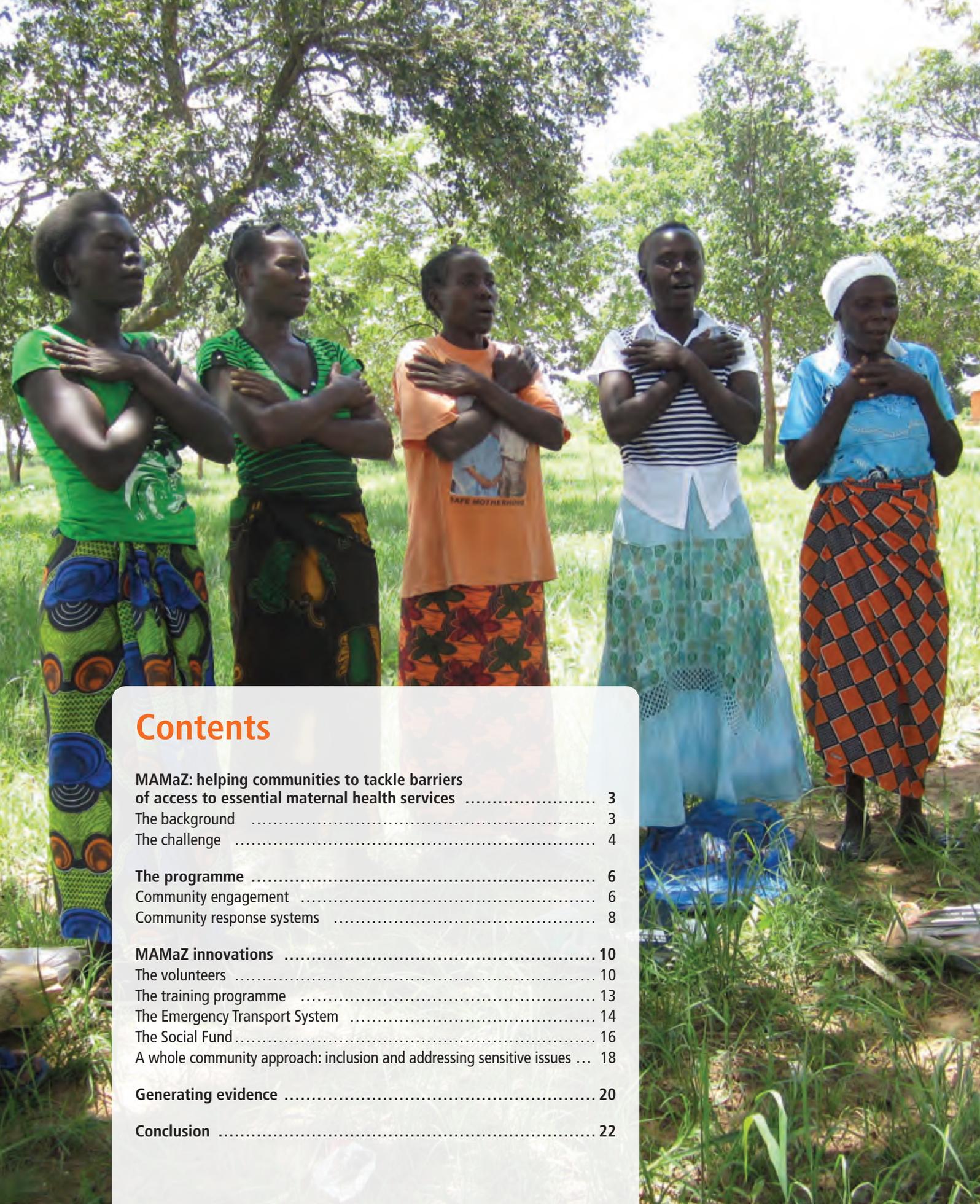




# Mobilising access to maternal health services in Zambia





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# Reducing maternal mortality: helping communities to access maternal health services

The Mobilising Access to Maternal Health Services in Zambia (MAMaZ) programme aimed to identify effective ways to stimulate demand for maternal and newborn health care services among poor rural communities and to capture the impact of these interventions in a research component.

This document provides an overview of the programme. It reflects on the challenges addressed, the design of the programme and its initiatives, the key results and the lessons that have been learned along the way. It is hoped that MAMaZ's experience will help inform the design of other similar initiatives in future.

## The background

The MAMaZ programme was part of a broad package of UKaid-funded support to maternal and child health in Zambia, titled 'International Health Partnership Catalytic Fund in Support of Improving Maternal, Neonatal and Child Health'.

The main objective of MAMaZ was to design and test innovative approaches to address the factors at household and community level that prevent timely access to emergency maternal health care services, utilisation of other essential maternal and newborn health services, and appropriate home-based care of pregnant women and their babies.

