Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa
ACKNOWLEDGEMENTS

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Patients living on the farms in musina
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EXECUTIVE SUMMARY

Step 1: a patient-held record, the “Health Passport”:
Patients who test HIV positive are provided with a patient-held health record, the “health passport” documenting their current treatment and health status.

Step 2: identifying alternative treatment sites, the “Road Map”:
When patients are started on ART an alternative treatment site is identified close to their home village and the contact details of the site is recorded in the patient held passport.

Step 3: anticipating travel, at every visit:
All patients are asked about their travel plans at every visit from the day of diagnosis. These plans are documented in the patient’s file.

Step 4: a “safe travel pack” (buffer stock, tail protection and transfer letter):
All patients planning to travel for 2 weeks or more are issued with three months of ART plus an emergency pack of tail protection (a strategy to prevent resistance if treatment interruption is unavoidable). A full detailed transfer out letter is also issued to be taken to receiving ART sites.

Step 5: migrant-adapted treatment counselling:
At each visit in depth counselling is given to explain possible changes in regimen and in the formulations used either side of the border.

Step 6: Questionnaire for returning patients:
Patients returning to the MSF mobile clinic must inform the clinician/counsellor that they are a returner and a short questionnaire is filled out on their treatment behaviour while away.

Step 7: Adapt monitoring to mobility, the “temporary transfer out”:
A classification system was created in order to follow mobile patients. Patients planning to travel for two weeks or more are classified as a temporary transfer out (TTFO) and those who decide to go back permanently to another site are classified as a transfer out (TFO).

Migrant populations are especially vulnerable to HIV and TB. They are at higher risk of infection, face challenges in accessing care, and have a higher risk of poor adherence, treatment interruption, loss to follow-up and treatment failure. High mobility is inherent to Southern Africa, epicentre of the HIV/TB pandemic, yet health systems in the region are not adapted to ensure continuity of chronic care for migrants. Knowing these patients will be crossing between South Africa and Zimbabwe two to five times a year, a specific model of care was developed to ensure continuity of chronic care for these highly mobile populations. This report outlines the elements of this strategy and demonstrates the benefits of these tools and strategies that cater to the needs of highly mobile populations in need of chronic care. We hope this model of care, or an adaptation thereof, will help health systems across the region ensure continuity of chronic care among migrant populations.

Adapting the provision of HIV care to mobility
EXECUTIVE SUMMARY

Pre ART
From November 2010 to February 2012 3310 patients were tested for HIV with 769 (23.2%) testing HIV positive. 488 patients were enrolled in Pre ART care.

Impact of decentralized services
Introduction of mobile HIV/TB services resulted in a 37% increase in newly diagnosed patients receiving a CD4 result and a 32% increase of eligible patients initiating ART.

ART Programme
ART initiation began in November 2010 and up to February 2012 410 patients have been initiated on ART.

Retention in Care
Retention in care was 93% (95% confidence interval [CI] 88.1-96.3%) and 90% (95%CI 78.2-96.7%) at 6 and 12 months respectively. In light of the high proportion of migrant workers this compares favourably with other cohorts in South Africa and Zimbabwe.

Virological Outcomes
At 6 and 12 months 90% (95%CI 86.3-99.0%) and 92% (95%CI 75.2-97.0%) respectively were virologically suppressed (< 400 copies/ml) also supporting that adherence to treatment was possible in this highly mobile population. This rates again compare favourably to other cohorts.

Temporary Transfer Out Outcomes
Of the documented temporary transfer outs (TTFOs) 68% returned to care and remained on their ART regimen; whilst 3% returned late they had accessed ART in Zimbabwe; 12% of the TTFOs returned late and had been forced to stop ART but the majority (10%) had stopped with tail protection; 17% had not returned three months or more after their return date.

Lack of harmonized treatment regimens and protocols
Different treatment protocols and regimens between countries challenge continuity of care for migrants. Both patients and health care providers are often unaware of the differences across countries. MSF staff at the clinics work on treatment literacy with patients to inform them about the differences in the regimens and formulations of their drugs so that they are able to continue treatment.

Patient documentation lost or stolen
Individuals attempting to cross the border between Zimbabwe and South Africa irregularly are prone to a myriad of risks. Often individuals lose the majority of their belongings including money, health documentation, and chronic medication when being robbed by criminal gangs along the border. In addition to treatment interruption, restart of ART is delayed when patients are unaware of their medical history and treatment regimen.

Stigma and discrimination
Patients with HIV and TB continue to experience high levels of stigma stemming from a variety of factors, including inadequate access to information and fear and prejudice in addressing socially sensitive issues, such as sexuality and gender identity. In addition, foreign migrants face the scourge of
xenophobia, and have to face a double burden of stigma, both because of their HIV status and their nationality, often forcing them underground and discouraging health seeking behaviour.

**Defaulter tracing**
High mobility between farms and between South Africa and Zimbabwe complicates defaulter tracing. Use of mobile phones for tracing was difficult due to the presence of different networks and need for roaming.

**Planning the way forward**
The inadequate harmonization and coordination of disease management guidelines, border health services and cross-border referral networks all challenge the continuation of care for highly mobile populations and are risks to disease transmission and the development and spread of drug resistance. Regional harmonization of treatment protocols and guidelines will facilitate continuity of care through simplification of treatment provision for both patients and health care providers as the region moves towards a single, TDF-based fixed dose first-line regimen. This would also allow the consideration of pooled procurement by SADC states as a means to ensure sustainable supply and reduced treatment costs. The success of patients being able to continue chronic care despite high rates of mobility is highly dependent on countries in the region adopting harmonized treatment tools and the strengthening of monitoring and evaluation systems. Furthermore, there is a need to strengthen the referral system between ART sites in the region, in light of high rates of migration to avoid patients being lost to care. Integration of the model of care described here, or an adaptation thereof, into ART and TB programmes across the region would improve treatment outcomes for cross-border, as well as in-country migrants.
Introduction

The HIV and TB epidemics have had a devastating impact across Southern Africa. With sub-Saharan Africa home to 68% of the global HIV burden\(^1\), mobile populations are particularly vulnerable with both increased rates of infection of HIV and TB and barriers to accessing care. Providing effective treatment to migrants hence poses a huge challenge to the health service. Challenges to ensuring continuity of HIV care across national borders stem from legal and administrative barriers limiting access for foreign nationals, costs incurred (including travel costs), language and cultural barriers, discriminatory attitudes of health care providers, and a lack of regional harmonization of protocols for HIV and TB care. Migration in general complicates chronic care, especially when high levels of adherence are necessary to prevent drug resistance and treatment failure. Many of the challenges to continuity of chronic care apply to in-country migrants as much as to cross-border migrants. Southern Africa combines the highest burden of HIV and TB with very high levels of migration, generating a perfect storm, yet health systems are not adapted to this reality. In light of this reality there is an urgent need to develop tools addressing the specific needs of migrants to ensure continuity of HIV and TB care.

