The Mchinji/Mwami Bicycle Ambulance Project

Project Location:	Mchinji in Malawi and Mwami in Zambia
Project Start Date:	September 2004
Project Duration:	2 years

Introduction:

In September 2004, Transaid, with the assistance of a Malawian Rural Communities expert (Ron Chokani) launched a bicycle ambulance project in Mchinji in Malawi and Mwami in Zambia. The project's goal was to demonstrate the effectiveness and efficiency of low cost bicycle ambulance and trailer as an intermediate transport resource at community level.

The project trained eleven local welders drawn from Mzuzu, Mwami Hospital, Chimwalira and Mchinji in bicycle ambulance production and produced five bicycle ambulances and 8 trailers in November 2004. These were distributed to six sites in rural villages in March 2005.

Methodology:

The project began by forming Project Implementation Teams (PIT). A multidisciplinary team was set on the basis of the following set of criteria:

Mchinji Team-

- Key line ministries were represented
- Non-governmental organisations (NGOs) were represented
- The team was to be gender sensitive

Mwami Team-

- The administration department was to be involved
- HIV/AIDS outreach programme was to participate

Therefore, the implementation teams were composed of-

- Representatives from District Hospitals, Ministry of Gender and Community Services, District Assembly Secretariat and TANARD (Target National Relief and Development) representing NGOs
- Mwami team comprised of 3 people from the 2 departments of Administration and Outreach Programmes Unit

Transaid offered experience and an orientation of the project concept. This was the beginning of the team building process and ensured that all team members had the same basic understanding of the project.
The next stage of the project was the selection of project sites, prioritising specific areas where an intervention of this nature would be most appreciated– specifically rural locations with little or no access to motorised transport.

In Mchinji, the team prepared a sampling chart of all traditional authorities which included the following characteristics; prevailing livelihood system, child malnutrition, and access to health services. In Mwami, the same criteria were used but the activity was conducted by the local neighbourhood committees. Eight project sites were selected; two in Mwami and six in Mchinji.

Local manufacturers were provided with funding and training to build the ambulance trailers, along with small goods-carrying trailers that could be used for local hire, to generate an income and pay for the scheme's running and maintenance costs. It was also established that if trailers were available it would reduce the likelihood of the bicycle ambulances being used for carrying charcoal or farm produce which might damage them. The village health committees and home based care committees were also involved. They were responsible for managing the use of the trailers as a community resource.

During the project, two field visits were made to project sites to monitor and evaluate the project. In the five sites, the consultant conducted focused sessions with committee members as well as interviews with key informants, users of the bicycle ambulance (and trailer) and health surveillance assistants. Additionally, interviews were conducted with project implementation team members, welders and an executive committee of Tidzuke Women's Group.

Outcomes:

The findings of the monitoring and evaluation visits over the 2 year period were as follows;

- Technology- the technology used was acceptable but costly compared to other designs. The problems experienced included; the quality of the bicycle parts used, general road conditions, weather and general management. Where the road is sandy and stony incidences of broken bicycle rims and spokes are high. Users complained that it is not comfortable on the smaller mattress. Other respondents compared the Transaid design with what they have seen in other areas and claimed that the Transaid bicycle ambulance was superior.
- Utilisation- The bicycle ambulance/trailer has been seen to have had a positive impact on the users. The main points that emerged were-
    - All four sites except one used the bicycle ambulance
    - The bicycle trailer has been used in three of the five sites visited
    - The bicycle ambulance is more widely used than the trailer
    - Project sites which have strong committees and supported by Health Surveillance Assistants have used the facility well

- No incidences of misuse of the bicycles/trailers by the leaders were noted

Reasons given by the other communities as to why the ambulance is not widely used include; misconceptions about the bicycle ambulance, disagreements at community level and poor quality tyres and tubes.

Findings show that the bicycle trailer is not as widely used as the bicycle ambulance.

- Management- the overall management of the bicycle ambulances and trailers at community level is the responsibility of the selected village committee. While access to the transport facility at a village level was considered easy, in most sites in was difficult to meet all the demands.
- Rules and procedures- oral communication and the presence of relatives are most preferred when the bicycle ambulance picks up a patient. This allows for greater clarity and detail regarding the nature of the sickness and who will accompany the patient.
- Cash management- a lot of committees do not have proper machinery and business acumen to fully utilise the bicycle trailer to generate income. The social-economic status of the potential users across the five sites does not vary widely but only two sites managed to generate a reasonable income.
- Project implementation- the implementation teams of Mchinji and Mwami were satisfied with the process used and felt they were involved in all critical stages of this project. The committee members observed that the duration for orientation training (one day) was not adequate and suggested that two days is more realistic.
- People's perceptions- the usefulness of the transport system is homogenously positively viewed over all project sites. Respondents perceive the facility positively because; people's lives have been saved, pregnant women have been able to deliver at the right place and time, access to transportation of goods and the sick has improved, the facility is cheap compared to other means of transport. However, there were complaints from some committee members that bikes were not strong, the demand for the bikes was too high, the welders are not committed and their prices are too high.
- User perceptions- all four beneficiaries indicated that the transport service intervention has increased the quality of transport in the rural areas. However, they complained about the lack of comfort on poor roads and suggested a bigger mattress and stronger rims.
- Buyers' perception- one buyer felt the technology is appropriate, unique, stable, efficient and superior to the conventional bicycle ambulance because of its low base and removable stretcher. However, another buyer claimed that the ambulance looks heavier than the traditional one and it is very expensive.
- Sustainability- There is low utilisation of the bicycle trailers and market trading is the main source of income. This could make it difficult for committees to sustain their activities financially. However, some communities have seen the benefits of the ambulance service so are keen to continue it on their own.

Conclusion:

The project interventions are unique and appropriate for rural communities where transport is one of the major developmental constraints. The project interventions have the capacity to bring immediate results in terms of improving the ability of the people and structures involved, as well as contributing to poverty reduction. The primary and secondary beneficiaries see these immediate results and are so appreciative and continue demanding more from the project. The demand for this transport service in Malawi and Zambia is huge and requires a coherent strategy to address these demands.

Tools Utilised: Final evaluation of the project by Ron Chokani, July 2005. Report on the Mchinji/Mwami bicycle ambulance project.

Partners: Ron Chokani, Mchinji District Assembly, Mwami Hospital, Health Village Committees and Home Based Care groups.

About Transaid:

Transaid is an international UK development charity that aims to reduce poverty and improve livelihoods across Africa and the developing world through creating better transport. Transaid was founded by Save the Children and the Chartered Institute of Logistics and Transport. Our Patron is HRH The Princess Royal. Transaid specializes in the following:

- Building the capacity of public health authorities to provide effective, safe and cost efficient transport management systems to promote equitable access to primary health care services.
- Developing and improving logistics and supply chain systems to enhance the delivery of medicines, equipment and relief services to vulnerable communities.
- Promoting effective partnerships to support and enhance community participation in developing sustainable transport solutions in rural areas.
- Developing and delivering transport and logistics training and qualifications for public and private sector operators.

Transaid has the capacity and reach to lead projects throughout the developing world, but is equally capable of providing niche technical assistance to large scale health systems strengthening projects. Transaid maintains strong relationships with a number of leading international organizations including donor agencies such as DfID, DANIDA and USAID, and implementing organizations such as Health Partners International, Options Consulting, John Snow Inc. and Management Sciences for Health.

Contact:

Transaid
137 Euston Road, London NW1 2AA
United Kingdom

t: +44 (0)20 7387 8136
f: +44 (0)20 7387 2669
e: info@transaid.org
www.transaid.org