SUMMARY FOR BUSY MANAGERS AND POLICY MAKERS

Linking communities to maternal health care via an Emergency Transport System

The role of mobility and transport in public health is often neglected. Where policy makers do give the issue priority, the focus is more usually on the provision of public transport or on the strengthening of ambulance services.

> *"Ukwali insoke takwafwile abantu:* where there were warnings people never died.
>
> The work MAMaZ is doing is warning us of the dangers that take our children and loved ones. Finally we have the light and we don't wish to go back to our past, which is full of darkness. We will continue looking after and using our ETS (Emergency Transport System) wisely".
>
> Translated from a Community Leader's Statement, Serenje District

To date, much of the dialogue about strengthening emergency transport systems for health in Zambia has focused on expanding and upgrading formal ambulance services at district level. Yet, even with significant scaling up of these services, there will still be a missing link in the referral chain, that between communities and the first level of care.

The UKaid-funded Mobilising Access to Maternal Health Services in Zambia (MAMaZ) programme tested a community engagement approach which aimed to stimulate demand for maternal and newborn health (MNH) care services among poor communities living in rural areas.

The approach included community discussion groups, which raised awareness of maternal and newborn issues and taught community members the possible danger signs of pregnancy and delivery. It also helped communities establish community systems, which enabled them to take action in response to any maternal emergency.

A central component of the community systems was the Emergency Transport Scheme (ETS). The idea was that once communities recognised maternal and newborn danger signs, the ETS would provide them with the capability to act. The action would then be supported by other systems, such as savings schemes, food banks and childcare.

Once communities recognise maternal and newborn danger signs, the ETS provides them with the capability to act.

HOW ETS WORKED

A total of 123 bicycle ambulances, 28 oxcarts, one boat and one donkey cart were introduced across the six programme districts

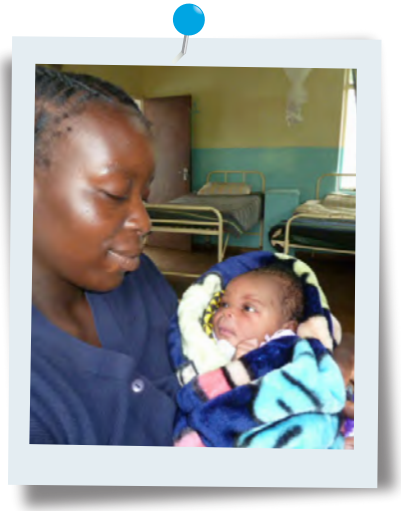
In the MAMaZ programme sites where there was no or limited access to any type of vehicle, the programme filled the gap by introducing locally appropriate transport, mostly bicycle ambulances where the terrain permitted, and oxcarts where bicycle travel was too difficult. A total of 123 bicycle ambulances, 28 oxcarts, one boat and one donkey cart were introduced across the six programme districts.

At community meetings, the ETS was fully explained and riders and custodians of the transport were nominated. All community members were informed about how to access the vehicle; that they were now stewards of the vehicle; and that they were entirely responsible for its maintenance, safe-keeping and responsible usage.

Story Narrated by a Beneficiary, Mkushi District

I was almost nine months pregnant and lived with my husband and mother in-law. I felt abdominal pains at 1am and informed my mother of my condition at 12 noon. My mother immediately phoned an ETS rider who also lives in our settlement; the rider arrived at 2pm with the bicycle ambulance. He asked me to lie down in the ambulance, and he set off for the health facility.

We reached the health facility at 3pm; the nurse welcomed me and led me to a bed. I delivered just one hour later – at 4pm; both my baby and I were fine and we were discharged that same day. The bicycle ambulance rider had waited for us and he took us back to the village.



Baby born one hour after being brought to the facility on a bicycle ambulance, Choma District

Two riders from each community were trained in maintenance and usage of the vehicle; its safe-keeping; what to do in an emergency; how to handle pregnant women; record-keeping, how to relate to facility staff; and how to ensure that the patient received immediate treatment. The riders were encouraged to train other riders in the community and to adopt a schedule which meant that at least one rider was available at all times.

When an emergency arose, riders did not delay but left as quickly as possible for the facility. They were accompanied by at least one additional rider to substitute when the first rider felt tired. The husband and perhaps a female mother's helper, who knew what to do if the woman delivered on the journey, accompanied them. Once the woman was being treated at the facility the rider recorded the transfer in the record books.

Having delivered the woman to the facility, the rider waited to see if the mother needed to return home the same day. If so, he transported her and the baby home. If not, he returned to the community and sometimes returned to the health facility a day or so later to collect the woman. Many communities also used the ETS to transport women to wait at the Mothers' Shelters near to their due date and, once they fully understood the potential dangers in childbirth, many women sought out ETS to transport them to the facility at the onset of labour.

Where appropriate, motorcycle ambulances (MCAs) were also placed at selected health facilities to enable health staff with life-saving skills to respond to emergencies in the communities. The MCAs were also used to transfer women with serious complications to an agreed meeting point with the district ambulance vehicle, which then continued the transfer to the General Hospital.

RESULTS

Community members appreciated the introduction of the ETS vehicles and the extent to which they enabled them to save lives. There is strong evidence that most communities took the stewardship of the ETS transport very seriously and protected it from misuse.