In December 2007, MSF launched a project to provide primary health care to Zimbabwean migrants, asylum-seekers, and refugees in Musina, Limpopo Province, South Africa. Musina, formerly a relatively prosperous mining town, lies on the South African-Zimbabwean border. Musina-Beitbridge is Africa’s busiest commercial border, located 530 km north of Johannesburg and 545 km south of Harare. The estimated population of Musina municipality is 57,000, where 21,000 live on approximately 50-60 surrounding farms. It is likely that tens of thousands of Zimbabweans in the area are unaccounted for in these estimations. Musina serves as a “transit point” through which vast numbers of Zimbabwean refugees, asylum-seekers and migrants pass to obtain temporary legal documentation and/or to prepare for their journey to major urban centres. The majority of Zimbabweans are concentrated in South Africa’s major urban cities including Johannesburg, Durban, Cape Town and Polokwane. However, large numbers remain in the rural areas close to the border (in keeping with traditional “rural to rural” and “city to city” migration patterns), trying to find work as cheap labourers in the farms around Musina.

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*Migration patterns in the region*
Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

MSF’s programme in Musina began by providing primary health care via mobile medical teams visiting six farms along the border with Zimbabwe (population 7500) on a weekly basis. Whilst providing primary health care, including HIV testing, the unmet need for HIV/TB services became clear. Compared to Musina district, where 14% of people who tested were HIV-positive, the HIV prevalence among farm workers who tested was 25%.

Only half of those in need were initiated on antiretroviral therapy (ART), as treatment could only be accessed at Musina district hospital, up to 50km from the furthest farm.

We describe here a model of HIV & TB care for migrants, piloted in farms along the border between South Africa and Zimbabwe, and highlights the tools that have been developed to ensure continuity of care in mobile populations. Many of the lessons learned could be applied to HIV and TB programmes in the region.

HIV and Migration

Rates of HIV in both South Africa and Zimbabwe rank amongst the highest in the world South Africa 16.6%, Zimbabwe 15%. A recent IOM HIV adult prevalence survey conducted on farms in Limpopo found a 39.5% HIV prevalence amongst 30-39 year old farm workers on 23 farms in Limpopo which included 5 farms in Musina, where the HIV prevalence was established at 28.1%, approximately twice as high as the surrounding Vhembe district.

Migrant populations are especially vulnerable to HIV and TB. They are at higher risk of infection, face challenges in accessing care, and have a higher risk of poor adherence, treatment interruption, loss to follow-up and treatment failure. This relationship was recognized early on by the United Nations during the General Assembly Special Session on HIV/AIDS in June 2001, that pledged for countries to “implement national, regional and international strategies to facilitate access to HIV/AIDS prevention programmes for migrants and mobile workers, including the provision of information on health and social services.”

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5 United Nations General Assembly, Declaration of Commitment on HIV/AIDS, June 2001
Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

Increased vulnerability to infection may result from:

- The risks of HIV acquisition whilst crossing a border, including the experiences of rape and human trafficking
- The increased likelihood of engaging in risky sexual behaviour when separated from their partners for prolonged periods of time exacerbated by the limited availability of condoms

Barriers in accessing health care:

- Mobility often results in social isolation, limiting their access to health information and knowledge of how to access health services.
- Language barriers preventing migrant workers accessing services
- Reluctance of health care workers to provide care to non-nationals
- Legal and administrative barriers (provision of care to migrants)

Challenges with adherence, treatment interruption, loss to follow-up and treatment failure:

- High mobility results in increased need for transfer out, often to facilities in another country or province. Given the limited availability of adapted information and tools, transfers out often result in treatment interruption as patients struggle to find a facility at their destination point, detailed clinical information is often not available and health staff at receiving facilities are not always aware of different treatment protocols in the region.
- Health systems are not adapted to the specific needs of migrants. Counselling doesn’t pre-empt the common situations where a patient runs out of treatment (and needs to stop safely), has to leave the area within a short time frame or gets arrested and deported, often without access to medication.
- A lack of harmonized treatment regimens among countries in the region. Migrants moving from South Africa to Zimbabwe e.g. need to switch from a tenofovir-based first line to a stavudine-based first line.
- Restrictions on the duration of ART that may be prescribed which does not consider the needs of migrant workers who may travel for longer periods (e.g. only one month allowed in Mozambique and Lesotho).

High rates of mobility not only affects risk to HIV infection but has the potential to affect adherence to treatment. Poor adherence to treatment severely impacts treatment success and is a strong predictor of disease progression and death. The impact of mobility on poor adherence stems from disruptions in medication supply as a result of movement, disruptions in daily schedule of treatment, conflicting demands on the mobile individual’s time, and a loss of social support. A study conducted in Botswana to assess adherence among people living with HIV found that in addition to financial challenges, forgetting to take medication, and running out of treatment, 13% of patients cited travel or migration as a reason for missing their treatment. Furthermore, 54% of the participants cited frequent travel or migration and challenges with having to travel far distances to access treatment.


Médecins Sans Frontières’ (MSF) previous work in Lesotho, where 12% of the patients in the HIV programme were migrant workers found that the most common reason for defaulting among the population was migration to South Africa for work. The rates of loss to follow-up between migrants and non-migrants were similar after 3 months in care, but between 3-6 months after initiating ART, migrants were almost 3 times more likely to default, and after 1 year, migrants were almost 7 times more likely to default treatment.

