



ACCELERATING HEALTH ACCESS: HOW BUFFALO BICYCLES EMPOWER CHEWS IN UGANDA

Summary of Findings | May 14, 2025



INTRODUCTION

World Bicycle Relief (WBR) operating as Buffalo Bicycles Uganda in Uganda, is a non-profit social enterprise that works globally in underserved markets, where millions lack reliable transportation. By providing access to affordable, purpose-built bicycles and trained mechanics and bicycle components, WBR empowers individuals and communities with greater independence and improved outcomes in healthcare, education, and economic opportunities so they can thrive. WBR efforts focus on empowering women and girls, youth, and marginalized communities.



331

NUMBER OF CHEWS
EQUIPPED IN LIRA AND
MAYUGE DISTRICTS WITH
BUFFALO BICYCLES

Since 2022, the Ministry of Health (MoH) in Uganda has trained Community Health Extension Workers (CHEWs) to help bridge the gap between communities and the formal health system through provision of health services at the household level. However, mobility constraints affect a significant share of CHEWs and hinder health service delivery. To address mobility barriers faced by CHEWs, WBR partnered with MoH in September 2023 to equip 331 CHEWs in Lira and Mayuge districts with Buffalo Bicycles.

ASSESSMENT BACKGROUND

In November 2024, BBU collaborated with MoH to assess the impact of Buffalo Bicycles on community health work in Lira and Mayuge districts. The assessment utilised quantitative data from a survey conducted with 221 randomly sampled CHEWs, supplemented by quantitative data from a post distribution monitoring that was carried out six months after bicycle distributions with 78 CHEWs. The assessment also drew on qualitative data from six focus group discussions (half with CHEWs and half with community members receiving services from CHEWs) and key informant interviews with CHEW supervisors, other leaders in the healthcare sector in the two districts, and local council representatives from both districts.

KEY FINDINGS

CHEWS' WORK

Commonly nicknamed the **"village doctors"**, by community members, CHEWs undertake a variety of work. Some of their roles include providing health education, undertaking disease and outbreak surveillance, referring sick patients to health facilities, mobilizing pregnant women to attend antenatal care (ANC) among others, supporting early childhood development, and tracing the lost to follow-up patients on Antiretroviral Therapy (ART) and return them to care.

CHEWs work an average of 19 days in a month, translating to approximately 5 days per week. Sometimes CHEWs provide their services outside traditional working hours, which makes access to transportation even more important.

"Ever since CHEWs received bicycles, I have observed an increase in the frequency of their visits in the community. In a typical week I see them twice or thrice in the community. This is because their transportation was made easy."— Female community member, Lira DLG



MOBILITY PATTERNS

CHEWs travel an average of 4.5 kilometres to their designated health facilities. Buffalo Bicycles are currently the main mode of transportation for the vast majority (95%) of CHEWs. Prior to receiving Buffalo Bicycles, walking was the main transportation mode used by 58% of CHEWs to provide health services. The remainder used either motorcycle taxis, also referred to as boda bodas (27%), bicycles (12%), or own motorcycle (3%).


4.5KM

CHEWS' AVERAGE TRAVEL DISTANCE TO THEIR DESIGNATED HEALTH FACILITIES



95%

CHEWS USING BUFFALO BICYCLES AS THEIR MAIN MODE OF TRANSPORTATION

Among other community members, walking is the main mode of transport when accessing health facilities and other essential services. Bicycles and motorcycle taxis (boda boda) are also used by those who can afford to pay the fares.

KEY FINDINGS

BUFFALO BICYCLE USAGE BY CHEWS

More than half (60%) reported using their Buffalo Bicycles every working day, and majority of the remainder used Buffalo Bicycles four out of five days per week. On the days that CHEWs do not use Buffalo Bicycles, the reasons vary, such as preference for walking when visiting clients living near their homes while others opted for motorised transport during emergencies or during unfavourable weather (e.g., rain or muddy terrain).