While many programmes focus on improving supply-side factors and facility-based interventions, few effectively address the multiple barriers at household and community levels. Hence there is limited evidence on how to intervene effectively on the 'demand-side'.

The programme's design drew on lessons learned from other African countries and international good practice. The original hypothesis was that by working directly with communities to build wide social approval for behaviour change and to assist communities to develop their own, locally appropriate emergency response systems, the programme would have a direct impact on the first two of the 'three maternal delays', in other words the delays in deciding to seek care, and delays in reaching

appropriate care, thus increasing the demand for, and access to, maternal and newborn health services. MAMaZ did not address the third delay directly – the delay in receiving care once at the health facility, although the programme was involved in advocacy initiatives at district and national levels which focused on the need to address specific service delivery or health systems failures.

**“When labour started I told members of my family...but I couldn't walk by then. It was too late to go to the health facility.”**



## 4

The approach was based on four core strategies:

1. A 'whole community' approach which reaches out to men and women and is inclusive of different age groups
2. An emphasis on building wide social approval for behaviour change
3. Working through existing structures, particularly the Government's Safe Motherhood Action Groups, to train community health volunteers
4. Building sustainable community and district capacity to address barriers of access to maternal and newborn health services

Given the importance of identifying successful models for future scale up and replication across Zambia, the whole programme was designed with a strong operations research focus. Baseline and endline surveys in intervention and control areas captured changes in knowledge and behaviour during pregnancy, delivery and the post-natal period by recently delivered women and their partners.

The programme's research component also focused on undertaking further detailed analysis of data from a national health survey<sup>1</sup> and from health facilities in order to find out more about why maternal death rates appeared to be falling in Zambia.



### The challenge

Despite a relatively favourable economic picture for the country, around 10% of Zambia's population of 13 million is so poor that it can be categorised as destitute. Rural areas especially suffer high levels of poverty. Health indicators remain poor, with an estimated 2,600 maternal deaths annually, and a neonatal mortality rate of 30 deaths per 1000 live births. The average rate of delivery by skilled birth attendants has remained stagnant at around 47% for over 20 years. In both relative and absolute terms, progress in reducing maternal mortality is currently insufficient to achieve national and international health targets.

**“We have been advised that anyone who delivers at home is making a mistake. But some women deliver on the way to the health facility because of the long distance.”**

**“The problem that we have is that the health facility is very far from here. If we start at 6am we may reach the facility by 12pm. If labour is near or starts in the village we would rather have our baby in the village.”**

While service delivery is constrained by shortages of trained personnel, essential equipment and drugs and poorly maintained health facilities, there are also significant physical, financial and social barriers which prevent women from accessing essential care. This is particularly true of rural areas, where delivery rates by a skilled birth attendant and uptake of antenatal and postnatal care are significantly lower than in urban areas. Indeed it is estimated that 70% of deaths during childbirth in Zambia occur in rural areas where women have to travel long distances, often by foot, before they can reach a health facility.

Poor road infrastructure, challenging terrain and limited transport options are major constraints to service utilisation, and commonly result in delayed transfer of maternal and newborn emergencies to higher level health facilities. Limited knowledge of maternal and newborn danger signs and concerns about the high cost of transport and other out-of-pocket expenditure on health compound the delays.

### Constraints to institutional delivery

“We are told at antenatal care (ANC) to go and deliver at the health facility. But it is not possible for some. Some women cannot afford to buy clothes for themselves and their babies... It is very difficult to find money... They therefore don't want to go.”

“I planned to go to the health facility with all my pregnancies, but there was no transport.”

“We are told to bring clothes for delivery. If we don't have these things, we are shouted at.”



<sup>1</sup> The 2007 Zambia Demographic and Health Survey.

# The programme

Operating from 2010 to 2013, MAMaZ was implemented in six districts in Central, Western, Southern and Muchinga provinces in rural Zambia and reached a population of over 250,000.

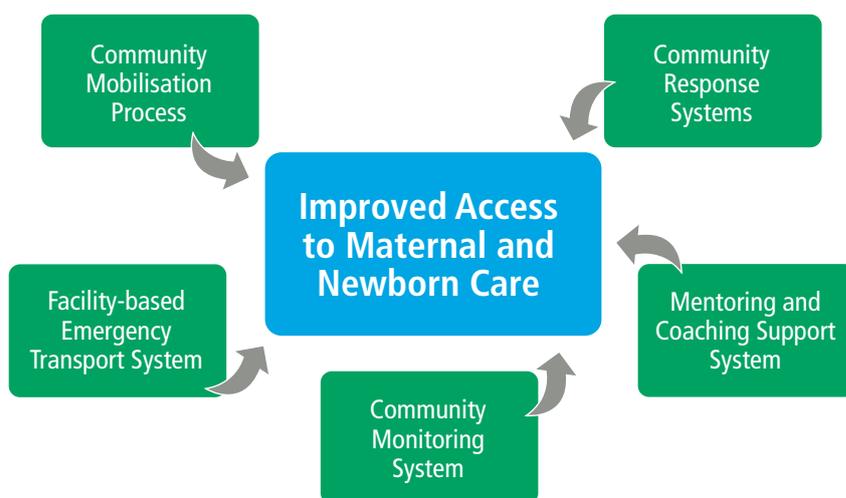
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## Community engagement