Specific barriers to accessing and continuing HIV care for the farm workers in Musina identified by the MSF mobile teams included:

- Long distances to HIV/TB service points located in Musina town (up to 50km)
- Cost of transport to such service points
- Loss of wages for time off work and risk of losing employment by taking time off work
- Long waiting times at the ART clinic in Musina
- Long ART preparation time at Musina Hospital, requiring up to five visits to initiate ART

“Because we could not get ARVs in the farms, I was started on ART at Fountain of Hope (FOH) HIV clinic at Musina Hospital. It was expensive for me and my husband to continue getting my drugs from FOH because we could not afford the monthly transport fees. Then the good news came that MSF was now providing ARVs here in our Maroi farm from 2010. We asked for a transfer to our Maroi clinic and we started getting our ARVs just next door to our compound! MSF have done a great job of bringing treatment to us and we are so happy.” 29 year old female Zimbabwean farm worker.

“For them to have us visit them once a week must be wonderful. Imagine your GP visiting you once a week just to bring you your chronic medicine and to help you if you are ill. AMAZING!!! No more extra expenses traveling to and from the doctor and this way you also get to know your doctor/patient better and build a good relationship. We also get to test new patients for HIV and the existing patients that are HIV negative, every three months. The implementation of this project was no mistake. It changed thousands of lives for the better since the beginning and will continue changing lives. And I’m not only referring to our patients.” Nurse on farms.

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Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

Musina sub-district is served by 4 public health facilities: Musina District Hospital and 2 clinics in Musina town, and one clinic 120 km east of Musina. The rest of the rural areas are theoretically covered by three mobile Department of Health (DOH) clinics that visit the sites on a monthly basis; these services are however somewhat infrequent and, due to human resource constraints, often provide a limited service.

In September 2007, the National DOH released a Revenue Directive stating that refugees and asylum seekers, with or without a permit, would be exempt from paying for basic health care, including ART services. Furthermore, the previous HIV & AIDS and STI Strategic Plan for South Africa, and the newly developed 2012-2016 plan, made specific reference to the rights of refugees and migrants to access care.

Despite legal provisions allowing both undocumented and documented migrants access to care, service utilization by these populations remains low. Data analyzed between 2007 and 2008 by the Forced Migration Studies programme on access to public sector care found that less than half of all migrant populations indicated that they ever needed healthcare in South Africa, with Zimbabweans being the group to indicate needing health care the least. A possible explanation for the limited uptake of health services among Zimbabwean populations is the close proximity of the countries; where Zimbabweans may return home when healthcare is needed. However, given that asylum seekers may risk going back home to receive care despite legal restrictions on returning to their countries, may serve to indicate fear in accessing care in the public sector. Furthermore, 30% of those surveyed indicated that they had problems accessing care in the public sector, with documentation status relating to the likelihood of experiencing a problem. 38% of undocumented migrants indicated problems while 31% of asylum seekers and 24% of refugees reported problems. Undocumented Zimbabweans, for fear of deportation, and in light of increasingly restrictive immigration policies in South Africa, including the lifting of the moratorium on deportations, are often forced to go ‘underground’, thereby severely impacting their access to and utilization of public sector health services.

Access to Healthcare in Musina and beyond

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10 Ref: BI 4/29 REFUG/ASYL 8 2007
11 Migrant Rights Monitoring Report Data, April 2008
Model of care for provision of ART to migrants

From November 2010, MSF integrated HIV/TB services into their mobile clinics targeting farm workers in 6 farms in Musina. All six farms have access to TB screening, HIV testing, diagnosis and treatment of OIs, ART and TB preparation and initiation by nurses.

“My sister advised me to get tested for HIV. I went to FOH in 2009 where I tested HIV positive. My CD4 was taken in FOH but it took 3 months for me to get the results. I was travelling to Musina frequently and this was straining me financially. You know we don’t get paid good salaries here in the farms. I was started on ARVs in FOH. When MSF started providing ARVs here in the farms, I asked to be transferred. This was a great relief for me because when I was going to Musina, my employer would not pay me for the days I went to collect for my supplies. It was an issue of no work, no pay. I also joined the support group where we share our experiences with other patients who are HIV positive. I have just had my viral load taken and I will be back to collect my results.” 29 year old female Zimbabwean farm worker.

Defaulter tracing, in which patient support teams go onto the farms and try to trace patients who miss their appointments, takes place along with the development of support groups held on the farm compounds. Patients living on the farms who were currently accessing HIV care at Musina Hospital were down referred to the mobile clinics and all new patients eligible for ART were initiated directly on the farms.

Knowing these patients will be crossing between South Africa and Zimbabwe two to five times a year a specific adherence strategy was developed which is central to this model. The key elements of this strategy are outlined below:
“I usually go home to Zim once a year during Christmas holidays. Every time I visit the clinic, the nurses and counselors ask me if I will be travelling from the farm. This is because when one is travelling outside the farm, the team organize a referral letter and some drugs. In March this year, I had to go home for 2 weeks. I went to the mobile clinic and told them I wanted to go home. I first had counseling by a counselor then I was seen by a nurse. I was given three months supply of my medication. The package included a referral letter, what they called an emergency pack and a self addressed envelope.

They said I must only use the emergency pack as a last option when I fail to get my supply whilst in Zim. I went to Zimbabwe. I did not go to any health facility in Zim as I had enough drugs from my MSF mobile clinic. I kept taking my medication as scheduled. I went back to the clinic in Kayemayema on my review date. I reported that I was back from Zim. As for now I am well and have since joined the Support Group in Kobi. I am now a trained Facilitator. I am happy with the arrangement as this did not disrupt my drug supply during my visit in Zim.”

35 year old male Zimbabwean farm worker.
All patients who are tested and found to be HIV positive are issued with a patient held “health passport” (See annex 1). This document includes all details of their current treatment and laboratory investigations.

