



Bicycling Empowerment Network Namibia

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Bicycle Ambulance Project



The production model of the BEN Namibia Bicycle Ambulance has wide tyres, a removable and adjustable stretcher, a handle for pulling by bicycle or hand, and a sun shade.



A Home Based Care Volunteer in Okathitu cycles through sand with a bicycle ambulance prototype during the development phase early in 2007.

Summary

BEN Namibia is producing bicycle-pulled ambulances for use by HIV/AIDS Home Based Care (HBC) workers, HIV/AIDS self help projects, communities, clinics, and hospitals in rural Namibia.

Accomplishments to date

- Establishment of a manufacturing facility at BEN Namibia's workshop in Windhoek.
- Stakeholder identification and analysis. We are currently working with HBC networks in the North, Northeast, and Northwest of Namibia.
- Prototyping of four different ambulance design iterations, with provision for active feedback and suggestions from stakeholders.
- Manufacture of 45 bicycle ambulances through August 2007, with an ongoing capacity of 9 per month.
- Coordination of the delivery of 33 ambulances to organisations throughout Namibia.
- Delivery of 17 bicycle ambulances to partners in the Caprivi and Kavango regions in July, 2007. Deliveries are made with training in the use, repair, and management of the ambulances.

Background

BEN Namibia's work delivering bicycles to home-based care volunteers in the North has demonstrated that there is an enormous need for emergency transport solutions for care of people living with HIV/AIDS. In other African countries where bicycle ambulances are in use, there have been increases in access to health care and marked declines in infant and maternal mortality rates. Because our ambulances are being used through HIV/AIDS HBC networks, we anticipate a high percentage of transports to be HIV/AIDS related. BEN Namibia is addressing the need for data on transport of HIV/AIDS patients.

Villages in Northern Namibia are often long distances from clinics and hospital. In much of Sub-Saharan Africa, emergency medical transportation is provided by improvised carts, wheelbarrows, and even stretchers. These transport options are slow and require more human resources than may be available.

Existing Work

In 2005 BEN Namibia built a demonstration bicycle ambulance and demonstrated it to home based care specialists, volunteers, and medical professionals who provided feedback about the local needs of the design. To build on that work and incorporate suggestions from the stakeholders, Aaron Wieler, the Ambulance Project Coordinator, began work in October 2006 in the BEN Namibia workshop to establish a facility to prototype and produce bicycle ambulances.



This ambulance(left) was delivered to HBC volunteers at Ombome Oto in Oshandi, Ohangwena. Catholic Aids Action volunteers (right) learn safe ambulance operation skills during a delivery training.

From November, 2006 to April, 2007, BEN Namibia demonstrated four ambulance prototypes around Namibia to HIV/AIDS Home Based Care organizations and other healthcare organisations. The ambulance prototypes were delivered to TKMOAMS Home Based Care Volunteers in the village of Okau, Catholic Aids Action volunteers in villages around Oshikuku, HBC workers through the Anglican Church in Okathitu, and Waapandula Noyaka, an overnight care centre in Oshakati. The volunteers received training in the use of the ambulance, in addition to training in collection of usage and usability data. In several field trials the ambulance prototypes have been used for one health transport per week, and in the first two months of use in Okau, the ambulance was used for 45 trips between the Okaukumasheshe clinic and people's homes, for a wide variety of illnesses.

Since April 2007, BEN Namibia has manufactured and delivered 33 ambulances to CBOs in the Kavango, Caprivi, Ohangwena, Oshana, and Kunene regions. BEN Namibia started this project with the support from the IBIS project, Yelula, and has a partnership with the Canada-based organisation Design for Development.

Project purpose

BEN Namibia works to improve access to healthcare for Namibians living in rural locations where other transport is neither available nor appropriate. This is done primarily through the promotion of bicycles as tools for sustainable, efficient, and cost-effective transportation. BEN Namibia has coordinated the delivery of around 3000 bikes and training to health workers, and is providing ambulances and training through the same networks. By providing ambulances, training, and support to a variety of organisations working on health care, we are hoping to raise interest in the technology on a community scale. This project also provides potential for the creation of jobs through manufacture, distributed assembly, and operation of bicycle trailers and ambulances.

We are now working to facilitate sponsorship of ambulances for Community Based Organizations (CBOs) in Namibia. We will provide the ambulances to communities with a need, along with training, monitoring, and ongoing support. We are working to directly connect communities with sponsors, to facilitate project ownership and community buy-in. We are seeking support to help us deliver ambulances to Healthcare Community Based Organizations in Namibia. With manufacturing, delivery, training, and field support, each ambulance has a cost of N\$3750. We hope you can join us in our work to assist disadvantaged Namibians access health care, with the provision of appropriate and affordable medical transportation.



Bicycle Ambulance Budget	Cost Percentages
Material	35%
Technical Labour and Fabrication	12%
Field support, administration, delivery, and training	41%
Bicycle for ambulance	12%
Totals: N\$3750	100%

Please feel free to contact us with more questions: ambulance@benbikes.org.za and by phone at +264 61 250 200