The MAMaZ community engagement model was tailored to address the factors at household and community levels that were preventing timely access to maternal and newborn care in the implementation communities. MAMaZ also focused on generating evidence that would inform the process of scaling up the approach in selected districts and eventually across the country.

By mobilising communities, creating widespread social approval for behaviour change and helping to establish sustainable community response systems, MAMaZ helped to break down long-standing barriers to use of health services.

The community engagement design was based on the findings of a series of rapid social assessments. These examined the multiple barriers that were preventing appropriate home-based care of pregnant women and newborns and timely utilisation of essential maternal health services and gathered community views on how to tackle these problems. The approach had five core components. These were:



*Figure 1: Five components of the MAMaZ community engagement approach*

- A community mobilisation process to generate community-wide social approval for routine and emergency maternal and newborn health services and to promote effective home-based care;
  - Establishment of community systems to address identified barriers of access and affordability and lack of social support;
  - A community monitoring system that generated data on the maternal and newborn health activities and changes in the community; and
  - A system of mentoring and coaching support provided by MAMaZ and its district partners to help communities make the transition from increased awareness to sustained change.
- Five of the districts had a fifth component:
- A facility-based emergency transport scheme to help reduce the transfer times between the identification of a complication and the patient reaching appropriate care.



The community engagement approach was implemented in 289 intervention sites in six rural districts. The total population coverage was 250,000, which equates to between 18 and 31% of the district populations. In view of the wide area to be covered, implementation was phased in gradually. While some sites were involved in programme activities for 22 months, others had been implementing for only five months when the programme ended.

Key aspects of the design that were core to the success of MAMaZ were as follows:

- It was based on needs identified by the rural communities in the programme's intervention areas.
- It began with and built on the Government's Safe Motherhood Action Group Strategy, showing how the strategy could be operationalised and quickly scaled up.
- The process of change was community-led and managed by community health volunteers.

**“Up to 30 volunteers were trained in each community. This resulted in the rapid saturation of the community with new ideas.”**

- Community discussion groups involving the entire adult population of intervention communities proved to be an effective way to mobilise communities around a maternal and newborn health agenda. These sessions were backed up by door-to-door visits to the homes of pregnant women and their families.
- A large number of volunteers (up to 30) were trained in each location using innovative participatory communication methods. This resulted in rapid saturation of the community with new ideas and a quick acceptance of the importance of behaviour change.

- Community volunteers promoted male involvement, encouraged young and older women to participate alongside women of reproductive age, and promoted the inclusion of vulnerable and excluded individuals in group activities.
- Support was provided to communities to establish and manage their own community response systems, including an emergency transport scheme, savings schemes, communal food banks, establishment of a core group of mother's helpers and informal childcare schemes.

**“Communities established their own systems for responding to the key barriers that were preventing timely use of maternal and newborn health services.”**

### Community response systems

A set of interdependent community response systems was established by each community in response to the maternal and newborn health barriers that they faced. The systems, which varied slightly from community to community, depending on the local context, included:

1. Safe pregnancy and delivery plans: families were supported to devise a plan so that they were well prepared for a birth and knew what to do in the event of an emergency
2. Community emergency transport schemes (bicycle ambulances, oxcarts, donkey carts or boats) were introduced in communities that faced the most challenging physical access barriers
3. Savings schemes were established and these allowed women and their families to access cash quickly in the event of an emergency, or if they needed support for normal delivery
4. Food banks, which women and their carers drew on if they faced financial hardship, were established. These provided basic food supplies for women using health facilities or mother’s shelters (maternity waiting homes) in readiness for delivery
5. Mother’s helpers, who were provided with extra training support so that they knew what to do in the event of a maternal emergency were introduced
6. Child care schemes, which were formal and informal schemes established by communities to assist women with childcare when they needed to travel for health care were set up



Figure 2: Community response systems



# MAMaZ innovations

## The volunteers



At a time when many community health worker initiatives in Zambia were offering their workers some sort of financial incentive, MAMaZ, with evidence of effective volunteer programmes in other parts of Africa, decided to experiment with a volunteer model. It was felt that a well-designed volunteer model could be effective, sustainable and affordable for government replication.