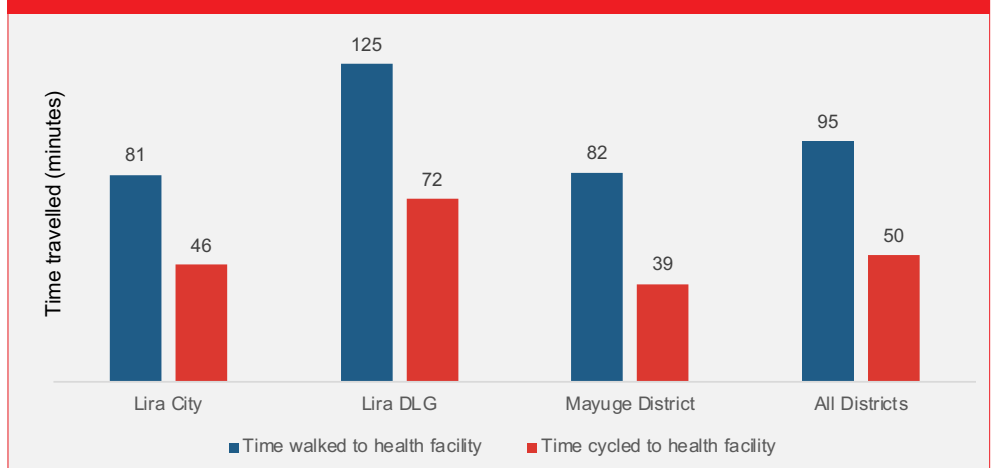
“CHEWs rarely came to the facility, but after receiving Buffalo Bicycles, they work two days at the facility every week where they help to register patients, conduct health talks, retrieve patients’ files, attend the monthly meetings at the facility and submit their reports on time.” — Health Facility In-Charge, Lira.



DISTANCE AND TIME TRAVELLED BY CHEWS

Findings from a post distribution monitoring undertaken six-months after bicycle distribution shows that the longest distance travelled increased by 68%, from an average of 4.6 kilometres to 7.8 kilometres. CHEWs further reported that they can reach distant villages, including those previously unreachable due to transportation challenges. This expanded reach was reported by approximately two thirds (61%) of CHEWs.

AVERAGE TIME TRAVELLED BY CHEWS TO DESIGNATED HEALTH FACILITY



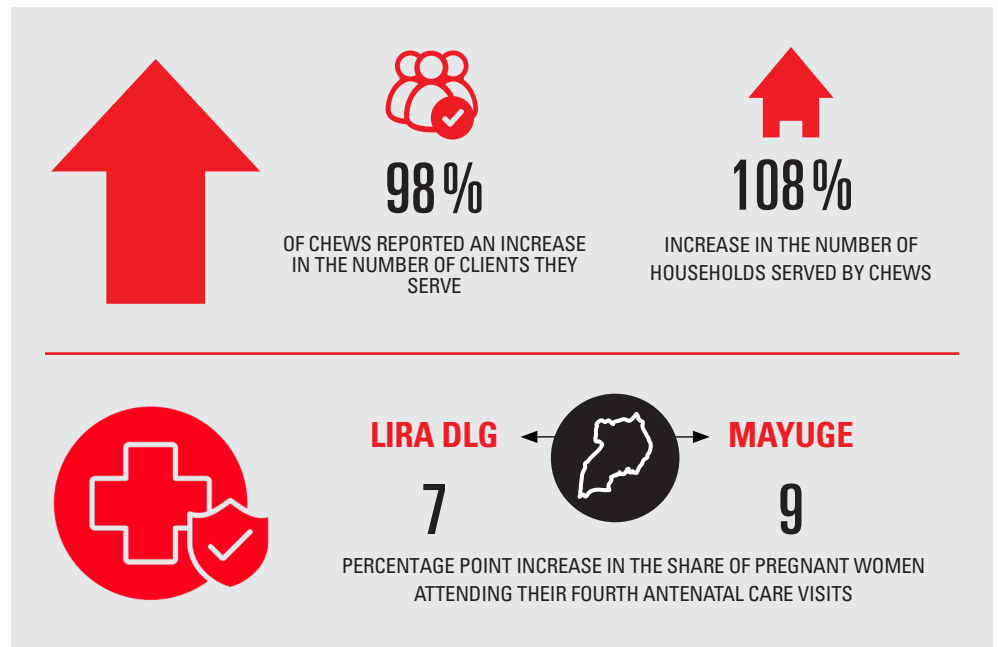
The vast majority (97%) of CHEWs surveyed reported that bicycle usage had resulted in a decline in time spent travelling for community service work. During Focus Group Discussions (FGDs) in Mayuge and Lira City, CHEWs estimated that bicycles have cut travel time by half. This is supported by survey findings which show that CHEWs using Buffalo Bicycles spent 47% less time travelling to the health facilities. On average, they cycled 50 minutes from their homes to health facilities for work, compared to the 95 minutes it would take to walk the same distance.

