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**Emergency Transport Scheme (ETS) Training Guide for Trainers of Bicycle Ambulance**

**April 2019**

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# ****1. Acknowledgements****

The authors of this manual would like to start by thanking all the Emergency Transport Scheme riders who, despite carrying out their role on a voluntary basis, have dedicated their precious time to ensure pregnant women and children suffering with severe malaria arrive at the health facilities on time without any unnecessary delays during that critical time. For the riders deep in Mapamba catchment in Chama district, in Nasenge catchment in Mongu district, Misofu catchment in Mkushi district and Chisomo in Serenje just to mention a few, your true and generous dedication is hugely appreciated and has contributed to an enormous transformation in your respective communities. Your time and energy has changed many lives in Zambia.

# 2. List of Abbreviations

BA Bicycle Ambulance

CF Community Facilitator

CHV Community Health Volunteer

DHMT District Health Management Team

DPO District Programs Officer

EDD Expected Day of Delivery

EOC Emergency Obstetric Care

ETS Emergency Transport Scheme

HPI Health Partners International

MCDMCH Ministry of Community Development and Mother and Child Health

MDG Millennium Development Goal

MMR Maternal Mortality Rate

MAMaZ Mobilising Access to Maternal Health Services in Zambia

MNH Maternal and Neonatal Health

MNCH Maternal Neonatal and Child Health

NHC Neighbourhood Health Committee

ODI Overseas Development Institute

PHC Primary Health Care

PPM Planned Preventative Maintenance

RAS Rectal Artensunate Suppository

SMAG Safe Motherhood Action Group

# 3. Introduction

## 3.1 Implementating Partner Organisations

Since 1998, Transaid has been working to address barriers to accessing health services, specifically the barriers experienced by isolated communities where the lack of formal transport services often means available transport is unaffordable to the majority. This has a direct impact on whether or not community members can access local health services. The majority of Transaid’s work in this area has focused on addressing high maternal mortality ratios in sub-Saharan Africa by ensuring women have the means to travel to and from maternal health care services when required.

Health Partners International (HPI), now DAI Global Health, has worked on broader health systems and public health issues (including Maternal Neonatal and Child Health- MNCH, community health systems strengthening, nutrition, and medicines transparency) in Zambia for a range of development partners for more than a decade. HPI designed and led implementation of the Zambia MAMaZ programme, and was a key implementation partner in MORE MAMaZ, responsible for the community health systems strengthening, district capacity building and national scale-up components.

Development Data is a Zambian organisation that is working on maternal health and other issues. Development Data signed a memorandum of understanding (MoU) with the Government of the Republic of Zambia in 2014 and is fully registered in Zambia as a private voluntary organisation. The organisation provides technical support in data and information management for development practitioners, including Government departments. Development data is driven by a mission to provide technical expertise in data and information management for development processes in the Southern African region. Development Data has successfully conducted evaluation studies, feasibility studies, KABP surveys, impact and vulnerability assessments and baseline surveys for various organisations.

Disacare Wheelchair Centre Trust is a registered trust that is involved in manufacturing mobility aid devices. The centre has been in existence since 1991 and has worked with a number of international organisations involved in wheelchair and mobility aid technology. As a result of this work Disacare is now producing mobility aids which are designed to specifically cope with the often challenging Zambian terrain. Disacare has achieved a number of accomplishments over the years including having supplied the Ministry of Health with wheelchairs, bicycles ambulances and tricycle crutches. Disacare also built bicycle ambulances for the World Health Organisation and in 2009 worked with the WHO to develop guidelines on distributions of wheelchairs in low income countries and to distribute bicycle ambulances to a number of districts in the country. Disacare was also one of the consortium members who facilitated the technical support and monitoring on the emergency transport system in conjunction with Transaid.

## 3.2 Mobilising Access to Maternal Health Services in Zambia (MAMaZ)

In 2010 the UK Department for International Development (DFID) funded a three-year maternal and new-born health programme in Zambia called Mobilising Access to Maternal Health Services in Zambia (MAMaZ), a key element of which was the introduction of emergency transport schemes (ETS) which offered women and children under 5 a means to travel to local health facilities. The programme was implemented to support the Government of Zambia’s efforts to achieve Millennium Development Goal (MDG) 5, which called for a 75% reduction in maternal mortality by 2015. At the of MAMaZ the project recorded 27% increase in skilled birth rate and one the key contributing factor was the availability of ETS at community level

## 3.3 MORE MAMaZ

To continue the strong work achieved as part of the MAMaZ programme, in 2014 Comic Relief funded the MORE MAMaZ programme and this enabled the transitioning of the MAMaZ demand-side approach from 'proof of concept' stage to implementation on a larger scale. Each MORE MAMaZ intervention district was supported to achieve as close as possible to 100% coverage. New learning and evidence from the five intervention districts[[1]](#footnote-1) was shared with national government to increase knowledge and understanding of effective ways to intervene at community level in support of improved maternal and neonatal health (MNH). The Ministry of Community Development and Mother and Child Health (MCDMCH), was supported to scale up beyond the five intervention districts. The vast majority of maternal deaths are preventable. With haemorrhage and hypertension being the primary cause in the majority of maternal deaths, access to skilled care during pregnancy and at birth is critical. The delay in achieving this access to the appropriate care is a key determinant in maternal mortality. The lack of available and/or affordable transport is a key constraint to accessing healthcare. Between September 2014 and July 2016, 4,105 pregnant women benefitted from the ETS. The percentage of women delivering at a health facility increased from 64% at baseline to 89% at endline. At the same time Women were able to rely on ETS ‘24/7’and 43% of

the recorded transfers happened at night[[2]](#footnote-2)

**3.4 MAMaZ Against Malaria**

In July 2017, the National Malaria Elimination Centre (NMEC) and MAMaZ Against Malaria (MAM) conducted a 12-month pilot project on ‘Developing innovative approaches to increase rural access to commodities for the case management of severe malaria in Zambia’[[3]](#footnote-3). The project was implemented in close partnership with the Ministry of Health (MOH) and Serenje District Health Management Team (DHMT). The project was funded by Medicines for Malaria Venture (MMV), who also provided ongoing technical support. The pilot project was implemented in 45 communities in the catchment area of eight health facilities and reached 54,000 people (40% of the district population). The project aimed to introduce and increase access to community-based pre-referral management for severe malaria using pre-referral rectal artesunate (RAS) for children aged six months to six years old; and to reduce referral delays from the community to health facilities equipped to treat severe malaria, ideally with injectable artesunate (Inj. AS).

The results from MAM show the main impact from implementing the pilot: the reported case fatality rate from severe malaria reduced from 8% at baseline, down to <0.5% at the end of May 2018. At the same time, severe malaria danger signs were identified in 1,215 children - up from 224 at baseline. This indicates a significant increase in ability to identify severe malaria danger signs at community level and refer children to HFs without delay. The results suggest that before the intervention many cases were not identified, and thus a significant number of deaths were occurring in communities without being reported.

## 3.5 This Training Manual

This training manual is intended for trainers who are conducting training on ETS and introducing bicycle as a solution for community based transport to help expecting mothers and under 5 children with severe malaria in accessing health care when in labour and six weeks after child birth. The topics in this manual have been logically arranged to help guide the trainer follow an approach which aims to maximise the impact of the ETS introduction through clear messaging and instruction.