From the day of diagnosis all patients have an alternative ART site identified close to their home village. Contact details of this ART site are then recorded in the patient held passport. The Zimbabwean MoH provides an ART road map where contact details of ART clinics can be found. (See Annex 2) Similarly, the HIV-911 database created by the Centre of HIV/AIDS Networking (HIVAN) that contains details on over 12 000 health and social welfare support services across South Africa.

To ensure continuity of care and prevent treatment interruptions, all patients are asked about their travel plans at every visit from the day of diagnosis. These plans are documented in the patient’s file.

The art monitoring system was slightly adapted in to appropriately monitor and evaluate the treatment outcomes of mobile populations accessing services at MSF’s mobile clinic. All patients planning to travel for two weeks or more are classified as a temporary transfer out (TTFO) in the register. All patients who decide to go back permanently to another site are classified as a transfer out (TFO).

**STEP 4**

Three months of ART plus an emergency pack of tail protection for travelling patients

All patients planning to travel for 2 weeks or more are issued with three months of ART plus an emergency pack of tail protection (a strategy to prevent resistance if treatment interruption is unavoidable). A full detailed transfer out letter is also issued, should the patient need to access services elsewhere. (see annex 3)

**STEP 5**

Counselling session for patients preparing to travel

In depth counselling to explain possible changes in regimen and in the formulations used either side of the border is given at each visit. Patients are encouraged to take the same treatment and counselled on the possibility that the drugs may change in appearance but essentially remain the same or the treatment may be adapted according to what is available and what the patient is currently on. (see annex 4)

**STEP 6**

Form for returning ART patients

Patients returning to the MSF mobile clinic must inform the clinician/counsellor that they are a returner and a short questionnaire is carried out. (See Annex 5). Information is recorded on whether patient’s accessed ART at another site and any change in regimen is noted. If there was an interruption of ART and whether tail protection was used is indicated in the register, returning form and patient file.

**STEP 7**

The art monitoring system was slightly adapted in to appropriately monitor and evaluate the treatment outcomes of mobile populations accessing services at MSF’s mobile clinic. All patients planning to travel for two weeks or more are classified as a temporary transfer out (TTFO) in the register. All patients who decide to go back permanently to another site are classified as a transfer out (TFO).
**Programme Outcomes**

**Pre ART**
From November 2010 to February 2012 3310 patients were tested for HIV with 769 (23.2%) testing HIV-positive. 488 patients were enrolled in Pre ART care.

Patients not eligible for ART are provided with a pre-ART package of care, including 6 monthly clinical follow-up, CD4 testing and the provision of cotrimoxazole and isoniazid prophylaxis. This package of care is aimed to retain Pre-ART patients and ensure that patients are enrolled on ARV treatment as soon as they become eligible.

**Impact of decentralized services**
Introduction of mobile HIV/TB services and point of care CD4 testing resulted in a 37% increase in newly diagnosed patients receiving a CD4 result and a 32% of eligible patients initiating ART.

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<th>Access to CD4 testing</th>
<th>Access to ARV’s</th>
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<td>CD4 RESULTS GIVEN</td>
<td>ART ELIGIBILITY</td>
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<tr>
<td>Before: 951 (44%)</td>
<td>TO ART INITIATION</td>
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<tr>
<td>After: 594 (81%)</td>
<td>INITIATED ART</td>
</tr>
<tr>
<td>% Increase After</td>
<td>Before: 193 (51%)</td>
</tr>
<tr>
<td>37%</td>
<td>After: 188 (83%)</td>
</tr>
<tr>
<td></td>
<td>% Increase After</td>
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<td></td>
<td>37%</td>
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</table>
The figure 1 represents increased access to CD4 testing and ART initiation through the decentralization of services on the farms. Prior to the provision of HIV/TB care by the mobile teams, 44% of HIV positive patients received their CD4 test results. This increased to 81% of patients when they were able to receive their results when accessing the service on the farms. Increased access to CD4 testing also translated into increased proportions of patients initiating treatment. Where ART initiation was only available in Musina, 51% of eligible patients were able to initiate treatment, whereas 83% of eligible patients were able to initiate treatment when the services were available on the farms.

**ART Programme**

ART initiation began in November 2010 and up to February 2012 410 patients have been initiated on ART.
Retention in care was 93% (95% confidence interval [CI] 88.1-96.3%) and 90% (95%CI 78.2-96.7%) at 6 and 12 months respectively. In light of the high proportion of migrant workers this compares favourably with other cohorts in South Africa and Zimbabwe.

At 6 and 12 months 90% (95%CI 86.3-99.0%) and 92% (95%CI 75.2-97.0%) respectively were virologically suppressed (< 400 copies/ml) also supporting that adherence to treatment was possible in this highly mobile population. These rates again compare favourably to other cohorts (Fig 4).
Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

Of the documented temporary transfer outs (TTFOs) 68% returned to care and remained on their ART regimen; whilst 3% returned late but had accessed ART in Zimbabwe; 12% of the TTFOs returned late and had been forced to stop ART but the majority (10%) had stopped with tail protection; 17% had not returned three months or more after their return date.

Ensuring that those TTFOs who did not return reached their identified ART site was not possible. Better communication between ART sites should be encouraged but in the absence of a regional unique identifier the monitoring of the success of a transfer out at country or regional level is not currently feasible.

**Paediatric HIV Care and PMTCT**

Paediatric HIV care is also provided by the mobile teams. Children started being initiated on the farms in the second quarter of 2011. From November 2010 to February 2012 32 children have been initiated on ART (this includes all children from ages 0 to 15). This low number of initiations of children is reflective of the nature of the working environment, where the majority of migrant farm workers do not bring their children who are above 5 years of age with them on the farms. Only children who are under 5, especially the ones breastfeeding are brought along. Paediatric protocols in South Africa and Zimbabwe use different first line regimens (ABC/3TC/Lopinavir/Ritonavir in South Africa and AZT/3TC/NVP in Zimbabwe). Lopinavir/Ritonavir syrup also requires refrigeration which in rural settings and for this mobile population poses additional challenges. Due to these differences it was decided to initiate all children on the Zimbabwean regimen.