KEY FINDINGS

INCREASED REACH

An overwhelming 98% of CHEWs surveyed reported that they had increased the number of clients they serve. Notably, six months after bicycle receipt, CHEWs reported a 108% increase in the number of households served. Before receiving bicycles, on average, CHEWs served twenty five households per week; this number more than doubled after bicycle access.

Data on pregnant women accessing antenatal care services suggests notable improvements since CHEWs received bicycles. Between October 2022 and December 2024, in Lira DLG, the share of pregnant women attending their fourth antenatal care visits increased by 7-percentage points, while in Mayuge there was a 9-percentage point increase over the same period. This is a notable finding given that one of the CHEWs' main tasks is to visit pregnant women and refer them to health facilities for antenatal care visits.



TRANSPORTATION EXPENDITURES

CHEWs reported an average of 61% decrease in transport expenditure. Moreover, 43% of CHEWs reported spending no money on transportation when undertaking service delivery work. Although the CHEWs are responsible for bicycle maintenance, the bicycles do not break frequently, resulting in minimal spend on the repair and maintenance of the bicycles.

“The money my husband used to give me to buy food for the family is what I would use as transport to go to work at the health facility, but now I do not need transport money, I can buy meat for my children, I am able to buy salt, sugar and other consumables.”

— Female CHEW, Mayuge



KEY FINDINGS

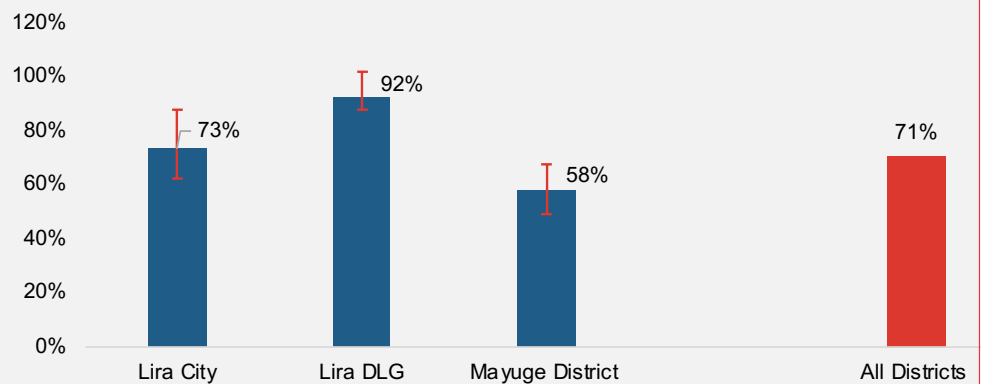
ABILITY TO RESPOND TO EMERGENCIES

One of the most frequently cited impacts of the Buffalo bicycles, reported by 57% of CHEWs, is their increased ability to respond to emergencies. As an example, close to three quarters (71%) of CHEWs used their Buffalo bicycles to transport sick patients to health facilities. One of the reasons why CHEWs use their Buffalo bicycles for this purpose is the long distances travelled by community members to health facilities. CHEWs who used their Buffalo Bicycles to transport sick patients to health facilities reported doing so an average of 11 times since receiving their bicycles.

"In my village, my Buffalo Bicycle is referred to as the village ambulance". — Male CHEW, Lira City



PERCENTAGE OF CHEWS REPORTING USE OF BUFFALO BICYCLES TO TRANSPORT SICK PATIENTS TO HEALTH FACILITIES, BY DISTRICT



IMPROVED QUALITY OF SERVICE

More than two thirds (69%) of CHEWs reported spending more time with clients after receiving the Buffalo Bicycle. While a variety of factors may influence the time spent with clients, including the nature of service provided, more than half of CHEWs attributed the increase in time spent with clients to time savings arising from bicycle usage. These findings suggest that access to transportation can influence the quality of care during service provision.