## 3.6 Purpose of the Training Manual

The purpose of the ETS training is to develop the knowledge and skills of the community volunteer ETS riders so that they can professionally, safely, actively and effectively contribute to reducing the delay on maternal emergencies and children with severe malaria faced in accessing transportation. This manual acts as a learning tool and reference to be used in conducting training geared towards achieving this. It contains the course layout, proposed timings and gives the trainer comprehensive guidance on critical issues relating to the successful operation of a community managed ETS. It is not meant as a document for general distribution among all ETS volunteer riders, rather for trainers.

## 3.7 Training Plan

The training should be structured over 1.5 days and a participatory approach should be ensured throughout. The following is a suggested training plan:

|  |  |  |
| --- | --- | --- |
| **DAY ONE** | | |
| **Time** | **Session** | **Subjects Covered** |
| 45 minutes | 1 | Participant’s welcome and introduction  Introduction to ETS training  Training content and objectives |
| 1 hour 30 minutes | 2 | Understanding the barriers to accessing transport during a maternal emergency |
| 1 hour | 3 | Ensuring easy access to transportation without delay |
| 1 hour | 4 | Understanding the role of volunteer ETS riders |
| 1 hour 45 minutes | 5 | Problem solving issues that can cause further delay in transporting women |
| 1 hour 50 minutes | 6 | Health and safety  Driver and road safety  Customer service  Professionalism |
| 1 hour 35 minutes | 7 | Planned preventative maintenance  Pre driver checks  The importance of servicing |
| 2 hours | 8 | Bicycle and bicycle ambulance assembly |
|  |  | |
| **DAY TWO** | | |
| **Time** | **Session** | **Subjects Covered** |
| 1 hour 15 minutes | 9 | Reporting and the recording of ETS cases |
| 30 minutes | 10 | Recap on Day One training  Participatory review of course so far |
| 1 hour | 11 | Safe lifting of women experiencing maternal complication  Use of stretcher |
| 45 minutes | 13 | Formulation of community ETS action plans |
| 1 hour 30 minutes | 14 | Review of Day Two training  Handover to District Health Management Team (DHMT)  Closing statements |

# 4. Training Content

## 4.1 Session 1 Introduction

### 4.1.1 Session Objectives

This first session will build a thorough understanding amongst participants as to the purpose of the training and the overall training objectives.

### 4.1.2 Welcome and Introductions

The trainer and participants should introduce themselves by name, and, in the case of the participants, which health post and/or neighbourhood health committee they are from. This is also an opportunity for the trainer to carry out an ‘ice breaker’.

Ground rules should be collectively set and agreed upon and might include:

* Mobile phones should be set to ‘silent’
* Show up on time for each session
* Feel free to ask any questions and every question is important
* Respect the opinions of others
* Limit side conversations

### 4.1.3 Training Objectives

The trainer should introduce and outline clearly the objectives of the training over the following 1.5 days.

On completion of this, training participants will be better able to:

* Appreciate and explain the role of community ETS riders as volunteer partners and appreciate the benefits of volunteerism in helping to save lives
* Commit to ensure that pregnant women experiencing any of the danger signs and children suffering from severe malaria are transported to the health facility without delay
* Appreciate the difficulties faced by women and children in accessing transportation during a maternal/severe malaria emergency
* Understand the need to respect the confidentiality of any information relating to the transportation of pregnant women/children
* Demonstrate how to lift/handle a pregnant woman experiencing a maternal complication
* Demonstrate and explain how to record ETS cases correctly in the logbook
* Agree to ensure that the bicycle ambulances are readily available and in working condition for emergencies and maintain and service the bicycle ambulances to reduce breakdowns and potential delays in the transfer of ETS patients
* Contribute to identifying ways of working with the families of pregnant women and the community to ensure that women and children needing emergency care are transported without delay
* Understand how to introduce ETS in the community
* Understand how to identify oxen symptoms which can lead into serious illness
* Understand how to conduct periodic basic maintenance of ETS transport

### 4.1.4 Introduction to ETS

In communities where no formal transport services exist, and where what little transport that is available is not affordable, Emergency Transport Schemes (ETS) offer a means of transporting community members requiring patient referral to health facilities. ETS as a concept is often community owned and managed, and is operated by volunteer riders. The ETS’ goal is to reduce the time it takes to get to a health facility in a safe way. The design of the ETS must be appropriate to the local context and take into account terrain and topography as well as culturally acceptable norms. The community identifies people to operate these modes of transport (ETS riders) whenever there is a need and the selected community member(s) undergoes training to meet the required standard when offering this type of service and pledges to do so on a voluntary basis. The ETS riders play a key role in reducing the delay of accessing transportation to a health facility during a maternal emergency that many women experience and for children with severe malaria.

### 4.1.5 The Use of Intermediate Modes of Transport (IMTs)

Bicycle ambulances and ox-carts are two examples of what might be considered the most appropriate forms of transport in certain contexts. It is essential that, as well as being accessible and affordable, the ETS must also focus on patient comfort and safety. Patient comfort in the bicycle ambulance is addressed through a suspended stretcher bed. In addition, the removable stretcher allows patients to be safely and comfortably transferred to and from the bicycle ambulance. The canopy cover provides shelter from extreme weather conditions and also privacy for women in labour/children during transit. The weight of the vehicle itself is minimised through the use of a square tube frame, and through the use of fabric surfaces for the shelter which are much lighter than using metal sheet. At a weight of about 36 kilogrammes the bicycle ambulance can easily be lifted where obstacles exist. The bicycle ambulance also has good ground clearance when it sits on its 26 inch” bicycle wheels allowing it to move comfortably through uneven terrain (see annex 1).



Ox-carts are more suitable as a means of transport in areas where routes are through deep sand and where seasonal flooding is common. They are also suitable for women moving in groups for example, to attend ante-natal classes. The ox-carts have a much higher ground clearance, wooden sides and floor, suspension fitted with wheel bearings and a full canopy. This design is extremely robust and can easily move through deep sand and flooded areas without difficulties theoretically offering access to health services throughout the year (see annex 2).

The cost of repairs and maintenance is low for these modes of transport meaning that the community is more able to afford to keep the ETS operational as the skills and spare parts needed are usually available locally.

### 4.1.6 Note to Trainers

Trainers should maintain a participatory approach which encourages input from participants throughout. In session 1 it is essential that participants are confident that they understand the ETS concept. To maximise the chances that everyone increases their understanding, sufficient time should be left for questions.

## 4.2 Session 2 Understanding the barriers to accessing transport during a maternal emergency

### 4.2.1 Session Objectives

Participants should appreciate the role of transportation in helping Children with severe malaria and for women experiencing maternal emergencies and the difficulties faced in these circumstances, in accessing transportation.

### 4.2.2 Maternal Mortality

In 2013, the WHO estimated that maternal deaths were more than 14 times higher in economically developing countries than in economically developed countries. In fact, 99% of global maternal deaths occur in developing countries (WHO, 2014). The maternal mortality rate (MMR) in Zambia is unacceptably high at 398 maternal deaths per 100,000 live births (ZDHS 2013-14) compared with developed countries such as the UK where the MMR is 8 per 100,000 live births.

