

# WHY BICYCLES FOR HEALTHCARE?



**45%**

WITH A BICYCLE, COMMUNITY HEALTHCARE WORKERS MAKE 45% MORE PATIENT VISITS



**4X**

COMMUNITY HEALTHCARE WORKERS CAN TRAVEL FOUR TIMES FURTHER ON BICYCLES THAN ON FOOT



**138,310**

NUMBER OF COMMUNITY HEALTHCARE WORKERS MOBILIZED WITH BUFFALO BICYCLES (2008-2016)



In rural sub-Saharan Africa, where medical professionals are overworked and in short supply, community healthcare workers (CHWs) deliver services designed to improve maternal, newborn, child and adult health.

Children with adequate nutrition are more likely to reach their full physical or cognitive potential, fulfilling their ability to learn and earn a living wage.

## GOOD HEALTHCARE FROM THE START

At World Bicycle Relief, we believe that all children should have access to proper healthcare – regardless of their birthplace, family, race, ethnicity or gender, family income, or physical and mental abilities.

Infants with prenatal care are much more likely to have a regular birth weight and survive their first few days. A child who is immunized and has access to safe drinking water is much more likely to live past his or her fifth birthday and have a healthy life. (Source: UNICEF)

WBR sells Buffalo Bicycles to international NGOs and government agencies, who then distribute the bikes to Community Healthcare Workers (CHW). Research shows that these workers can reach 45% more patients by bicycle than on foot.

CHWs in Zambia are using WBR's Buffalo Bicycles to help eliminate malaria, teach positive health and nutrition practices to more pregnant and lactating women, and visit more homebound patients. CHWs in Kenya travel by bike to treat more individuals with tuberculosis, helping to reduce the spread of this preventable disease.



In rural areas, traveling is difficult even under the best circumstances. When ill, it can be impossible. CHWs can visit more patients at home when they bike instead of walk.

## THE HEALTH CRISIS IN SUB-SAHARAN AFRICA

Children born in sub-Saharan Africa are 12 times more likely than their counterparts in high-income countries to die before their 5th birthday. The region has 11 percent of the world's population but carries 24 percent of the global disease burden. It lacks the infrastructure to provide even basic healthcare to many of its people. (Source: The Business of Health in Africa, International Finance Corporation)

Poor health not only claims lives, but also limits the potential of children, their communities, and their countries. In Africa, 11% of the gross national product is lost due to poor nutrition alone. (UNICEF) Improving the health and nutrition of mothers and their children can help increase educational attainment, workforce participation, and social contributions, thereby helping individuals and communities to prosper.

## ROLE OF COMMUNITY HEALTHCARE WORKERS

The overwhelming majority of child and maternal deaths could be prevented through well-known, low-cost and easily deliverable interventions. However, the interventions needed to diagnose, prevent and treat the causes of these deaths must be delivered by skilled community-level healthcare workers, midwives, nurses, and doctors. (UNICEF State of the World's Children 2016). In the developing world, CHWs are trained volunteers who sacrifice their time to support other community members. The severe shortage of medical professionals in rural sub-Saharan Africa makes the CHW's role even more important.

UNICEF reports in its State of the World's Children Report 2016 that much of the input for progress in healthcare "has come from strengthened health systems and community-based health interventions. Community health workers have expanded the reach of care, linking vulnerable people to high impact, low-cost interventions for maternal, newborn, and child health."



Health programs that provide Buffalo Bicycles enjoy better CHW retention rates, which results in better care for patients.

## THE ROLE OF BICYCLES IN HEALTHCARE

To fulfill their responsibilities, CHWs often walk long distances over rough terrain and in inclement weather. A bicycle reduces the workers' travel times, enabling them to reach more patients, visit them more frequently, and spend more time with them, thus increasing the quality of care received by these patients – and their communities.

Owning a bicycle comes with extra benefits for healthcare providers. CHWs are able to run their personal errands more quickly and efficiently giving them more time to fulfill their CHW responsibilities to deliver services to the under-served in rural areas.

## IMPACT OF CHILD MARRIAGE ON CHILDREN'S AND WOMEN'S HEALTH

While child marriage rates are decreasing, each year about 15 million girls in the world are married before the age of 18.

Women who marry later in life have the opportunity to finish their education and delay childbearing until they are more mature. When they do get pregnant, they are more likely to receive adequate medical care. Mothers in their 20s and 30s have fewer complications during pregnancy and childbirth, and their babies are 1.5 times less likely to die during the first 28 days than babies born to adolescent mothers. (Source: UNICEF)



In sub-Saharan Africa, many CHWs are women with many domestic duties before and after work. Bicycles help them get those chores done faster.