The programme was closely monitored to assess volunteer motivation; the amount of time the volunteers spent on their activities; volunteer drop-out rates; and the prospects for sustaining the volunteer effort. The findings of a special study into the volunteer model found that:

- 69% of volunteers in the MAMaZ programme districts worked for three hours or less per week;
- Most of the volunteers felt that their contributions were manageable and could be fitted in easily with their other responsibilities;

- Altruism, and specifically a concern to save lives, was the main driver behind the commitment of 71% of the volunteers. Only 2% of volunteer respondents mentioned 'incentives' as a reason for their participation in the programme;
- The volunteer drop-out rate was 5.4% across the six programme districts, which was extremely low compared to other community volunteer programmes;
- All except one volunteer indicated that they planned to continue their volunteering activities in future. This included volunteers who had been working for up to 20 months;
- There was a high level of confidence among volunteers that it was within their power to bring about change, plus an enormous amount of enthusiasm for the methods that they had been trained to use in order to mobilise the community.

**"I intend to continue with my works. This work is now like part of my blood. I can't stop doing it"**

Male volunteer

The study found that the volunteers were largely self-motivated. This meant that their activities were more likely to be sustained over time. Many volunteers mentioned that they were motivated by the quality and relevance of the training they had received. In their opinion, the training addressed the key challenges that they faced at community level, increased their knowledge, and developed their capacity to support a change process. They felt that the participatory methods that they had been taught to use ('body tools', song and mime) were easy to remember and enjoyable to use. They also found the emphasis on facilitating group discussions, rather than giving long presentations, very effective. The fact that the volunteers could see the results of their work almost immediately was an additional inspiration.



## Altruism – a primary motivator for MAMaZ volunteers

“I volunteered just to save lives. I am sacrificing my time because I want to save lives.”  
Female volunteer

“What motivates me to volunteer? The desire I have to help people, especially women. The desire in myself is what makes me work.”  
Female volunteer

“I am motivated to work because of the love I have for the community. I want to work together and fight these issues in the way the [Ministry of Health] wants to do it.”  
Male emergency transport volunteer rider

“I want people to have a healthy life. I think people should die of other things, not maternal problems.” Female volunteer

## Lessons learned

The experience of MAMaZ and its district partners suggests the following:

- Volunteer approaches can be a highly effective way to stimulate maternal and neonatal health-related behaviour change at community level.
- Community members are often motivated to work for the good of their community for reasons other than economic gain. MAMaZ’s experience was that a great deal of altruism exists in rural communities in Zambia, despite the many hardships that local people face. If harnessed effectively, this can be put to good use, not only in order to save lives, but also to build stronger communities.
- A carefully designed community engagement process which addresses the concerns of local communities, plus a training approach and methods which are effective and enjoyable to use, provide the bedrock for a successful volunteer programme.
- Volunteer expectations need to be carefully managed from the outset by emphasising the self-help nature of their work.
- Although volunteers may not be paid on an individual basis, there are other ways to recognise their efforts. MAMaZ and its district partners introduced a Social Fund, to which communities could apply for grants which could be used to strengthen the community systems they had established. These community grants acted as an incentive for the volunteers to continue their work.
- It is important not to confuse financial and other in-kind incentives with essential ‘tools for the job’ such as wet weather clothing and gum boots for emergency transport scheme drivers, torches for volunteers who need to travel at night, and stationery and pens for record keeping. Any volunteer programme needs to provide these ‘basics’.
- The MAMaZ-supported volunteer initiative worked because a large number of volunteers in each community area were trained together and formed a support network, providing encouragement and advice to each other. Being able to access this support helped to transform the change process into one that was fully under local ownership. This bodes well for the future sustainability of the initiative.





# MAMaZ innovations

## The training approach

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Core to the success of the MAMaZ-supported community engagement efforts was a training approach which built the capacity of community health volunteers to facilitate the process of change at community level. The training approach proved to be effective not only in bringing about the desired changes at community level, but also in building sustainable capacity among the volunteers and among the district and national level government personnel who trained, coached and mentored the volunteers.

The training approach used by MAMaZ was distinctive for several reasons. First, the material was learner-centred and the teaching methodologies were problem-based and participatory. Second, the approach utilised a number of training methodologies conducive to adult learning, enabling quick assimilation and strong capacity to train others. Third, training methods which helped participants remember information were given priority, reducing the need to refer to training manuals or notes in order to remember key content. The training approach also did away

with the need for multiple training aids, which lowered replication costs. The use of communication body tools enabled community members to remember the maternal and newborn danger signs, and to memorise the five actions in a safe

pregnancy and delivery plan, and were perhaps the most striking and memorable aspects of the MAMaZ training approach.