In June 2011 ANC and PMTCT services were introduced in the mobile teams. Implementing the key steps of the counselling model for these women is essential as the majority plan to travel back to Zimbabwe to deliver and often remain for the first few months of the baby’s life. Hence ensuring women complete...
Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

the PMTCT protocol (HAART for those with CD4 < 350 and WHO Option A for those with CD4 > 350)\textsuperscript{14} and that babies are tested according to schedule is a huge challenge.

“When I used to collect my drugs from FOH, it used to cost me R120.00 for the return trip. This was a lot of money considering that my salary was R800.00 per month. When MSF started to provide ARVs here in our farm, I was one of the first patients to get my drugs from their mobile tent clinics. I no longer have to spend money to travel to collect my drugs. I can use that money for other more important things. My baby is healthy and is on PMTCT. Today she turned 6 weeks old and she will be tested for PCR. I know all these terms because I joined a support group where I was later trained as a facilitator. I used to stigmatize other HIV patients but this changed especially when I joined the Maroi support group as I was one of those who are HIV positive. We welcome newly tested HIV positive people in our support group.” 35 year old female farm worker

Challenges

Lack of harmonized treatment regimens and protocols

The lack of harmonized treatment protocols and regimens further challenge the continuation of care among highly mobile populations. Both patients and health care providers are often unaware of the differences across countries. MSF staff at the clinics work on treatment literacy with patients to inform them about the differences in the regimens and formulations of their drugs so that they are able to continue treatment. In South Africa the same drug may be presented with a number of different trade names in addition to being packaged differently, varying from plastic containers to pre-packed envelopes. This further confuses patients who often identify their drugs by the packaging it is presented in.

The table below highlights the differences between Zimbabwe and South Africa with respect to treatment protocol and drugs.

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<thead>
<tr>
<th>ZIMBABWE</th>
<th>RSA</th>
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<tbody>
<tr>
<td>1. 1st Line regimen: TDF/3TC/NVP (National)\textsuperscript{10} TDF/3TC/EFV only in MSF projects</td>
<td>1. 1st Line regimen: TDF/3TC/EFV</td>
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<tr>
<td>2. Fixed dose drug combinations</td>
<td>2. Individual drug formulations</td>
</tr>
<tr>
<td>3. Generic and Trade names used</td>
<td>3. Trade names used</td>
</tr>
<tr>
<td>4. Patient held documentation</td>
<td>4. No patient held documentation. Patients only hold an appointment card with the of the ART site. Regimen is not identified.</td>
</tr>
<tr>
<td>5. Different terms to highlight HIV positive status: ISD/Code 1</td>
<td>5. Different terms to highlight HIV positive status: RVD</td>
</tr>
<tr>
<td>6. Pediatric regimen AZT/3TC/EFV</td>
<td>6. Pediatric regimen ABC/3TC/EFV above 3 years and ABC/3TC LPV/r below 3 years.</td>
</tr>
</tbody>
</table>

\textsuperscript{14} Option A (zidovudine during pregnancy/infant NVP during breastfeeding for women without advanced HIV disease i.e CD4>350 ; lifelong ART for women with advanced disease i.e CD4<350).

\textsuperscript{15} As of 1 April 2011 Zimbabwe is phasing out d4T, 3TC NVP. Patients initiated before 2009 are being switched to TDF first and only new patients initiated on TDF is pregnant women. All other new patients initiated on D4T as part of phasing in process.
Defaulter tracing
A missed appointment triggers defaulter tracing by peer supporters on the farms. Particular challenges faced in tracing included patients using different names and the high mobility between farms and between South Africa and Zimbabwe. Use of mobile phones for tracing was complicated by the presence of different networks and need for roaming between Zimbabwe and South Africa.

Patient documentation lost or stolen
Individuals attempting to cross the border between Zimbabwe and South Africa irregularly are prone to a myriad of risks. Criminal gangs known as ‘guma guma’ are known to patrol the border in search of human prey. When not victims of sexual violence, many asylum seekers are victims of physical violence, as a result of being forced to cross illegally. Often individuals lose the majority of their belongings including money, health documentation, and chronic medication. If patients are forced to stop treatment, restart of ART is delayed when patients are unaware of their medical history and treatment regimen. In such instances, staff make contact with their ART site in Zimbabwe in an attempt to find the patient’s ART regimen and medical history.

Stigma and discrimination
Patients with HIV and TB continue to experience high levels of stigma stemming from a variety of factors, including inadequate access to information and fear and prejudice in addressing socially sensitive issues, such as sexuality and gender identity. Patients are often uncomfortable to disclose their status for fear of losing employment and experiencing violence and discrimination in the community. Often farm workers bring their employees to the clinic to be tested but confidentiality of results between the clinician and the patient is essential to maintain.

TB and MDR Management
No clear model exists to ensure the continuity of TB treatment among highly mobile populations. Self-administered treatment and monthly supply of TB drugs have become routine given the impossibility to ensure daily observed treatment in the farms. Travel is not recommended given the shorter duration of treatment (6 to 8 months for drug-sensitive TB) When it is impossible to prevent travel, one of the major challenges is the ability to obtain authorisation to issue longer supplies of TB medication from the TB programme. Ensuring similar flexibility as developed with ARV supplied should be possible within the TB programme.

Infection control is of particular concern on the farms as most dwellings do not have appropriate cross-ventilation and rooms made for one person are often shared by 3 to 4 people, further fuelling the risk of transmission.
Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

Planning the way forward

The inadequate harmonization and coordination in disease management guidelines, border health services, cross-border referral networks, and disease control all challenge the continuation of care for highly mobile populations and are risks for disease transmission and the development and spread of drug resistance. SADC aims to foster economic cooperation in the region through the free movement of goods, services, and people, facilitated through convenient transportation. As a result, infectious disease control and prevention can no longer be considered as solely a country owned responsibility but rather, requires cross border cooperation and collaboration. These challenges must be addressed appropriately with comprehensive surveillance, care and treatment. In light of this, the Southern African Development Cooperation (SADC) countries put forward a successful Round 9 proposal to the Global Fund in 2009 to improve the coherence of the regional response to the HIV epidemic and to reduce HIV incidence and morbidity among mobile populations and affected populations.