The vast majority of maternal deaths are preventable. With haemorrhage and hypertension being the primary cause in the majority of maternal deaths, access to skilled care during pregnancy and at birth is critical. The delay in achieving this access to the appropriate care is a key determinant in maternal mortality. Thaddeus and Maine introduced the three delays model which has been hugely influential in defining approaches to address the numbers of maternal deaths and in analysis of the barriers to accessing maternal healthcare services (1994). They stated that delays in accessing maternal health services can occur at 3 levels:

1. Delay in the decision to seek care: This is influenced by late recognition of symptoms, a reluctance to travel to health facilities possibly due to cultural norms, or the absence of a decision maker highlighting gender inequity at the household level.
2. Delay in reaching the appropriate health facility: Usually due to the lack of an appropriate means of transport or an inadequate network of health facilities resulting in low coverage.
3. Delay in receiving adequate care once at the health facility: Often caused by a lack of equipment or essential supplies such as blood for transfusions and medicines, or a shortage of staff.

The second delay recognises that transport plays an integral role in influencing the level of access a woman has to maternal healthcare services.

### 4.2.3 Transport as a Contributing Factor

In many isolated rural areas where there is low demand and inadequate infrastructure, the lack of available and affordable transport services is a major contributing factor to reducing the uptake of essential services, in turn exacerbating rural poverty. Therefore failure to integrate transport into programmes designed to address the constraints to accessing essential services, in this case maternal healthcare, will reduce the effectiveness of community-based efforts that aim to improve maternal health through increasing uptake of institutional deliveries.

Murray and Pearson (2006) state that transport strategies implemented alongside other interventions could contribute to as much as an 80% reduction in maternal deaths. Barriers to access such as transport can increase the clinical severity of cases particularly where complications exist. Recent research by Transaid (2013) in partnership with the Ghana National Ambulance service and the State Ministry of Health in Katsina State, Nigeria found that women with access to motorised means of transport for referral arrived at a referral facility in significantly better health than those without such means.

### 4.2.4 Note to Trainers

The trainer should encourage 4 or 5 of the participants to share their experiences with the group. This should be a reflection on an experience where someone close to the participants or someone living in their community experienced a maternal complication and severe malaria which could have been prevented if transport was available at that time

The following questions could be asked to the wider group after experiences have been shared if appropriate:

* What factors could have improved the outcome of this experience?
* How would the experience have been different with access to an affordable means of transport?

In bringing this session to a close, the trainer should summarise the key points and emphasise the important contribution that communities can make to improve the outcomes of maternal emergencies.

## 4.3 Session 3 Ensuring easy access to transportation without delay

### 4.3.1 Session Objective

Participants will build on their understanding of the important contribution that ETS riders can make in improving access to transportation during maternal/severe malaria emergencies.

### 4.3.2 Group Work

For the purposes of this session, participants will be split into two or three groups. Trainers will allow 20 minutes for discussions within each of the groups whereby the ways in which ETS riders can contribute to improving access to transport will be discussed.

At the end of the discussion, each group will nominate one or more representative who will conduct a 5 minute presentation on the findings from the group’s discussions to all participants.

### 4.3.3 Note to Trainers

It is perfectly acceptable if participants are more confident presenting in a group for them to do so.

If training is conducted in a classroom or conference room facility, encourage the use of flip charts to provide some sort of visual representation of the group discussions which could be displayed on the wall of the training room. However, most training in the community setups are held under the tree and/or in small facilities which are not be ideal and not the best training environment, the trainer need to adjust and adopt to the available training environment. The trainer should use BA tools such as the logbook and maintenance sheets

## 4.4 Session 4 Understanding the role of volunteer ETS riders

### 4.4.1 Session Objectives

This session will discuss the advantages of volunteerism as well as the desired attitudes of the riders volunteering to participate in the ETS.

### 4.4.2 Group Discussion

The trainer should encourage the group to reflect back to experiences participants have had in their various communities, do they know of people who gave their time and other resources to volunteer in the community?

If so the group should answer the following questions to build a collective understanding of volunteering:

* Why do people volunteer their time, services or resources?
* Are there any advantages in volunteerism? Say what these are?
* What are the challenges when it comes to volunteering?

Further discussion could follow the following guidance:

* What are some of the expected advantages to ETS riders volunteering their time and services in the ETS?
* What are some of the desired characters and qualities of riders volunteering their services in the ETS?

### 4.4.3 Why Volunteer?

Volunteering is vital to the sustainability of the ETS. If monitory incentives are used then there is the chance that a lack of funding in future would lead to the collapse of the ETS.

This initiative works according to the following assumptions:

* People are more likely to offer their time and money in a voluntary capacity for services and/or projects in their communities.
* The driving force behind volunteerism for community services and projects is services to humanity and the desire to contribute to the development of the community.
* Financial reward should not be expected by those working in a voluntary capacity. People do not volunteer because of the expectation of financial reward or reward in kind.
* Volunteerism has its ‘moral’ benefits. For example, one good turn deserves another; you help a woman today, someone else may help your sister, your wife or your mother during an emergency.
* Volunteering in the ETS is an honourable thing to do because it is contributing to saving lives.

Volunteer riders are expected to have the following special qualities:

* They are concerned for preserving life
* Kind
* Patient
* Considerate

### 4.4.4 Note to Trainers

The trainer should be as clear as possible in communicating the fact that there is no financial reward to ETS riders to avoid problems later.

## 4.5 Session 5 Problem solving issues that can cause further delay in transporting women

### 4.5.1 Session Objective

Maintaining a focus on ensuring a participatory approach, in discussing possible causes to delaying transportation including some of the challenges that ETS riders may encounter in their own communities, participants will discuss and agree ways of mitigating for these challenges.

### 4.5.2 Group Discussion

There are a number of reasons why delays might occur in helping transport pregnant women and children with severe malaria to health services. For example, delays may be caused due to the bicycle ambulance needing a spare part or cultural factors may present a challenge to using the ETS:

|  |  |
| --- | --- |
| *Problems* | *Possible Solutions* |
| Communities do not appreciate the services provided by the ETS rider | Community leaders and other ETS partners should arrange for community meetings where riders contributions are acknowledged and recognised |
| There may be a misconception that ETS riders are paid to carry out their role | Community leaders and other ETS partners should clearly communicate the fact that ETS riders are volunteers |
| The ETS rider might not be available when a maternal emergency and severe malaria case occurs | Community representatives should have a close working relationship with the riders; they should always know when a rider is out of the village and identify alternative riders |
| Women refuse to use the ETS | Community meetings to understand the reason for low uptake of the service and discuss the importance of women giving birth at the health facility and conduct demonstration rides before women use the ETS |

In this session participants are expected to discuss and identify such problems and will also agree on solutions.

Participants will be split into two or three groups and asked to identify and list possible challenges which could lead to delays in transporting pregnant women in need of emergency care. Groups should be allowed 10 minutes before presenting their findings to all participants.

Participants will then return to their groups to consider what the solutions might be to each of the challenges that they have identified. Groups will again be allowed 10 minutes for this discussion before presenting their findings to all participants.

### 4.5.3 Note to Trainers

Add to the list of likely challenges and ways of mitigating them if key factors are not mentioned as part of the discussion.