### Lessons learned

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- The content of the training was crucial to the effectiveness of the community engagement approach. The training materials reflected the issues and concerns highlighted by communities during the baseline assessment process, with examples of problems and solutions framed using language, proverbs and expressions that were familiar to the community.
- Beginning the training with a focus on safe motherhood worked well since this is an emotive issue around which communities were readily mobilised.
- Considering the large number of communities supported by MAMaZ (289 across six districts) and the large number of community health volunteers to be trained (just under 3,000) a cascade training approach was used. This allowed the programme to train a pool of 41 core trainers across six districts. These trainers were able to provide ongoing support to communities.
- The pool of trainers is a valuable resource for future scaling up of community engagement activities within and outside the MAMaZ-supported districts. The cascade training process also allowed MAMaZ and its partners to reach a large number of volunteers and community members within a relatively short timeframe.
- As with all cascade training approaches, it is probably true to say that there was a degree of dilution of training quality. However, evidence gathered by the programme suggested that the training was good enough to achieve desired outcomes.

# MAMaZ innovations

## The Emergency Transport Scheme



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Prior to MAMaZ, much of the dialogue about strengthening emergency transport systems for health in Zambia had focused on expanding and upgrading formal ambulance services. Yet, even if these services were to be scaled up significantly, the transfer of patients from communities to the first level of health care would still be problematic.

The MAMaZ approach involved helping communities to establish Emergency Transport Schemes. The idea was that once communities recognised maternal and newborn danger signs, these schemes would provide them with the capability to act. Other community systems such as savings schemes, food banks and childcare would be activated at the same time.

Based on discussions with communities, MAMaZ introduced locally appropriate transport, mostly bicycle ambulances where the terrain permitted, and oxcarts or donkey carts 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. Communities took ownership of the vehicles and riders were trained in how to manage emergencies.

In addition to being used for emergencies, many communities used the emergency vehicles 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 the emergency vehicles to transport them to the facility at the onset of labour.

Where appropriate, motorcycle ambulances were also placed at selected health facilities to enable health staff with life-saving skills to respond to emergencies in the communities. They travelled to meet the community-based emergency transport and were used to transfer women with serious complications to an agreed meeting point with the district ambulance, which then continued the transfer to the General Hospital.

### Beneficiaries of Emergency Transport Scheme (ETS) in one community in 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 she survived.
- A newborn had a distended stomach, and was also transported to the health facility. The baby was treated and survived.

Across the six programme districts a total of 1,225 women benefitted from community and facility-based emergency transport between July 2011 and December 2012 (251 women with complications and 974 women with normal deliveries). This result shows that the two types of Emergency Transport Scheme had begun to serve as an important safety net for pregnant women living in rural communities.



The 251 emergency transfers can be used as a proxy for 'maternal deaths averted'. Although there is no guarantee that a successful emergency 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 supported this perception.

## Lessons learned

- Transport solutions need to be locally appropriate, which means being suitable to the terrain, and easy to maintain and sustain. However, in the case of ox carts, which are one of very few transport options in areas of deep sand, this mode of transport is slow and considered uncomfortable by women in labour. In areas of challenging terrain new and innovative transport solutions urgently need to be developed.
- Emergency transport schemes are about much more than 'hardware'. The MAMaZ transport schemes worked because they were embedded within a broad community engagement approach and were supported by a range of other systems. Building community capacity to manage and act as stewards of these schemes was also essential to their effectiveness.
- Facility-based emergency transport solutions may not work effectively if there are other supply-side challenges facing the health facilities. MAMaZ's experience was that persistent shortages of health staff, and the fact that the staff who were in post were over-worked meant that these emergency vehicles were not used as much as they should have been.
- There is a need to acknowledge in health policy, strategy and budgets that it is the responsibility of the government to ensure that referrals between communities and health facilities can happen unhindered.
- Governments need to recognise the potential of communities in contributing to transport solutions at the lowest level of the referral chain and when planning referral systems, to involve community representatives in planning processes.

## Story narrated by an Emergency Transport Scheme 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."

# MAMaZ innovations

## The Social Fund

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**“We divided the money up among our seven villages. Each was given ZMK 150 to buy maize, so each village has its own food bank now.”**

Male community volunteer



To complement the community engagement approach, MAMaZ introduced a Social Fund to assist communities to strengthen and extend their initiatives to improve access to maternal and newborn health services. The Fund provided both top-up amounts for the community savings schemes and small grants for community-led projects.

At district level, the Social Fund was administered by a committee, comprising key staff from the District Health Management Team (DHMT). Access to the Fund was open to all communities in the MAMaZ intervention areas and special attention was paid to supporting the most disadvantaged communities to apply for a grant.

By the end of the programme, all but one or two communities had received a grant. A total of ZMK 522,581 (approximately GBP £70,000) had been disbursed; 20 percent to top up savings schemes and 80 percent as grants.