Possible steps in strengthening the services provided for this vulnerable group include:

1. Regional harmonization of protocols

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>REGIMEN</th>
<th>PRESENTATION OF DRUGS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SA</strong></td>
<td>TDF/3TC/EFV</td>
<td>1 pill TDF; 2 pill 3tc; 1 pill EFV = 4 pill /day</td>
</tr>
<tr>
<td>Lesotho, Swaziland, Botswana, Mozambique</td>
<td>TDF/3TC/EFV</td>
<td>One pill od FDC</td>
</tr>
<tr>
<td><strong>Zimbabwe</strong></td>
<td>TDF/3TC/NVP</td>
<td>National TDF /3TC od+ NVP bd = 3 pills a day</td>
</tr>
<tr>
<td></td>
<td>TDF/3TC/EFV only in MSF projects</td>
<td>(available in a co-blister)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One pill od FDC (only in MSF sites)</td>
</tr>
<tr>
<td><strong>Malawi</strong></td>
<td>d4T/3TC/NVP</td>
<td>One pill bd FDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TDF /EFV will be one pill od</td>
</tr>
<tr>
<td><strong>Zambia</strong></td>
<td>TDF/FTC/NVP or EFV</td>
<td>TDF /3TC 1 pill od + NVP 1 pill bd = 3 pills a day</td>
</tr>
<tr>
<td><strong>Tanzania</strong></td>
<td>AZT/3TC/EFV or NVP</td>
<td>AZT/3TC 1 pill bd +EFV od</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women of childbearing age NVP bd</td>
</tr>
</tbody>
</table>

16 Or NVP
17 Phasing in TDF: Most patients still on AZT
18 As of 1 April 2011 Zimbabwe is phasing out d4T, 3TC NVP.
19 TDF/EFV being phased in
Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

Regional harmonization of treatment protocols and guidelines will facilitate continuity of care through simplification of treatment provision for both patients and health care providers as the region moves towards a single, TDF-based fixed dose first-line regimen. This would also allow the consideration of pooled procurement by SADC states as a means to ensure sustainable supply and reduced treatment costs.

2. Review and harmonization of tools (health passport, transfer out forms, etc.)
The success of patients being able to continue chronic care despite high rates of mobility is highly dependent on countries in the region adopting harmonized treatment tools that help facilitate cross-border (whether countries or provinces) referrals and the strengthening of monitoring and evaluation systems (See annex 1-5). Adherence counselling should include preparation for migration (see annex 4). A harmonised patient held record (health passport), transfer out forms and maps of treatment sites should be adopted across the region. The concept of temporary transfer out would be a useful field to add to the monitoring and evaluation of most ART programmes.

3. Strengthening of the referral system between ART sites within the region
In light of the high mobility of populations accessing ARV treatment in the region, there is a need to strengthen the referral system between ART sites in the region. Poorly functioning cross-border patient referral systems result in patients being lost to care when they cross borders and as a result, are often re-started on treatment as new patients which increases the risk of drug resistance and poor health outcomes. Given the fact that a large number of health facilities in the region are under resourced, both in terms of human resource capacity and the availability of electricity and phone lines, communication between health facilities is often a large challenge. A referral system that is simple to implement in light of these constraints is essential for the continuity of care of mobile patients who require follow up.

4. Need for a community-centred approach
As the number of patients on treatment continues to increase, models of care are being piloted to improve adherence by improving the convenience of treatment provision to patients and alleviating the burden on the health system. Such models, known as community adherence groups, entail the provision of chronic ARV treatment to stable patients in the community rather than requiring frequent unnecessary visits on the day of the mobile clinic as is the case on the farms, or health clinics in other settings such as Mozambique where the model is being rolled out nationally. This would also serve to ensure that the health care providers are able to provide effective services to sick populations who require more intensive clinical care. Furthermore, while services are decentralized to the farms through the use of mobile services, farm workers still have to take time out from their work day to access the services. The provision of pre-packed ARVs within the already existing community support groups on the farms would allow for patients to receive their drugs outside of working hours in addition to receiving adherence support from other patients.

Providing antiretroviral therapy for mobile populations: Lesson learned from a cross border ARV programme in Musina, South Africa

Conclusion

The high mobility that exists between and within bordering countries in the Southern African region is as a result of poverty, high unemployment, political instability, and differential economic opportunities across the border, where mobility has been necessary for the economic survival of families. As countries in the region begin to take bold commitments and national ownership to ensuring universal access to care, the needs of their migrant and mobile populations must not be overlooked. Currently, no adequate mechanism for health care facilities exist to easily provide services for cross border patients, with a lack of regional harmonization of treatment protocols and poor referral networks. Practical solutions to addressing the needs of mobile populations, to reduce the risk of treatment interruption and facilitate continuation of care among mobile populations are essential in order to address the reality care in the Southern African region. The cross border model of care draws on the use of simple and adapted tools including a patient health passport, documentation of travel plans, in-depth counseling about different drug formulations, regimen changes and use of tail protection along with provision of a road map of ART treatment sites in the different countries. Early outcomes of the model demonstrate good retention with under 20% of patients being lost to care and high rates of adherence to treatment. The concurrent challenges of high mobility amidst extremely high rates of HIV prevalence can no longer be neglected. These tools are easy to implement and have the potential to cater to the health needs of populations on the move.
ANNEXES
# ANNEX 1: PATIENT HEALTH PASSPORT

## FRONT

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
<th>Review date</th>
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<tr>
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<table>
<thead>
<tr>
<th>ZIM N°</th>
<th>BA N°</th>
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</table>

### ART/FIAD PATIENT TREATMENT CARD

- **Take your tablets daily for life.**
- **Bring all your tablets for checking on review dates.**

### Patient Details

- Surname: ____________________________
- First Name: ________________________
- DOB: ____________________________
- Age: ____________________________
- Gender: ____________________________

### Physical Address: ____________________________

### Phone No: ____________________________
### Health Facility in RSA: ____________________________
### Health Facility in Zim: ____________________________