## 4.6 Session 6 Recognising Maternal Danger Signs

4.5.1 Session Objective

By the end of the session, participants will be able to:

Lift a woman experiencing complications without further endangering her and Identify simple safety measures to adopt when transporting pregnant women with complications to the health facility. Participants will also understand the need to treat the patient and her helpers with respect

The riders are required to know all the maternal danger signs but to the duration of the training we do not expect them to be at the same level as the SMAGs

### 4.5.2 Group Discussion

The trainer has to review the knowledge on danger signs from participants and the most practical way to address this is to splitting participants into small group

### 4.5.3 Note to Trainers

**Presentation**

* We have discussed from our own experience some of the danger signs that tell us the life of a woman and her baby is in danger.
* Some of these danger signs occur from the beginning of pregnancy, during childbirth and after childbirth for the first 42 days.
* The doctors have identified 8 danger signs to watch out for during the maternal period from the beginning of pregnancy, during childbirth and after childbirth for the first 42 days.
* A woman who has any of these 8 signs before, during or after childbirth must be rushed to the hospital. The doctors and midwives can save her life and her baby’s life.

The 8 danger signs are:

*Note for trainers: Use the “Say and Do” body signs while you talk about these signs (see Say and Do instructions below).*

**Severe headache** means she may start fitting. Don’t delay. Go to the hospital so the health workers can prevent the fitting.

**Swollen feet, hands or face** means she may start fitting. Don’t delay. Go to the hospital so the health workers can prevent the fitting.

**Fitting** (often preceded by headache and swollen feet, face & hands). Don’t delay. Rush to the hospital.

**Severe bleeding.** A mother who keeps bleeding after childbirth can die in a few hours. Bleeding during pregnancy also means something is wrong. Rush her to the hospital.

**Fever/chills in the days after childbirth** is caused by a serious infection that can cause death or infertility (an infertile man or woman cannot have children). **Foul smelling discharge** also indicates infection. Don’t delay. Rush her to the hospital. Do not go to the chemist/patent medicine vendor for help.

**High fever during pregnancy** can mean infection or malaria and are dangerous for both the baby and the mother.

**Labour lasts more than 12 hours**. Something is wrong. Don’t delay. Rush to the hospital. The birth canal may be too small; the **baby’s umbilical cord, hand or feet could be coming first.** It will be difficult or impossible for the baby to come out. If the baby comes out, it will tear the mother’s birth canal hurting both the baby and the mother. Don’t delay. Rush to the hospital.

**Placenta does not come out within 30 minutes of childbirth.** Something is wrong. Don’t delay. Rush to the hospital.

**Rupture of membrane** (draining of liquid/water is coming out). You should take the woman to the hospital immediately.

|  |
| --- |
| **THE 8 MATERNAL DANGER SIGNS** |
| 1. Severe headache (fitting may start soon) 2. Swollen feet, hands and/or face (fitting may start soon) 3. Fitting (often preceded by severe headache and swollen feet, face & hands) 4. Severe bleeding 5. High fever after childbirth; or fever during pregnancy 6. Labour lasting more than 12 hours 7. Placenta still has not come out after 30 minutes of delivery 8. Rupture of membrane (draining of liquid/water is coming out) |

**4.5.4 Summery**

The riders are required to know all the maternal danger signs but due to the duration of this training we do not expect them to be at the same level as the SMAGs and the methodology of this session is a lighter touch

## 4.7 Session 7 Recognising malaria danger signs for children

**4.7.1 Session objective**

It’s very important that riders transporting children who are showing malaria signs have a very good knowledge on how to identify and confirm any severe malaria danger signs during transport. At the end of this session participants will be able to recognise these signs as they are supporting the communities in providing good access to health service by transporting them to the health facilities.

The role of the ETS rider is ultimately to provide transport for any community member with a child need access to the health facility. In this case there is need to ensure some level of knowledge on dangers is well imparted to supplement the efforts of other community volunteers. The training on severe malaria danger signs is a light approach module.

**4.7.2 Notes to the trainer**

**Group presentation:**

The trainer should try to split participants into small group and try to evaluate their knowledge on severe malaria danger signs before engaging them into the details ion the table below.**[[4]](#footnote-4)**

|  |  |
| --- | --- |
| Say & Do Demonstration | |
| Severe Malaria Danger Signs | |
| Say | **Do** |
| "Child has fever"  Repeat x 3  "It is severe malaria when fever comes with one or more of the following four danger signs" | * Cross your arms and place your hands on your shoulders * Shiver, moving your body from side to side * Do the action once and repeat three times |
| "Child is refusing to eat or drink"  Repeat x 3  "It is severe malaria when fever comes with refusing to eat or drink." | * Hold both your hands under your left breast and turn your face to the right side. * Move your right hand towards your mouth and quickly turn your head towards the left side. |
| "Child is vomiting everything"  Repeat x 3  "It is severe malaria when fever comes with vomiting everything."  "The child who is vomiting everything cannot hold down any food or drink." | * Lift up your head and open your mouth. * Bend down your head with your mouth open, pretend to empty out your chest and stomach showing vomiting. * Quickly do the emptying three times. |
| "Child is fitting"  Repeat x 3  "It is severe malaria when fever comes with fitting" | * Hold your hands up in the air and let your head fall to one side while shaking your hands and whole body at the same time. |
| "Child is difficult to wake up"  Repeat x 3  "It is severe malaria when fever comes with difficulty waking a child up" | * Slant your head to the right side of your body. * Close your eyes. * Allow both hands to drop down loosely. |
| "When fever comes with one or more of these other danger signs, it is severe malaria and is a medical emergency" |  |

**4.7.3 Summery**

All participant should have good knowledge on how to support communities in identifying and confirming all the danger signs as listed in the tables above.

Participants will have a level of understanding on any severe malaria danger signs for children under the age or 3 months to about 6 years. We should also note that due to the duration of the training and comparing to other competing topics the riders will not have the same knowledge as the other trained volunteers, the type of the training should be a light approach.

## 4.8 Session 8 Safe-lifting of women experiencing maternal complications & use of stretcher

### 4.8.1 Session Objectives

Participants will be able to ensure that pregnant women experiencing maternal complications are safely lifted.

### 4.7.2 Group Discussion

The trainer should ask for two or three volunteers to share what problems they may anticipate when lifting women who are experiencing maternal complications. Then ask the following questions to the wider group:

* Why are they lifting pregnant women in that way (trainer should not that sometimes there could be traditional norms which guide people to do things in a particular manner)?
* What did the volunteers do incorrectly in lifting or handling the pregnant woman/women experiencing maternal complications?
* What was the outcome?
* What should the rider have done?
* What would have been the more appropriate way of lifting the pregnant woman/women?
* Did the rider take any steps to correct his or her mistakes?
* If yes, how did the rider correct his or her mistakes?

If possible, the trainer should then ask for two or three volunteers to share positive experiences of lifting women experiencing maternal complications. After the volunteers have shared their positive experiences ask the following questions to the wider group:

* How does this method of handling compare to the methods used in the experiences shared earlier?
* From the different experiences shared, what have we learned about lifting/handling pregnant women experiencing maternal complications?
* What are some of the appropriate ways of lifting/handling pregnant women experiencing maternal complications?

### 4.7.3 Demonstration of Lifting Techniques

The trainer should demonstrate each of the correct lifting techniques for moving pregnant women into and out of a vehicle.