## HISTORY OF BICYCLES FOR HEALTHCARE

In late 2006, World Bicycle Relief began working with the USAID-funded consortium called RAPIDS: Reaching HIV/AIDS Affected People with Integrated Development and Support. The purpose of the partnership was to improve caregiver mobility, thereby enabling volunteer healthcare workers to better serve their clients. Over a 2-year period, WBR delivered 23,000 Buffalo Bicycles to 130 distribution sites across Zambia's 9 provinces and trained over 470 bicycle mechanics.

A subsequent study showed the bicycles were used effectively and consistently. Among households receiving a visit from caregivers during the preceding 6 months, there was a 66% increase in those who reported that the caregiver arrived by bicycle. This shows that bicycles played a significant role in caregivers overcoming transportation barriers to service

delivery. In addition, 77% of clients reported that a caregiver used a WBR bicycle to transport them to a clinic for necessary healthcare.

During focus group interviews, caregivers testified that the use of bicycles had resulted in improved quality and duration of their visits. The opportunity to own a bicycle may also motivate community members to join the CHW team – and to stay with it. Generally, volunteer health worker programs in Africa report approximately a 50% annual turnover rate of volunteers. RAPIDS, with the addition of World Bicycle Relief bicycles, enjoyed a 97% annual caregiver retention rate. (RAPIDS Evaluation Final Report 2005–2009 Key Findings July 2009, Revised 2010, p 17)

Since the RAPIDS project began, many NGOs have partnered with WBR to provide a transportation solution for healthcare volunteers delivering life-giving and life-saving services throughout sub-Saharan Africa.



## BICYCLES SUPPORTING TUBERCULOSIS CARE IN KENYA

In partnership with WBR, PATH in Kenya has provided 1,100 bicycles to CHWs to ease the burden of transport and reduce time spent walking to clients' homes. CHWs received strong, reliable bicycles that served as an effective tool to improve the health workers' motivation and efficiency as well as improve access to tuberculosis-infected individuals. The CHWs work-to-own their bicycles after two years of effective service to their communities.

As volunteers for the Ministry of Health, these CHWs conducted TB screening, referred patients to health facilities, identified patients who for one reason or another interrupted their TB treatment regimen, and provided home-based care and support to tuberculosis patients.

A study showed the Buffalo Bicycles increased the efficiency and quality of tuberculosis care by CHWs as follows:

- Increased number and frequency of visits to an average of 1523 patients per month, compared to an average of 89 before receiving the bikes
- Increased number of TB patient referrals to health facilities from about 20 to 30 patients per month
- Increased time spent with patients
- Improved tracing of drug defaulters

Supervisors of the TB caregivers at the community level noted that CHWs with bicycles were more motivated than those without. The study also suggested that owning a bicycle enhances the social status of the CHWs, who are mostly women and homemakers. The community interprets the provision of bicycles as recognition of the importance of the workers' function within the health care delivery system.

## KEEPING BICYCLES ROLLING

As with every machine, the specially designed and well-built Buffalo Bicycles require regular maintenance and occasional access to spare parts to keep them rolling over the rugged terrain. To promote sustainability for Buffalo Bicycles and our programs, WBR trains one field mechanic to maintain the bikes and provide spare parts. This helps keep students in school and leads to increased economic opportunities for mechanics and their families.

## IMPROVING HEALTHCARE OUTCOMES WITH TWO WHEELS

### SUPPORT FOR REMOTE COMMUNITIES IN ZIMBABWE

In 2016, the United Nations Development Programme (UNDP) facilitated the purchase of 3,000 Buffalo Bicycles on behalf of the Ministry of Health in Zimbabwe for the National AIDS Council. The bicycles were a key element of a comprehensive HIV education program in remote areas of Zimbabwe, a country that has been hit hard by the AIDS epidemic.