### Details of Next of Kin/Care giver

- Surname: ____________________________
- First Name: ________________________
- Address: ____________________________
- Relationship to patient: ____________________________

### Fountain Of Hope Muine SA + 27 16 534 0446 Ext 172174
- MSF Muine RSA: +27 16 534 2335
- MSF Bellbridge ZIM: +263 85 230371
- MSF Bellbridge RSA Number: +27 73 120 5749
- MSF Murambinda ZIM: +263 21 25692734
- MSF Harare ZIM: +263 4 745 002
- MSF Johannesburg RSA: +27 11 403 4449
- MSF Cape Town: +27 21 446 1559
- Treatment Action Camero: +27 860 448 911

### TREATMENT REGIMEN

- **A.** Zimbabwe 1st Line (Adults)
  - Tenofovir 300mg orally once daily
  - Lamivudine 300mg twice daily
  - Nevirapine 200mg orally once daily x 2 weeks
  - Then 200mg orally twice daily

- **B.** South Africa 1st Line Adults
  - Tenofovir 300mg orally once daily
  - Lamivudine 300mg twice daily
  - Efavirenz 600mg orally once daily at night

- **C.** State if any other regimen
  - 

### Prior ART

- **Transfer in (with records)**
- **PMTCT Only**
- **Earlier ARVs (No records)**
- **None**

### Prior TB Therapy [Circle]

- YES
- NO

- **If Yes, Number of episodes**
- **If Yes, CAT 1 or CAT 2**
  - CAT ______ Start Date: ______ / ______ / ______
  - CAT ______ Start Date: ______ / ______ / ______
  - CAT ______ Start Date: ______ / ______ / ______

### NB: For children use appropriate dosages

## BACK

### ART (Indicate the ARV drug)

<table>
<thead>
<tr>
<th>Drug (Single Dose)</th>
<th>Fixed Dose Combination (FDC) Dose</th>
<th>Start Date</th>
<th>Stop Date</th>
<th>Reasons for stopping</th>
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<tbody>
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</table>

### Cotrimoxazole Prophylaxis

### AZT Prophylaxis

### Fluconazole Prophylaxis

### INH Prophylaxis (IPT)

### Other

### Year | Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec
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</tbody>
</table>

### Baseline CD4 Date: / Peak CD4 Date: / Last CD4 Date: / Last Viral Load Date: / |

### DATE

<table>
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<tr>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR CL</td>
</tr>
<tr>
<td>ALT</td>
</tr>
<tr>
<td>CD4</td>
</tr>
<tr>
<td>Viral Load</td>
</tr>
<tr>
<td>OTHER</td>
</tr>
</tbody>
</table>
ANNEX 2: ZIM ROAD MAP

BOOKLET

EXAMPLE OF INSIDE PAGES

AN HIV TREATMENT ROADMAP FOR ZIMBABWE

PRIVATE DOCTORS

For a list of private doctors who have good training in ART treatment and counseling, tell your ART coach or contact SAMH交会.

FOR MORE INFORMATION:

Talk to people who already know ART. They know how it is. Ask for help and advice from local organizations and find information through HIV associations and networks. SAMH交会 can also help you.

BULAWAYO

WILLOWWOOD Clinic, Willowwood Rd, Bulawayo 2437

HARARE

Burchmore Hospital, Burchmore Rd, Harare 2922

University of Zimbabwe HADSI HIV/AIDS Clinic, Lengoni Rd, P.O. Box MP 1726, Harare 2922

HIV TREATMENT SITES — LISTED BY PROVINCE AND CITY

25
ANNEX 3: TRANSFER OUT FORM

TRANSFER OF ART PATIENT TO OTHER ART SERVICE POINT

Transfer to: ____________________________
ART Service Point: ____________________________

District/Metro: ____________________________
DC No.: ______ Province: ______ Country: ______

Tel: __________________________ Fax: __________________________ e-mail: __________________________

PATIENT IDENTIFIER

First Name: __________________________ Surname: __________________________ Date of birth: ______

Sex ______ Tel: __________________________ ART-ID: __________________________

Parent/guardian (if applicable) First Name: __________________________ Surname: __________________________ Tel: __________________________

PATIENT HISTORY

Baseline ART
ART start date: dd mm yy
Regimen: __________________________

Any child regimen: ______
ARV1 ______
ARV2 ______
ARV3 ______
ARV4 ______

Baseline Lab (at start of ART)
CD4 ______ % CD4 ______ cells/mm³

Baseline clinical status (at start of ART)
Weight (kg): ______

Current ART
Current regimen since: dd mm yy
Regimen: __________________________
same as initial: ______
different (specify) ______
ARV1 ______
ARV2 ______
ARV3 ______
ARV4 ______
Any child regimen: ______

ART drugs issued will last until: dd mm yy

Most recent Lab
CD4 ______ % CD4 ______ cells/mm³

Current clinical status
Weight (kg): ______

WHO Clinical Stage: ______

Current prophylaxis:
Cotrimoxazole: No ______ Yes ______
Fluconazole: No ______ Yes ______
Prophylaxis issued will last until: dd mm yy

REASON FOR TRANSFER / other relevant details:

______________________________
Clinician’s name
______________________________
Signature

ACKNOWLEDGEMENT OF TRANSFER
(to be completed by receiving ART service point and posted back by the patient in given pre-stamped envelope)

Received on date: dd mm yy

ART facility name: __________________________
Tel: __________________________ Fax: __________________________

Patient first name: __________________________ Surname: __________________________
ART-ID: __________________________

Clinician’s name: __________________________
Facility Stamp or Clinician’s signature: __________________________
FLIPCHART

ANNEX 4: COUNSELLING TOOL

Transfer out flip chart
How to use that tool?
This tool is supposed to be used for HIV counseling for mobile populations.
The eventual movement of the patients should be assessed during every visit to the clinic by the counselor.
The counselor should give a referral letter to the patient explaining the treatment that he is taking. This letter should be addressed to the health facility where the patient is going.
The counselor should explain to the patient where he can find a health facility in the place where he is going to. He should write this information in the Health Passport.
The patient is supposed to receive treatment for the time he is away and a tail protection.
This tool will help you to explain the tail protection to the patient.
Take time to assess the understanding of the patient.