After one or two years of implementation a review team found that most of the vehicles were in good condition. Communities had recruited and trained more riders to improve the availability of the transport. They had also recruited mechanics to perform routine maintenance on the ETS. A significant number of communities used community savings schemes and grants obtained from a Social Fund managed by the DHMT to improve the ETS.

The rider training was widely appreciated, especially the modules that focused on how to lift a pregnant woman and how to maintain the vehicles. Riders spoke with pride about their work, the fact that their status in the community had risen, the improvement in their knowledge and skills, and their confidence in their role.

Across the six districts a total of 1,225 women benefitted from community and facility-based ETS between July 2011 and December 2012 (251 women with complications and 974 women with normal deliveries). This result shows that ETS had begun to serve as an important safety net for pregnant women in the rural communities in which MAMaZ worked.

The 251 emergency ETS transfers can be used as a proxy for 'maternal deaths averted'. Although there is no guarantee that a successful ETS transfer results in a life saved, research and monitoring visits undertaken in the implementation districts showed that communities thought that maternal deaths had all but ceased since the programme began. Data from the health centres appeared to support this perception.

Motorcycle Ambulance

SCALING UP

As of January 2013, all six programme districts were intending to scale up the MAMaZ community engagement approach. However, these plans did not often include the introduction of community transport vehicles because of cost. Yet, when usage over time is taken into account, the cost of installing ETS vehicles, especially bicycle ambulances, in communities is relatively modest.

The unit costs of the various ETS vehicles are as follows:

- Bicycle ambulances: ZMW 3,400 (£470)
- Oxen and carts: ZMW 9,400 (£1,305)
- Motorcycle ambulance ZMW 30,000 (£4,190)

When used over a two-year period, the cost per transfer by bicycle ambulance fell to an average of ZMW 169 (£19). The high level of ownership of the ETS by communities provided a strong indication that the programme was likely to be sustained, with further potential for lowering the unit costs. Increased community capacity in the utilisation and management of ETS will also contribute to sustainability, and the integration of ETS with the other community systems will ensure that the resources are there for its continuation.

Recurrent costs of the community-based ETS vehicles, including maintenance, were the responsibility of the community. After the initial outlay, there are no on-going costs to government until such time as the different methods of transport wear out completely and need to be replaced. In some instances some of these larger investment costs were taken over by communities. For example, as oxen purchased by MAMaZ died, communities replaced them with their own animals.

Women from one community who benefitted from the ETS, Choma District

- A woman had a miscarriage in the 5th month of her pregnancy, she was transported by the ETS and her life was saved
- A woman had a retained placenta. She was transported by the ETS and her life was saved
- A newborn with a distended stomach was transported to the health facility, was treated and survived

While the cost of each transfer made by the bicycle ambulances may appear initially high, providing they continue to be used as planned and are well integrated into other community systems, the cost comes down significantly. Introducing these vehicles in communities in which the terrain is suitable can therefore make sound economic sense and provide a cost-effective way of working towards achieving MDGs 4 and 5. These costs are also low when compared to the purchase and maintenance of ambulances. Hence ETS has a great deal of potential to fill the referral gap between the facility and the community.

Statements about ETS by Community Members, Mkushi District

- The ETS has made it easier for family /community members to rush pregnant women experiencing maternal complications to the health facility
- With the ETS, pregnant women and newly delivered mothers are able to access the health facility without a delay
- The transport challenges are solved; no one has to search for money to hire oxcarts anymore. People now come to ask for the bicycle ambulances direct when they have problems.

> "There were many challenges with transporting pregnant women in emergency; people used to be stranded; we know that the bicycle ambulance has come to help us, this is what these volunteers are teaching us."
>
> Community Member, Mkushi District

POLICY IMPLICATIONS

Mobility is essential for many rural communities' access to maternal and child health services. Maximising the potential for communities to manage their own systems which bridge the gap between the community and the health facility could be the most effective way to ensure poor people's access to both emergency and non-emergency maternal health services. The ETS is an integral but crucial component of those systems and it enables government health services to draw on community resources and increase demand.

A number of policy implications arise from the ETS-related experiences of MAMaZ and its district partners. These include the need to:

- Acknowledge in policy and strategy that it is the responsibility of the government to ensure that the referral gap between communities and the facility is closed and that specific, budgeted activities need to be implemented in order to achieve this.
- Build a secure institutional home within government for community engagement activities in health and emergency transport systems.
- To devise a policy which recognises the potential of communities in contributing to transport solutions at the lowest level of the referral chain.
- When planning referral systems, to involve community representatives in the planning process.

For further information on MAMaZ please contact Health Partners International, info@healthpartners-int.co.uk

MAMaZ
Mobilising Access to Maternal Health Services in Zambia

FUNDED BY: UKaid from the British people

MANAGED BY: Health Partners INTERNATIONAL

IN SUPPORT OF:

The MAMaZ programme is funded and supported by UK aid from the UK Government. The programme is managed by Health Partners International, in association with Oxford Policy Management and Mailman School of Public Health, Columbia University, working with the Ministry of Community Development and Mother and Child Health and District Health Management Teams in Choma, Chama, Mkushi, Mongu, Kaoma and Serenje districts.

FEBRUARY 2013