Examples of the kind of initiatives for which funds were awarded included:

- Purchase of bicycles for additional riders to accompany the bicycle ambulances.
- Spare parts for the emergency transport vehicles.
- Income generating activities, such as goat, chicken or pig-rearing; cultivation of high value crops, such as ground nuts; the establishment of shops and kiosks and other small businesses to contribute to food banks and the savings schemes, which in turn provided grants and food to women delivering at the facility.
- Upgrading facilities, such as a mother's shelter or the purchasing of solar panels for a maternity ward.



### How Social Fund grants were used

“We bought an extra bicycle to accompany the bicycle ambulance and some spare parts.” Treasurer of a savings scheme

“We opened a small shop. We’ve made ZMK 700 profit so far. The money is being used to assist women and we’re buying more goods for the shop.” Female volunteer

“What made the men begin participating was the Social Fund. I won’t hide that we informed everyone and I think many wanted to be beneficiaries of the goat project, so they started attending discussions.” Male volunteer

“With the Social Fund grant we bought four pigs. Pigs here are good business. They cost ZMK 150 and we can sell them for ZMK 250-300. The profit will go back into the savings scheme and food bank.” Male volunteer

### Lessons learned

- The Social Fund was a significant and integral part of the MAMaZ community engagement approach in the majority of sites in which the programme worked. Despite the small size of the grants disbursed, the funds made a difference in that they enabled communities to tackle very specific barriers of access to services. This, plus the low level of management and modest costs associated with administering the Fund, means that it was a cost-effective element of the MAMaZ programme.
- A highly equitable approach was taken to Social Fund distribution. This ensured that the vast majority of communities were able to benefit. However, there were also concerns that in some cases funds were provided before communities had been effectively mobilised. This was primarily due to the programme’s short implementation timeframe. Any future schemes should ensure that the community structures needed to effectively manage the funds are in place before the money is disbursed.
- Women contributed significantly to discussions regarding what to apply for. There were also numerous examples of the vulnerable and socially excluded benefitting directly (for example young mothers, single mothers, those particularly in need of resources).
- The Social Fund provided a community incentive rather than individual incentives. The funds enabled and helped to sustain the work of the community volunteers without compromising the emphasis on volunteerism and self-sufficiency or undermining the efforts to build social capital at community level.
- Record keeping on the funds held by communities was weak in many intervention communities. Although communities were quite effective at keeping simple records of emergency transport scheme or food bank beneficiaries, or facility deliveries, the book-keeping skills required to maintain accurate records of Social Fund grants and investments required a higher level of skill. Due to its short timeframe, the programme did not have time to build capacity in this area.
- The establishment of the Social Fund management and administration within the District Health Management Teams worked well. The DHMTs demonstrated excellent capacity to review applications, and disburse and retire funds. The process of managing applications contributed to deepening the engagement of the DHMT in the community engagement work as a whole.

# MAMaZ innovations

## A whole community approach: inclusion and addressing sensitive issues

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Volunteers in the community engagement sites achieved excellent coverage using the community discussion group methodology and by undertaking door-to-door visits to the homes of pregnant women and their families. Although initially challenging in some communities, the emphasis on promoting male involvement paid off. By the end of the programme many men were knowledgeable about and supportive of the work of the community volunteers.

Early work to inform and involve community leaders was strategically important to the success of the community engagement process, resulting in the introduction of 'laws' promoting facility delivery. Also, the involvement of local Chiefs was instrumental in creating a supportive backdrop for implementation, and resulted in numerous examples of practical support, such as communities being instructed to clear footpaths so that bicycle ambulances could pass through unhindered.



Community volunteers in many of the intervention sites gave high priority to ensuring full inclusion of community members in the change process. Evidence from all six implementation districts highlights how volunteers had:

- Organised 'mopping up' efforts to reach groups that had been missed in earlier rounds of discussion groups (e.g. unmarried adolescents), or individuals who had recently relocated to the community
- Organised their work schedules in such a way that households located at considerable distances from the centre of the community were included in door-to-door visits
- Persisted in returning to households where they had initially met resistance from the residents.

These efforts indicated that community volunteers had successfully translated the emphasis on a 'whole community approach' into something that made sense in their local context.

During the programme's design phase, qualitative social assessments revealed that social problems such as alcohol and drug abuse and gender violence were widespread, and that community members tended to link these problems together.

When the programme started, the issue of gender-based violence, said to affect many women in the community, was seldom discussed openly. However, through the discussion groups, communities started to consider how violence affected pregnant women in particular. An issue that had previously been rarely discussed became a 'campaign issue', with an emphasis on 'zero tolerance for wife battering.' The use of song to address the issue proved to be highly appropriate: volunteers wrote their own songs and lyrics, and these were easy to learn and spread quickly throughout the community.