A woman who is already in labour could be lifted using some fabric/material onto the stretcher of the bicycle ambulance or straight into the ox-cart with the assistance of family members. The woman should not be seated. She should be supported by her side preferably with the assistance of the mother’s helpers where available. In cases where childbirth is well advanced the life and safety of the baby should be considered a priority. A woman who is bleeding should not be refused help. Bicycle ambulances and oxcarts can be cleaned afterwards and should generally be done so before and after transportation of women. Always remember that the woman could die if left unassisted.

### 4.7.4 Note to Trainers

Repeat the lifting techniques a number of times using all participant volunteers.

## 4.8 Session 8 Health and Safety Considerations

### 4.8.1 Session Objectives

Participants should acknowledge that safety concerns do exist and the application of basic principles in overcoming these concerns. An understanding of the importance in the way passengers are treated should also be developed.

### 4.8.2 Group Discussion

In facilitating a discussion on health and safety rules, participant experiences should be shared with the following questions acting as a guide to the discussion:

* What happened to the vehicle?
* If the vehicle caught fire what did you do to stop the fire and how long did this take?
* If the vehicle had a crash, what was the cause and how did you handle the problem?
* Did you have passengers, particularly a pregnant woman in the vehicle?
* Were they frustrated with the delay?
* What happened to the passenger that was in the vehicle?
* Did the problem cost money to fix?
* Did anybody lose his/her life?
* Could the problem have been prevented?
* What safety lessons did you learn from the problem?

### 4.8.3 Road Safety: World Health Organisation Data (2015)

* An estimated 1.24 million people are killed every year worldwide from road traffic crashes
* This is equal to 3500 road related deaths every day
* 20 to 50 million people are injured or suffer long term disability as a result of road crashes each year
* The most vulnerable groups are pedestrians or passengers
* Ambulances in the U.K. are 18 times more likely to be involved in road traffic crashes than private vehicles

### 4.8.4 The Cost to Families

* Road crashes are the single largest killer of young people aged 15-29
* 59% of road deaths are people aged 15-44
* Road crashes have the potential to plunge households into poverty as the family’s main earner is the most likely to get killed or injured

### 4.8.5 Group Work

Trainers should encourage participants to discuss the causes of safety problems.

Participants should be asked to tell their experiences of road traffic crashes and in their opinion, what the causes were, e.g. speed, fatigue, alcohol, drugs, dangerous overtaking, not obeying road traffic signs, unfamiliarity with the road/environment, poor condition of vehicles, use of mobile phones, inexperience etc.

Participants could be asked to consider the following:

What can you do as a rider to improve safety when carrying a pregnant woman/child?

If you do these, what benefits will your actions bring to your community and to you personally?

### 4.8.6 Universal Safe Driving Principles

* Do not use your mobile phone when riding (pull over and stop)
* Do not drink alcohol or take drugs when transporting people
* Obey road traffic signs and markings

### 4.8.7 Note to Trainers

Trainers should conclude this section reminding participants that road crashes are preventable with human error often being the principal cause.

### 4.8.8 Customer Service

ETS riders can be said to be serving their customers, the customers in this case being the pregnant women travelling to maternal health services or children with suspected severe malaria. Good customer service should govern the way and manner you treat the passenger so as to make him or her happy and comfortable during the journey.

### 4.8.9 Group Work

The trainer should ask four participants to tell the group suggestions about what they could do to make the patient happy and comfortable.

### 4.8.10 ETS Rider Pledges

ETS riders should make the following pledges to their passengers:

* Work hard at integrating my services within the community where I live
* Work hard at providing steady and consistent levels of customer service, especially to pregnant women/children
* Transport pregnant woman/children in a safe manner
* Keep details relating to their patients confidential
* Record the number of pregnant women/children carried to health facility in the log book provided
* Be polite, listen to the patient’s complaints and be prepared to help them at all times
* Try to make travel as comfortable as possible for the passenger by not over speeding, not smoking or drinking alcohol or taking drugs
* Be prepared to work with the Community Leaders, nurses, midwives and other health workers
* Ensure that the bicycle ambulance or ox cart is always in good condition
* Lead by example as an ETS registered driver

### 4.8.11 Professionalism

ETS riders should consider themselves as professionals and should therefore try to carry out the following to serve as good examples to others:

* Always clean your vehicle
* Ensure that you check your vehicle before use
* Always obey traffic rules and regulations
* Do not smoke, drink or take drugs when riding
* Do not use worn out tyres on your vehicle
* Keep records of the number of pregnant women and children you transport to and from health centres and the kilometres covered during the transfer

### 4.8.12 Note to Trainers

Trainers should bring this session to a close by summarising the main points and emphasise the importance of taking the time to reassure the passenger. Ensure everybody understands the need to keep issues relating to patients confidential.

## 4.9 Session 9 Planned preventative maintenance

### 4.9.1 Session Objectives

Participants should develop an appreciation of the importance of conducting pre-drive checks and carrying out regular servicing. An understanding of the potential delays incurred by maintenance problems should be grasped.

### 4.9.2 Group Discussion

The trainer should encourage eight participants to share their experiences of vehicle maintenance issues.

Participants will spend two minutes thinking of previous experiences they have had in the past where poor maintenance has affected them. Four volunteers should be ready to share their experiences with us. Each one of the volunteers will tell the group what happened and in telling the group their stories they should try to include the following where possible:

* What were the circumstances?
* If the vehicle stopped completely how long did it take to get the vehicle moving again?
* Did you have passengers, how did the delay make you feel?
* What would have happened if a patient was in the vehicle?
* Did the problem cost money to fix?
* How could the problem have been prevented?

### 4.9.3 Note to Trainers

The trainer should present his or her own example where poor maintenance affected them e.g. within another donor funded project there was an instance where a Ministry of Health driver did not check the water in his radiator before leaving the office. He travelled with some staff across very difficult terrain. The vehicle broke down due to overheating. The vehicle and people were stuck on the road between two towns. Another vehicle was sent by project to rescue the vehicle and its passengers. The vehicle which broke down was a new Land Rover. The cylinder of the engine was damaged; repairs were estimated to cost a lot of money when this could have been avoided. If a patient had been in the vehicle the delay may have further complicated their problem.

## 4.10 Session 10 Reporting and the recording of ETS cases

### 4.10.1 Session Objectives

Participants will learn how to complete log book[[5]](#footnote-5) entries, to accurately record data related to the women that are transported and the importance of keeping correct records.

### 4.10.2 Introduction

As the trainer introduces this session, he or she should ask participants the following questions:

* Why do we need to keep records of the pregnant women/children we transport to the health facilities?
* What information do we have to show in our ETS records?
* Why do we have to show that information?
* What should we do with our ETS records?
* Who do we submit our ETS records to?

Discuss with the participants the answers to the above questions. The trainer should guide participants to better appreciate the reasons for record keeping and the basic principles in ETS recording using materials.

ETS riders are expected to keep records of each ETS case in his or her ETS logbook which should be logged at the first available opportunity after a woman has been transported to a health facility. As far as the project is concerned, if an ETS transfer is not recorded in the logbook, then it cannot be counted officially.

### 4.10.3 Group Work

Trainer should initiate a group work exercise using a log book format to familiarise participants with completing an entry correctly.

