’t the health outcome she wanted, Doris was cautiously hopeful that once her viral loads were suppressed, she could carry a baby to term.

Today, Doris has two children that were safely delivered at a health facility. She enrolled in a program that prevents mother-to-child transmission of HIV during pregnancy, childbirth, and breastfeeding, and because of her dedication, both of her children are HIV free. Doris is also a member of her local parenting group. Euniter continues to visit Doris and her family, where she checks on the health and development of Doris’s children. The best part of this story for Euniter is that by caring for Doris, she helped bring two healthy children into the world.

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4 Name has been changed to protect the privacy of our community members.
Staff Spotlight

Doreen Achieng Baraza Awino, Director of Health Systems

“Doreen is exciting to work with. She is a workhorse; accountable, transparent, and highly ethical which is why the top leadership includes her as part of the Country Health Management Team. We have never regretted the decision—we only wish we had more of her.”

- Kenneth Ombongo, Director of Public Health, Kenya Ministry of Health

“Health is dynamic. Knowing the social determinants of health are what make programs work,” says Doreen Baraza, Director of Health Systems at Lwala. “It’s not enough just to know that someone is sick and going to the hospital, but emphasis should be on the factors contributing to the illness or recovery. When we know our community members, we can get to the source of the problem earlier—the preventative pieces.”

It’s this belief—knowing your community and providing them with holistic care throughout their lives—that lured Doreen toward applying for a position with Lwala Community Alliance four years ago. It resonated with her upbringing as part of a family of seven in Migori County, as well as her experience in nursing school at Kaplong School of Nursing. There, she was assigned to a community and followed women from pregnancy through birth and immunizations. “When you know what a family ate for dinner last night—who got the good parts of the chicken or the good eggs—you get to understand the psychological, social, economic, and family factors that can block access to health care, and act as barriers to health outcomes.”

In her work with Lwala, Doreen is driven by community connection and storytelling. “People will say to our Community Health Workers, ‘Thank you so much for visiting me in my house when I am not well. Last night I went to sleep hungry, but when you came, I felt motivated to eat.’ It’s hard to summarize all these small stories in data. Have you touched lives? Have you changed them? That’s what motivates me.”

A wife, mother of three, devoted church member, and contributor to her own small shamba (farm), Doreen began at Lwala by working with the community to understand where the health system was failing communities. Current Director of Programs, Hellen Kerubo Gwaro shared that Doreen’s leadership brought professionalism to the program staff—she drew clear responsibilities for each staff member, empowering them to work more collaboratively and efficiently. “And she guided the staff to a more open-minded approach to the adjustments we needed to make as an organization.” In late 2020, Doreen was promoted to her current position, which enables her to use her knowledge and expertise to liaise with other health actors at the county, national, and global levels—such as the Kenya Ministry of Health and the Community Health Impact Coalition (CHIC). Doreen shares experience and data about Lwala’s community-led health model with these national and county teams, engendering a mutual trust with the Kenyan government that has them calling her for advice now, and will enable collaborative expansion in the years ahead.

“It’s hard to pat myself on the back because I’m so inspired by others,” Doreen says, simultaneously snapping her fingers to alert one of her children to answer the front door and another one to hush the loud rooster in the background. “But I’m happy about what I’ve done with Lwala.”