Although the programme was not able to intervene directly to address problems of substance abuse, it did so indirectly in that communities began to explore and discuss the link between alcohol and drugs and wife battering. The introduction of the community Emergency Transport Scheme provided a further means to address substance abuse in that riders were encouraged to make a public commitment to be available '24/7' in case their services were needed, and to be fit for purpose. This excluded drinking or drug taking. Hence the strategies used to address several sensitive issues that had an indirect effect on maternal and newborn health indicators resulted in changes at community level that extended beyond those reflected in the programme indicators.

### Lessons learned

- It is all too easy to side-step social problems such as gender violence as 'too sensitive to address'. MAMaZ did not do this. Rather, the programme worked with communities to identify some highly effective and non-threatening ways to address these problems, including through song. The programme's experience in this area is very relevant to other health-related community mobilisation efforts – many of which are being implemented in contexts where similar problems exist.
- Since the least-supported tend to carry the greatest health burden,<sup>2</sup> identifying and supporting these individuals and groups is essential if improvements in maternal and newborn health indicators are to be seen across entire populations.
- For future programmes that are concerned with strengthening the community-based response to poor maternal and newborn health indicators, it will be important to subdivide the population based on social factors (such as differences in levels of support, social inclusion, and the extent of respect received from others) in any surveys. MAMaZ did not do this in its baseline survey and hence the programme missed an opportunity to specify in more detail the nature of the relationship between health access and utilisation and social factors.

**“Although initially challenging in some communities, the emphasis on promoting male involvement paid off.”**

<sup>2</sup> CSDH, 2008, Final Report of the Commission on Social Determinants of Health. Geneva: WHO.

# Generating evidence

Baseline and endline surveys and qualitative research studies captured significant changes in a range of key health indicators related to knowledge and behaviour, whereas community monitoring systems managed by local communities tracked the utilisation of community systems.

The programme's endline survey demonstrated important improvements in key health practices and highlighted statistically significant differences between the intervention communities and control sites.

Over the course of the programme, the number of babies delivered by a skilled birth attendant (SBA) rose from 43% (baseline) to 70% (endline) across the implementation districts. In sharp contrast, there was a rise of only 6% in the control areas.

This indicates that if the MAMaZ community engagement approach was rolled out across the country there could be a dramatic decline in maternal mortality in rural Zambia.

Community members reported behaviour change and improved knowledge of maternal and newborn danger signs and many of the myths about maternal issues were dispelled. The endline survey also showed a statistically significant improvement in knowledge of danger signs during pregnancy.

When the programme first started, about 67% of women in both intervention and control districts were at a health facility when their complication arose. This had increased to 83% in the endline survey and was 10% higher than in the control group. The community monitoring system showed extensive improvements in, and use of, community systems established by the programme as well as evidence of increased social capital and cohesion within participating communities.