This exercise can be carried in small groups each of which should be encouraged to make three or four log book entries, supported at all times by the trainer where needed.

### 4.10.4 Note to Trainers

The trainer should refer to examples on the logbook throughout this session to ensure that everyone understands what information is required and how to enter all that in the logbook. In bringing this session to a close, the trainer should explore low levels of literacy as a constraint to completing log book entries and potential ways of overcoming this situation, e.g. seeking the assistance of another colleague.

## 4.11 Session 11 Recap of day one and participatory review

### 4.11.1 Session Objectives

Group to revisit the content covered during day one to ensure everyone understands all the subjects covered.

### 4.11.2 Note to Trainers

Trainer should ask questions in general about the first day’s topics, session by session using the manual as a guide. Ensure that everyone gets a chance to answer at least some of the questions.

By the end of this session you should be confident everyone is at an acceptable level.

## 4.12 Session 12 Bicycle and bicycle ambulance assembly

### 4.12.1 Session Objectives

Participants should be confident that they have familiarised themselves with the bicycle and bicycle ambulance components and are able to assemble the equipment so that it can be used as a unit.

### 4.12.2 Demonstration of Bicycle and Bicycle Ambulance Assembly

The trainer should gather participants around the dismantled bicycle ambulance to explain piece by piece. This is usually best done with support from the company which manufactures the bicycle ambulance or ox-cart. Find enough space for this activity outside of the classroom environment.

After explaining everything piece by piece the trainer should let participants assemble their own bicycle ambulances under supervision to ensure it is being done correctly. Please note that a common mistake is to confuse the positioning of the hinge when connecting the trailer to the bicycle. The trainer should supervise this carefully to ensure the trailer is safely connected to the bicycle.

**Step 1**

Assemble people into groups in an open space were they will have enough room to display all the vehicle pieces. This is based on the assumption that all the vehicle will arrive in pieces and will be assembled during training. For ox-carts the focus should be on the axle and the canopy.

**Step2**

Start putting all the pieces together following instruction from the trainer.

**Step3**

After finishing assembling the vehicle call the trainer to come and quality assure the assembling. The trainer should monitor the participants taking the vehicle before quality assured by the trainer. This is a common mistake from most of the participant.

**Step 4**

Demonstration - the rider should take the vehicle for a test ride and ensure that they are familiarise themselves with the vehicle. This is more practical on the bicycle ambulance.

**NOTE:** After assembly has been completed to the trainer’s satisfaction, allow participants to carry out a test ride and ask about their first experience from the test rides particularly how they feel handling the vehicle. Focus on the weight of the vehicle and the implications this has when turning sharply.

### 4.12.4 Bicycle Repair and Maintenance

This session involves practical work to ensure all the participants develop the skills and knowledge needed to carry out repairs. Annex 4 shows the various parts of a bicycle many of which are mentioned below. All repairs conducted must be recorded using a maintenance record form (annex 5) so that ETS repair costs (for both bicycle ambulances and ox-carts are well understood and are planned for.

### 4.12.4 Diagnosing Noises

### 4.12.5 Fixing a Flat Tyre

The most common road bicycle or mountain bicycle failure by far is a flat tyre. If you have the correct tools to hand, and with some practice, you can fix a tube in minutes. If you have never done this before try to use old tubes to practice fixing tyres. Note that especially on a new bicycle a flat can be caused by a poor [tyre liner](http://www.bikewebsite.com/bikeot.htm#tireliner). If a flat is on the inside of a bicycle's tube than the tyre liner might be at fault.

### 4.12.6 Bicycle Wheel Removal

Front Bicycle Wheel Removal

Let out any remaining air from the bicycle tyre. Remove the axle nuts (they unscrew counter-clockwise). Many bicycles also have some safety devices or plates under the axle nuts which you should remove. Remove the wheel being careful not to damage the front brake pads. On most thick tyre bicycles and many thin tyre bicycles, there is a way to open the brake wider for removal of the wheel. Usually this is done by disconnecting one side of the straddle wire from one side of the brake. If you see that the brake has a way to do this without tools go ahead and pull the straddle wire free. Some types of bicycle brakes have a lever to flip, allowing the brake to open wider.

Most bicycle calliper brakes need to be opened before the tyre will pass through, and many provide a quick-release mechanism. Some have a release lever at the brake calliper or hand lever. Many have a slot in a bracket from which the cable casing can be lifted out when the brake is held squeezed against the rim to loosen the cable tension. Whenever you open a brake to remove a wheel, make sure to reset it immediately after reinstalling the wheel before riding the bicycle. This is easy to forget.

### 4.12.7 Bicycle Tyres and Tubes

Bicycle Tyre and Tube Removal from the Wheel

Let all remaining air out of the bicycle tyre. First try removing the bicycle tyre without the use of tools. Set the bicycle wheel on the floor with the valve in the three o'clock or nine o'clock position. Grab the top of the tyre in one hand and try to pull it sideways over the top of the rim. With thick tyre bicycles this is generally quite easy. With thin tyre bicycles, you may find it nearly impossible.

If you cannot remove the tyre without tools use a couple of tyre levers if you have them, or fork and spoon handles can be used. Avoid using sharp screw drivers. Start by inserting one tyre lever anywhere between the tyre and the edge of the rim. Insert the lever just far enough to pry the edge of the tyre over the edge of the rim. Be careful not to poke a hole into the bicycles inner tube.

After prising the edge of the tyre over the rim, insert one more tyre lever about four inches (10 cm) from the first one and prise a little more tyre over the edge of the rim. Take out this second lever and re-insert it another four inches away and prise the tyre over the edge again here. Soon the whole side of the tyre will be loose enough to finish prising it by hand.

Pull the inner tube out of the way and finish by prising the other side of the tyre off the rim. If necessary, carefully insert the tire levers at several locations.

### 4.12.8 Three Ways of Fixing a Puncture

There are three ways to fix a bicycle flat tyre. You can replace the whole inner- tube or you can patch it. Patching is cheaper and the patch kit is easier to carry than a whole inner-tube.

A third way is the easiest. There are various liquids and foams that you can squirt into the inner-tube through the valve. They seal leaks by clogging them up. Sealants can be put into your tyres before you have a puncture as a preventive measure. But they have a less than a fifty percent success rate. Sealants are at their best in cases where the rider has numerous small punctures which may occur after running over areas where thorn bushes grow. They seldom work with large holes.

### 4.12.9 Patching the Bicycle Tube

Put lots of air into the tube until it is twice its regular size. The hole should be noticeable by now, but if not, you can put the whole tube under water and look for bubbles coming out. If the hole is small, you can mark it by poking through the hole with a screwdriver to make it larger.

Unless you have glue-less patches follow this procedure exactly:

Deflate the tyre and make sure the outside of the tube is dry. Using the sandpaper or the metal scraper that comes with some patch kits; buff the tube around the area of the hole to remove the outer surface of the rubber and reveal fresh rubber underneath. Make sure to buff at least as large an area as the whole patch will cover. If you use a metal scraper be careful not to cut deep enough to create new holes.

Put glue over the buffed area. Work only in a well ventilated area. Let the glue dry fully. This kind of glue, also called contact cement, must dry completely before applying the patch. Peel the foil or the plastic backing off the patch and press it firmly on the glued area. Do not touch the side of the patch which sticks to the glue because even the microscopic amount of material on your fingers deactivates its stickiness.