### INCREASING CAPACITY FOR CARE IN KENYA

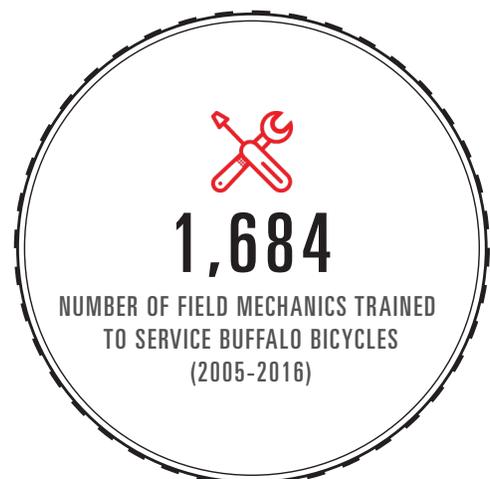
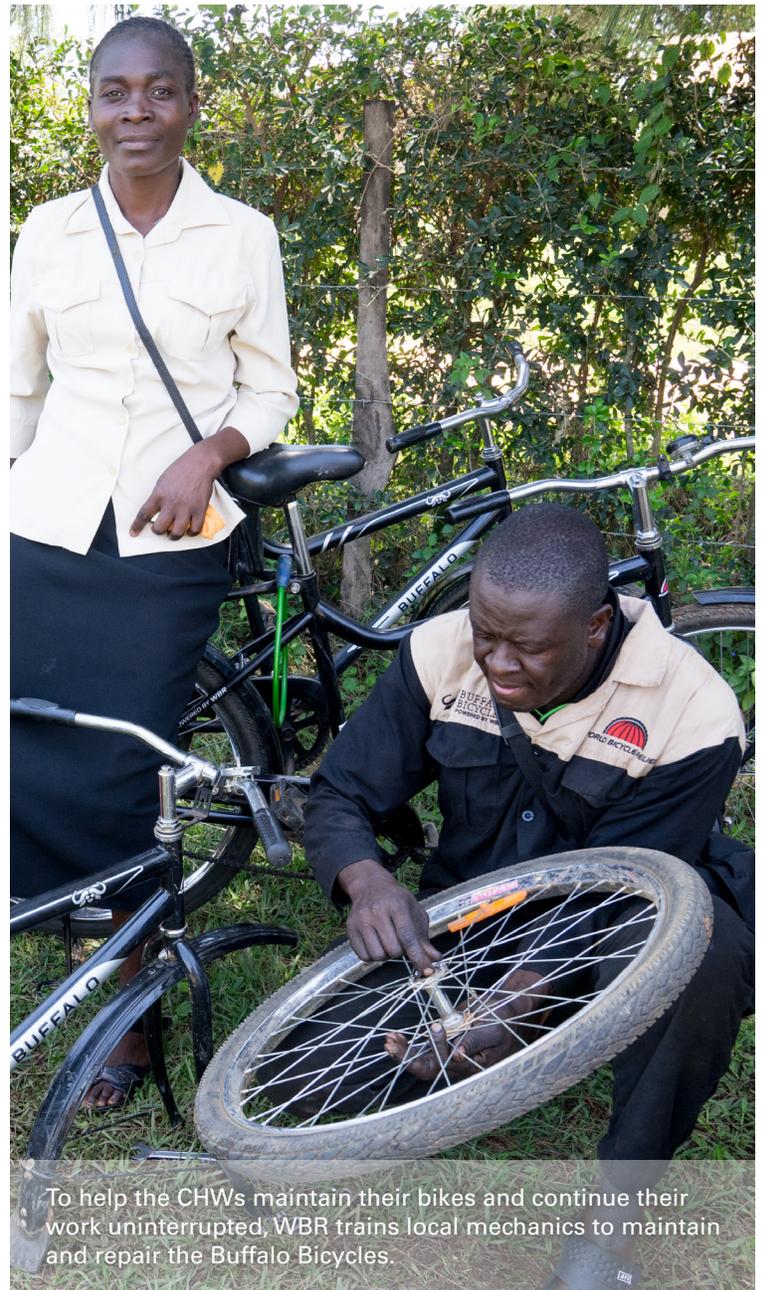
The Nilinde Project strengthens support systems for Orphans and Vulnerable Children affected by HIV and AIDS using innovative, evidence-based approaches. In 2016, the Nilinde Project purchased 269 Buffalo Bicycles to help caregivers care for and protect girls and boys.

### IMPROVING ACCESS TO PATIENTS IN KENYA

AMREF is an organization that's committed to improving the health of people in Africa by training health workers and strengthening community health systems. In 2016, AMREF purchased 200 Buffalo Bicycles for community health workers in Kakamega County, Kenya.

### MONITORING MALARIA IN ZAMBIA

Akros establishes data-driven systems that improve the health of disadvantaged communities. One aspect of their work includes malaria surveillance, prevention, and eventually, eradication. In Zambia, Akros helped design and scale a groundbreaking malaria surveillance system – and they purchased 50 Buffalo Bicycles in 2016 to help deploy it.





## WHY BICYCLES?

For many people in the developing world, walking is their primary mode of transportation. Add the challenge of distance and seemingly simple tasks become difficult and sometimes impossible. With no choice but to walk, meeting everyday needs is a struggle against time and fatigue. When you provide a bicycle, you empower people with the opportunity to make choices. Over time, bicycles enrich the lives of children, households, and entire communities.

## WHY WORLD BICYCLE RELIEF?

World Bicycle Relief (WBR) builds and distributes specially-designed, locally assembled, rugged bicycles. With the experience and expertise gained over the years, WBR has developed an efficient, innovative, and scalable model to successfully address the need for reliable, affordable transportation in rural areas of developing countries. Our Buffalo Bicycles not only help people survive, they help them thrive.

## GET INVOLVED.

- **DONATE** the gift of a bicycle
- **FUND** programs through a corporate giving program
- **FUNDRAISE** with friends and family
- **RIDE** with one of our many cycling events
- **FOLLOW** us on [Facebook](#), [Twitter](#), and [YouTube](#)