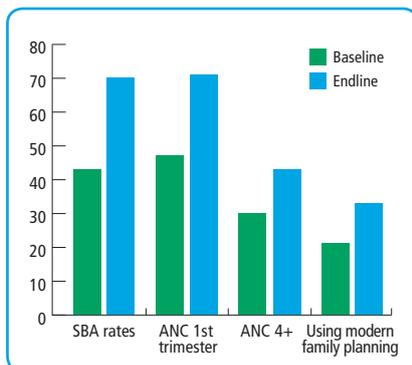


Figure 3: Key results from MAMaZ

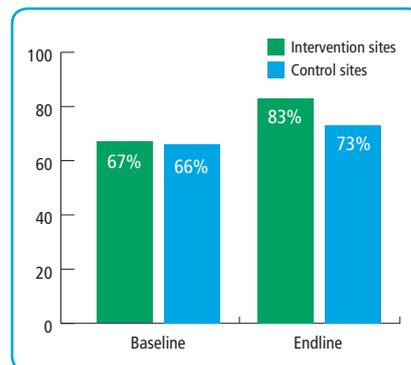


Figure 4: Proportion of women at facility when complication arose

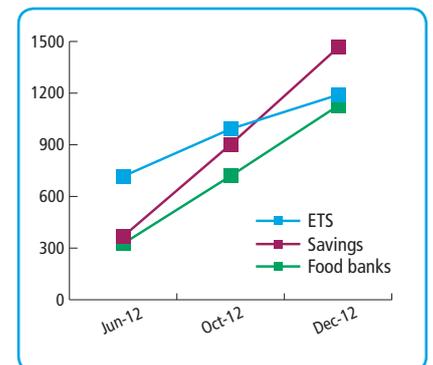


Figure 5: Number of beneficiaries of community systems

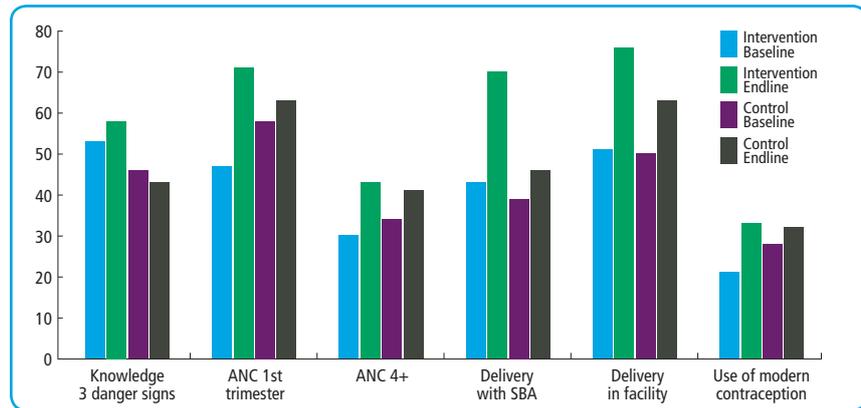


Figure 6: Comparison of control and intervention results

Qualitative research undertaken by the programme confirmed that the integrated and comprehensive approach used by MAMaZ, which addressed all the barriers faced by rural families, was an effective and sustainable way to increase access to maternal and newborn health services. Evidence to support this assertion includes:

- The success of the approach to training volunteers, with a 95% retention rate
- The demonstrated motivation and commitment of volunteers and emergency transport riders
- The existence of strong community response systems, and the fact that use of these systems increased quite dramatically over time showing a growing appreciation of their value
- The commitment of the District Health Management Teams to continuing and expanding the MAMaZ activities



### Overall lessons learned and policy implications

1. The encouraging results, even in areas that were included at a late stage of the programme, indicate that once the initial investment to build local capacity to roll out the community engagement approach has been made, it is relatively easy to scale up coverage within districts and achieve rapid success.
2. The effectiveness of the MAMaZ approach was contingent to a large extent on the combination of high quality training, which addressed all the barriers that had been identified by communities and the provision of immediate coaching and mentoring support. Local health facilities played an important role in ensuring that such support was systematically provided.
3. The necessary phasing in of implementation over a short timeframe meant that many communities had been operating for only a short period when the programme ended. A key lesson therefore is that a longer implementation timeframe is warranted to achieve the type of change and extent of scale-up envisaged in a programme of this nature.
4. The MAMaZ programme proved that, not only is it possible to stimulate demand for maternal and newborn health services in rural Zambia using a volunteer model, but that such an approach, when implemented in well-supported sites, is efficient, affordable and sustainable.
5. Much attention was paid to the development of an effective partnership with the District Health Management Teams and encouraging and facilitating the teams to take ownership of the interventions. This was critical to the successes seen in MAMaZ and to the future adoption of innovation.

## Conclusion

MAMaZ was an ambitious programme which aimed to increase rural communities' access to maternal health services using a community-based approach. The programme generated sufficient evidence of its effectiveness, which informed scaling up plans at district level. Skilled birth attendance rates increased by 27 percent over a period of less than two years. Scaling up the approach to cover the entire country would likely result in a dramatic fall in maternal and neonatal death rates.

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Over just two and half years of implementation, the endline survey results demonstrated that MAMaZ had accomplished a great deal, despite the ambitious agenda, which was a credit to the small management team in Lusaka, the MAMaZ district teams, the volunteers, the health facility staff and the District Health Management Teams. The fact that the District Health Management Teams in all six implementation districts had already started to roll out the community engagement activities to new parts of the district by the time the programme ended provides an indication that the approach was perceived to be relevant, needs-based and effective.

Key results of the programme focused on increased use of maternal and newborn health and emergency obstetric care services, as demonstrated by: an increase in skilled birth attendance rates; increase in post-natal care within six days; and increased use of modern family planning methods. Over the programme timeframe, skilled birth attendance rates increased to 70 percent, exceeding the agreed target; uptake of postnatal care within six days increased to 48 percent, almost reaching the agreed target; and use of modern family planning methods increased to 32 percent, again exceeding the programme target. As this document has shown, many other positive benefits were evident at community level when the programme ended including a willingness to address wife battering and other social problems, evidence of increased co-operation and support among community members, and greater capacity to reach out to the least-supported.

**“Over the programme timeframe, skilled birth attendance rates increased to 70 percent, exceeding the agreed target...”**

At the institutional level, the Ministry of Health and district health offices do not necessarily have the appropriate systems and structure to provide a secure institutional home for community engagement activities. The Zambian government has taken steps in this direction by moving the Maternal and Child Health Department from the Ministry of Health to the Ministry of Community Development – now the Ministry of Community Development and Mother and Child Health. This arrangement will provide a stronger platform to better support community-focused initiatives.



For further information on MAMaZ please contact Health Partners International, [info@healthpartners-int.co.uk](mailto:info@healthpartners-int.co.uk)



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