### 4.12.10 Installing the Bicycles Tyre and Tube

Check the rim strip, the rubber, cloth or plastic covering over the spoke nipples to be sure it is in good condition and in proper position. Look at the outside of the tire while feeling around the inside (carefully) to see whether the puncturing object is still stuck in the rubber. If the tyre has a large hole you may be able to shore it up temporarily. Just lay a square of cloth between the tire and the tube. The air pressure will hold it in place. Pump just enough air into the tube for it to take its doughnut-like shape. Place the inner tube fully into the tyre. Push the valve about half way into the valve-hole on the rim. If you have trouble getting it in, lift up the rim strip first and push the valve through the rim strip, then into the rim. Lay the wheel on a table and then slip the bottom side of the tyre into position onto the rim.

The last little bit may be difficult to slip over the edge of the rim. Resist the temptation to use a tyre lever to pry it on. This may damage the tyre edge, or you may slip and put a hole in the tube. It is almost always possible to get the tyre on entirely by hand if you force just an inch or two at a time over the rim using your thumbs. Practice helps more than strength. Except with a few thin tyres, almost no strength is needed.

Now put the top side of the tyre on the same way. If you have trouble then make sure there is not too much air in the inner tube. Also check to see that the tyre goes on properly. Sometimes the tyre won't drop fully into position on the rim near the valve. This is why you put the valve half-way into its hole at first to help prevent the tube getting caught between the tyre and the rim edge.

When the tyre is installed, gently pull and wiggle the valve stem into position. Put just a little air into the bicycle's tyre (about ten pounds per square inch). Look at the tyre all the way around and on both sides to be sure it is seated properly. If there is a section of tyre that is trying to bulge off the rim let the air out and fix this area by pushing it into position. Once you are satisfied with the tyre installation, inflate the tyre to full pressure. Do this slowly periodically checking that the seating is still correct. The proper pressure should be written (vulcanized) on the side of the tyre.

One common problem which can occur is when the tyre does not fill up entirely in one area giving you a wheel with a sort of flat spot. Sometimes this can be cured by letting the air out and manipulating the tyre by hand pushing it into place and then re-inflating. If this does not work, one approach is to coat the edges of the rim with soapy water to lubricate the tyre and rim allowing the tyre to slip into position as you inflate it. Use a kind of soap that dries up. Some mechanics just exceed the recommended pressure for a short while until the tyre pops into position but this risks damaging the inner-tube.

### 4.12.11 Bicycle Ambulance Care

Clean the bicycle ambulance stretcher using a damp soft cloth with some detergent after every use.

Always check if the wheels are tightly fixed before using. Try to keep the ambulance in the shade when not in use to avoid the paint peeling off. Try to always keep it out of the rain to avoid rust. Check the wheels and oil if needed every month. Keep the canopy and the stretcher away from sun light after use. Always ensure that the ambulance is securely connected to the bicycle before use. For repair of wheels, refer to the notes above.

### 4.12.12 Who should be the Custodian of the Vehicle?

The decision as to who will look after the vehicle should be community led. It must be someone trustworthy who will not use the vehicle for their own personal interest. This is an important decision and should be discussed in depth until the participants reach a consensus. Everyone must understand that they have equal access to the vehicle and that they are free to request the vehicle’s use whenever the need arises.

**4.12.13 Who should Construct a Bicycle ambulance Shelter?**

The community much understand the construction of the BA shelter is very important and it’s the sole responsibility of the NHC. There is need to explain the benefits of having a very well-constructed shelter which should have enough space to keep the complete BA and not in pieces. Keeping the BA in the house or health posts should be discouraged because this will destroy the BA in no time. Keeping the BA in open spaces will expose the BA to heat and during the rainy season to rains which will cause a lot of corrosion which brings down the condition and performance of the BA. A good shelter for safe keeping of the BA must include a wall which is three metres width, four metres length and two doors on both width sections. There should be a space where the logbook and rain suites should be safely kept.

### 4.12.14 Who repairs the vehicle when it breaks down?

As part of this process ownership of the vehicle is transferred to the community and therefore, it must understand that it is responsible for carrying out maintenance and spare part replacement when the vehicle develops a fault. During this session the participants should be encouraged to discuss what mechanisms should be in place to ensure that the vehicle is operational at all times.

This session should also cover the need to clean the vehicle every time it is used and before and who’s responsibility this should be. It is the role of the community to ensure they source cleaning chemicals to disinfect the vehicle. Discuss this topic with the participants and agree a solution.

### 4.12.15 How do we ensure that the community are aware of the vehicle?

Solutions should be discussed amongst the participants. It can be helpful to conduct introductory rides during church services but also involve the schools and other community gatherings. For many, they will be seeing bicycle and motor cycle ambulances for the first time.

These visits present participants with the ideal time to inform the community where the ETS vehicle will be stationed. The names of the ETS riders should also be distributed to the wider community. Group discussions are recommended to capture the views of the participants. Key to sensitising the wider community is securing buy in from traditional or community leaders. Their support is usually essential.

### 4.12.16 Safe Riding

Riding a bicycle ambulance is not the same as riding a bike. The rider has an additional load to pull which may make the bicycle a little less responsive than usual. It will be harder to get started due to the extra weight and it would take much longer to cross streets and paths due to the extra length. When going downhill you will pick up speed more quickly than by riding a bike alone. Be sure to apply the brakes often to keep your speed under control, rear brakes should be applied before front brakes. When you turn around a curb or corner, make sure that your speed is slow so as not to make your trailer roll-over.

Night riding is potentially more dangerous. If you must ride at night make sure that you have front and rear lights. Make sure that your front, rear and side reflectors are clean so that you are visible. It is recommended that the rider should always wear a high visibility vest when transporting pregnant women and children with severe malaria.

### 4.12.17 Maintenance of Bicycle Ambulance Trailers

Washing the trailer takes away the important grease that is lubricating your bearings. Without the grease, your trailer would get damaged quickly which could be quite expensive to repair.

To properly wash your trailer, use a bucket of water, a sponge and some detergent. The idea here is to wet your trailer to loosen up any mud then use the sponge and detergent to clean it off. While washing the wheels, check for any tread wear and tear or any sign that may indicate that it is time to change a tyre. After washing, rinse your trailer with any soap and dry it with a soft cloth. Apply grease onto the hub if you notice that they are dry. Apply grease onto the hubs, bottom and hinge if you notice that they are dry. Greasing will extend the life of the hinges.



**POSITION OF HINGE CONNECTOR TO THE BICYCLE**

Insert the large bolt into the bottom of the barrel and screw on the nut until only a small gap remains.

Before using your trailer check the tires if they have enough air pressure. A trailer with low air pressure would slow you down since it would drag you. Check on spokes and make sure they are all tight because lose spokes will cause the rims to bend.

The trailer is fitted with a removable stretcher which needs to be washed before and after transporting any pregnant woman. This is highly recommended to maintain hygiene whenever woman is being transported.

### 4.12.17 Safety Tips

Before using your trailer check the tires if they have enough air pressure. A trailer with low air pressure would slow you down since it would drag you.