"Before I received a Buffalo Bicycle, I would visit a home in a hurry and just record a few things and rush to another household and then to my home. But currently, because I am sure of the means of transport, I spend a minimum of one hour in a household when I visit. I take time to understand the health challenges in a home and work with the head of the family or mother to identify solutions. I am even able to do demonstrations such as construction of a handwashing facility, drying rack, latrine cleaning among others in a household" — Male CHEW, Lira City

KEY FINDINGS

OTHER REPORTED IMPACTS ON CHEWS WORK

More than half (54%) of CHEWs reported that they had increased referrals, 32% reported that they are able to attend meetings when required, and 21% cited increased ability to submit reports to their supervisors. CHEWs also report feeling motivated to undertake their work, noting that the bicycle has increased their sense of worth and positively impacted how the community perceives them.

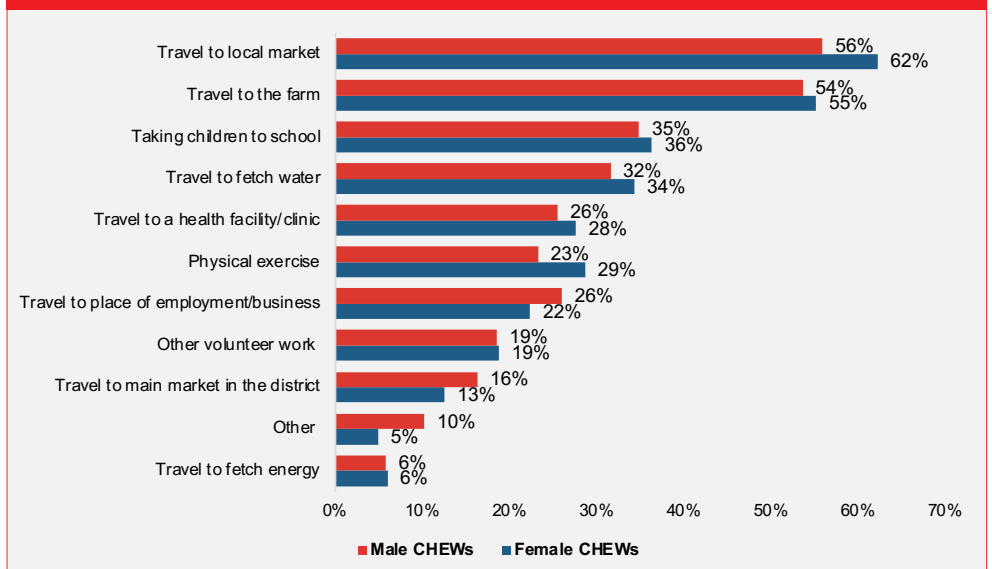
“This bicycle added value to my work as a CHEW, it increased the confidence of the community in my work. They now refer to me as a government Health Worker”
 — Male CHEW, FGD, Lira city



IMPACT ON CHEWS WELFARE AND WELLBEING

Buffalo Bicycle usage has enabled CHEWs to better balance time between community health work and family responsibilities. The most common activities that CHEWs now undertake due to time savings resulting from reduced travel time include farm work (reported by 57%) and businesses and other income generating work (48%). These activities enhance food security, income levels, and household spending. When not undertaking community work, CHEWs use their Buffalo Bicycles for a variety of other purposes – including travel to local markets to source supplies for their households, travel to farms, water source, and to take children to school.