If you are traveling?
You should go to the clinic before going away. It is important to make sure that you will receive enough treatment for the time you’ll be away.
The doctor/nurse should give you at least 3 months treatment and a referral letter explaining your treatment.
The nurse/doctor will identify with you a health facility where you can go for treatment in the area where you are going.
When you will arrive, you should go to that Health facility and give your referral letter to the doctor/nurse.
The nurse/doctor will give you a stamped envelope for you to send us back the slip at the end of the referral letter filled by the health facility that will provide you ART.
Ideally, you should continue the same ART treatment.
Sometimes, the pills can change color or number but it remains the same treatment. Make sure on how you should take the treatment that the doctor/nurse will prescribe you in the health facility.
In some countries, the ART could change. If it is the case, the doctor/nurse will adapt the treatment according to the one that you were taking before. It is important to take the treatment like it will be explained to you.
If you are in a situation in which you can’t find a solution to get ART, it is really important to stop them a very specific way to lower the risk of resistance.

Different drugs
In your actual treatment you are taking 3 different drugs. Those drugs does not all last for the same time in your blood:
1. One type of drug stays (2 of them) in your body for one day (NARTI).
   (The counselor should give the name of that type medication: d4t (Stavudine), 3tc (lamivudine), etc. Use the name of the drugs taken by the patient and show him which drug it is)
2. The other one (one of them) takes more time to disappear and takes one week to disappear in total of your body (NNRTI)
   (The counselor should give the name of that type medication: Efavirenz or Nevirapine. Use the name of the drugs taken by the patient and show him which drug it is)

It is anyway important to take all the drugs everyday when you are on treatment.
**Annex 4: Counselling Tool**

**Avoid mono-therapy**

When you are taking ART, it is very important to avoid that your body stays with only one drug in it.

If you have only one drug remaining in your body, there is a higher risk to develop resistance. As the HIV has only one drug to fight against, the virus could become stronger and stronger. Then, that drug could not work anymore.

**If you stop all the drugs at the same time**

If you stop the 3 different drugs that you are taking at the same time, HIV may become resistant to the drug that remains longer in the body than the others (NNRTI). If you stop the 3 at the same time, indeed only one remains in the body for one week amongst the 3.

For example, if you are taking two drugs d4T (Stavudine)+3TC (Lamivudine) and Efavirenz. If you stop the 3 drugs at the same time, you will only have Efavirenz remaining in your blood for a week because d4T (Stavudine) and 3TC (Lamivudine) will disappear after one day. Then, there is a high risk to create resistant HIV against that drug.

(The counselor should give the example according to the drugs that the patient is taking, name the drugs (use the name written on the box) and make sure that the patient recognizes all of them).

**How to stop ART in an emergency situation?**

If you don’t have enough of all your different drugs and you can’t find a place for refilling, stop one drug and continue with the others for a week.

Stop first the drug that remains in the body for a week to have less risk of resistance.

You should stop that one and continue to take the other one for one week if you want to protect yourself to become resistant.

For example, if you are taking d4T+3TC+nevirapine, stop Nevirapine and continue d4T and 3TC for one week. (The counselor should give the example according to the drugs that the patient is taking, name the drugs (use the name written on the box) and make sure that the patient recognizes all of them).

That way, you will not have one lone drug fighting HIV in the body. You will have first three and then, at least, two drugs fighting HIV until the end. It is more difficult for the HIV to become resistant against three or two drugs than against one.
Go back to the clinic to restart ART

If you are in a situation in which you have to stop your treatment, as soon as possible, try to find a Health facility to restart your treatment. ART should be taken for life and should not be stopped so the best way to protect yourself would be to restart as soon as possible if you have had to stop.
ANNEX 5: TRANSFER IN LETTER FORM FOR RETURNING ART PATIENTS (PREVIOUS TTFO,TFO OR LTF)

SA patient’s File Nb: …………  Name of nurse (or other) :…………………………
Date : ……./……./……..(dd/mm /yyyy)
Farm: ……………………………..
Name (patient): ………………………………..
Surname (patient): ………………………………..

1. Did the patient attend an ART facility while away? ......................   YES / NO      (circle)
   If yes, which one? ……………………………………………………………………………..Country : SA / Zim / Other (circle)
2. Did the patient discontinue ART since he/she left until today ? …….. YES / NO      (circle)
   If yes (discontinued treatment) for how many months?
   (write date of last visit and circle any month where patient DID NOT receive treatment)

<table>
<thead>
<tr>
<th>Month</th>
<th>201_ JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEPT</th>
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<tbody>
<tr>
<td>201_</td>
<td>JAN</td>
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<td>AUG</td>
<td>SEPT</td>
<td>OCT</td>
<td>NOV</td>
<td>DEC</td>
</tr>
</tbody>
</table>

3. Did the patient use tail protection (ART emergency treatment )? ....... YES / NO      (circle)
4. If YES, when, how and why:

5. If NO, did the patient return the tail protection YES/NO      (circle)
6. If NO, explain what happened to tail protection:

7. Is the patient continuing on his/her original regimen: ........ YES / NO      (circle)
   If YES, he/she is on the same formulation? YES/ NO      (circle)
   If No, he/she changed regimen to………………… ………………..because of one or more of the following reasons (circle):
   No availability of drugs: TDF  AZT D4T  3TC  NVP  EFV (circle)
   ☐ Medical reasons
   ☐ Other
   ☐ Does not know
7.
8. Does the patient still have a (health) passport? YES / NO      (circle)
9. Was the (health) passport used while away? …….. YES / NO      (circle)

(To be completed from the ART register)
1. TFO / TTFO / LTF   (Circle the patient’s category)
2. Date of transfer (last visit for LTF): ……./……./……..(dd/mm /yyyy)
3. Expected date of return (only for TTFO): ……./……./……..(dd/mm /yyyy)
4. Facility referred to: ………………………………………..Country : SA/ Zim / Other (circle)
Providing antiretroviral therapy for mobile populations:
Lesson learned from a cross border ARV programme in Musina, South Africa