The trailer is fitted with a removable stretcher which needs to be washed before and after transporting any pregnant woman. This is highly recommended to maintain hygiene whenever woman is being transported

### 4.12.18 Safety Tips

We can make bicycling safer for all by observing the following safety tips:

* Obey all traffic controls
* Wear your high visibility clothing every time you are on public roads
* Ride your bicycle near the left hand side of any public road. Avoid using busy road and use alternative routes were possible
* Never carry another person on your bicycle.
* Be careful when checking traffic and don't swerve when looking over your shoulder
* Give pedestrians the right-of-way
* Keep your bicycle in good condition
* Night riding should done with proper lighting support
* Always ride carefully
* Remember a bicycle is a vehicle. Cyclists share a complex traffic environment with other larger forms of transportation.

### 4.12.19 Note to Trainers

The trainer should end the session by emphasising the need to ensure that the ETS should be kept assembled at all times to be able to respond to emergencies. The trainer should also mention the importance of keeping the vehicle clean after and before using it to ensure no blood or other bodily fluids are present. This is the responsibility of the riders.

## 4.13 Session 14 Formulating Community ETS Action Plans

### 4.13.1 Session Objectives

Participants should develop an action plan which proposes a clear timeframe in which to introduce ETS in their respective communities. The community should hold a community meeting with all traditional leaders in attendance. Rider should prepare an agenda of the meeting which should include:

|  |  |
| --- | --- |
| **Activity** | **Period** |
| Construction of the ETS shelter | 6 weeks |
| Selection of the ETS Custodian | 1 week |
| Selection of the ETS Maintenance committee | 6 weeks |
| Establishing/contributing to Saving schemes and food banks | 6 weeks |

During this period you can involve a lot of group discussions and see how much community politics will affect this outcome. Allow people to discuss freely on the time they can achieve the item of the list

### 4.13.2 Group Discussion

The trainer should divide participants into groups of 4 were possible. Groups should formulate an action plan taking into account the following:

* What activities are needed once they arrive in the community with an ETS vehicle
* What method are they going to use to recruit additional riders
* How are they going to engage the wider community in constructing the shelter for the vehicle
* How are they will choose the location where the vehicle will be kept
* What timeframe they think all this will be achieved in

Each group will then present their action plan to all participants.

### 4.13.3 Note to Trainer

There is no hard and fast way to plan for the introduction of ETS in communities. There is flexibility to adopt different approaches within reason. However there are some key points:

* 4-6 weeks is an appropriate timeframe to conduct a general meeting within the community and introduce the ETS.
* It is important that traditional/community leaders are present at this meeting and play a part in selecting the riders.
* ETS riders selected should be able to assemble and dismantle the ETS vehicle at this same meeting.
* The decision as to where to keep the vehicle should be community led and may need to be changed if the chosen location is compromising access.
* The location should be central to ensure equal access.
* Repairs and spare parts and how to pay for these must be discussed early on.

## 4.14 Session 15 Review and Handover to District Health Management Team

### 4.14.1 Session Objectives

Participants should be able to demonstrate a general understanding of the training and make a commitment to performing their tasks to the best of their ability.

### 4.14.2 Review of Training

A review of the training should take place with participants pointing to at least two things they have gained as a result of the training. Participants should also be ready to declare their commitment and willingness to carry out their role as ETS riders to the best of their ability and to reflect on their statements of commitment.

### 4.14.3 Closing Statements

This should be carried out by the District Health Management Team and should include speeches from local leaders before officially closing the training.

### 4.14.4 Note to Trainers

The trainer must ensure that names, telephone numbers and community details are collected for all participants. Also participants my all have collected their vehicle and any additional tools at the end of the session.

# 5. Annexes

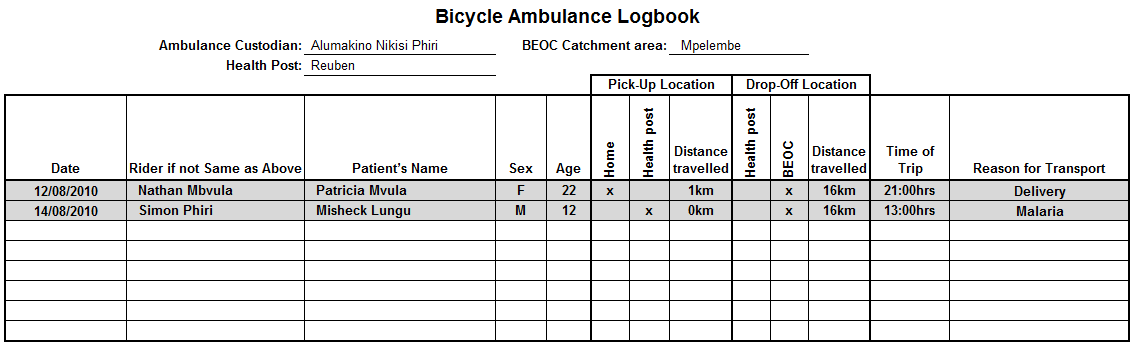
## 5.1 Annex 1: Guidelines on How to Use a Bicycle Ambulance

1. Ensure that the stretcher is disinfected properly after every use and before you transporting the next patient.
2. ALWAYS check the bicycle ambulance before you start your journey
3. Ensure that the stretcher is locked in place properly before you start your trip.
4. The nut and bolt hinge attaching the stretcher carriage to the bicycle must be checked before each trip.
5. Ensure that every trip is recorded in the log book.
6. **Do not use** the bicycle ambulance to transport the following:
   1. More than **ONE** patient/person at a time on the stretcher/carriage
   2. More than **ONE** rider/person on the bicycle at a time(nobody on the carrier)
   3. Dead bodies of humans or animals
   4. Maize or other food stuff
   5. Charcoal
   6. Boxes of tomatoes or other food stuff
   7. Fire wood
   8. Heavy travelling bags
7. Ensure that the bicycle ambulance is serviced regularly and is not parked broken.
8. It’s the responsibility of the Communities/Zones to source funds for maintenance and purchase spanners and spares needed.
9. Always ensure that the bicycle ambulance is parked in a secured place and is not parked in the sun or rain and left exposed to the weather.
10. It is the responsibility of the Communities, Zones, NHC’s and/or PHC’s to ensure every member of the community (expecting mothers) has equal access to the use of the bicycle ambulance.

**No expectant mother should be denied the use of the bicycle ambulance to access a health centre.**

**Equal access to the community based ETS must be promoted by all members of the community. No expectant mother needing transport to access health service should be denied use of the ox-cart.**

## 5.3 Annex 3: Example ETS Rider Logbook



## 5.4 Annex 4: Diagram of Bicycle Parts

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## 5.5 Annex 5: Maintenance Record Form

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Type Repairs Done** | **Spare Part(s) Replaced** | **Cost** |
| **21/06/17** | **Service** | **1.Chain**  **2.Front tube** | **1. K40.00**  **2. K 22.50** |
| **21/08/2017** | **Welding on the trailer** | **None** | **1. K120.00** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. Chama, Chitambo, Serenje, Mongu and Mkushi [↑](#footnote-ref-1)
2. More MAMaZ Endline survey report 2016 [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)
4. The table and its contents are extracted from the MAM CHV training manual [↑](#footnote-ref-4)
5. An example of a logbook can be found in Annex 3. [↑](#footnote-ref-5)