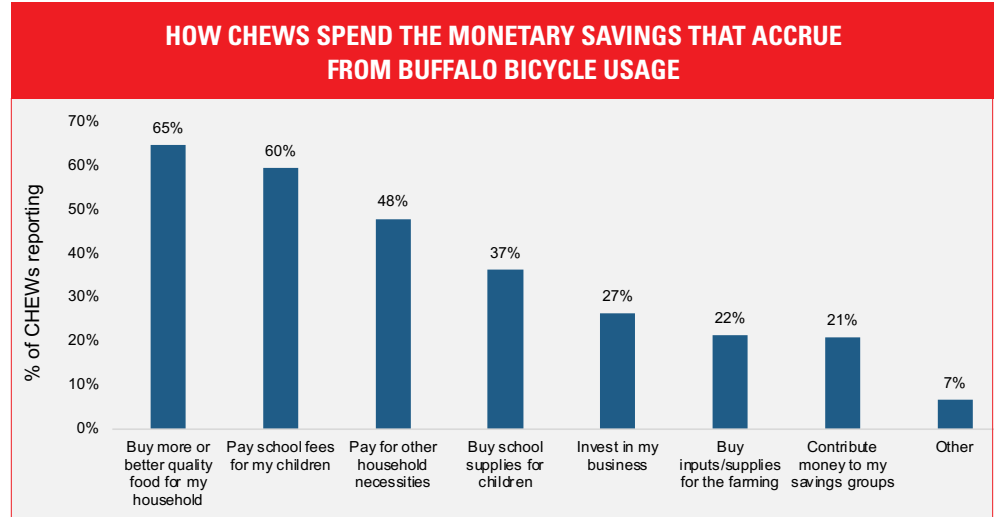
HOW CHEWS USE THEIR BUFFALO BICYCLES OUTSIDE OF COMMUNITY HEALTH WORK



KEY FINDINGS

INCREASED MONETARY SAVINGS AND IMPACT AT HOUSEHOLD LEVEL

Nearly all (95%) CHEWs report increased monetary savings, thanks to reduced transportation expenditure. The savings are used to acquire other vital household items, such as more or better-quality food and paying for their children's school fees.



BICYCLE FUNCTIONALITY

CHEWs bicycles remain in good condition. Buffalo-trained mechanics who participated in the assessment perceive the Buffalo Bicycle as good quality and durable because of the heavy-duty design (notably the carrier) and the overall bicycle design that allows both men and women to ride the bicycle.



CHEWS BICYCLES REMAIN IN GOOD CONDITION BECAUSE OF THE HEAVY-DUTY DESIGN OF THE BUFFALO BICYCLES



KEY FINDINGS

LOW EXPENDITURE ON REPAIRS AND MAINTENANCE

The vast majority (77%) of CHEWs had not needed to replace any parts of their bicycles during the 12-13 months following receipt. Additionally, more than half (57%) of CHEWs surveyed had not spent any money on servicing and repairs, including spare parts acquisition and mechanic fees, in the three-month period preceding the survey. Moreover, expenditure on spare parts and mechanics fees is low, with CHEWs reporting an average spend UGX5136.9 (US\$1.4) over the three-month period preceding the survey.



77%

THE PERCENTAGE OF CHEWS WHO HAD NOT NEEDED TO REPLACE ANY PARTS OF THEIR BUFFALO BICYCLES



57%

THE PERCENTAGE OF SURVEYED CHEWS WHO HAD NOT SPENT ANY MONEY ON SERVICING AND REPAIRS

DEMAND AND SUPPLY OF MECHANICS

In total, 20 Buffalo-trained mechanics support the maintenance and repair of Buffalo Bicycles in Lira and Mayuge districts. These mechanics can be found in markets in main towns or villages (trading centres), with CHEWs reporting that they travel an average 4.5 kilometres to reach them. A share (30%) of CHEWs felt that the mechanics are located far from their homes. The Buffalo-trained mechanics are located between 500m and 40 kilometres from the Buffalo Bicycle shops and place orders for spare parts when their client requires them.



4.5KM

CHEWS' AVERAGE TRAVEL DISTANCE TO BUFFALO-TRAINED MECHANICS

Access to high-quality, durable bicycles—such as Buffalo Bicycles—is vital for the sustained use of bicycles in service delivery. To ensure continued usage and address any bicycle-related challenges, Buffalo Bicycles will continue to strengthen access to trained mechanics and spare parts.

CONCLUSION

The findings from the assessment of the bicycle program underscore the vital role that bicycles play in enhancing health service delivery. CHEWs with Buffalo bicycles reach more households, can respond to emergencies faster, and spend more time with their clients. They also spend less on transportation costs and improve their household welfare through increased savings, improved food consumption for their households, and increased ability to afford school fees and supplies for their children.

These findings reinforce the need to scale bicycle mobility solutions to support more community health workers like CHEWs, including through integrating mobility into CHEWs' professionalization, to widen their reach and impact. World Bicycle Relief will continue to partner with MoH and other partners in the health sector to enhance CHEWs' service delivery and improve population-level health outcomes through the provision of Buffalo Bicycles and embedding mobility within national community health work strategies.



To read the full report, scan here or visit worldbicyclerelief.org

