



# Impact of transport on access to health services for PLWHA in Namibia

August 2008

BEN Namibia · Yelula/U-khâi · LAC · ICW-Namibia

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Data collection occurred in Ruacana, Outapi, Aussenkehr, Noordoewer, Karasburg and Windhoek, from 6 August to 7 September 2007.

## Participating organisations

Bicycling Empowerment Network Namibia (BEN Namibia)

AIDS Law Unit/Legal Assistance Centre (ALU/LAC)

International Community of Women Living with HIV/AIDS (ICW-Namibia)

## Supported by

Yelula/U-khâi · National Paralegal Association · Geo Business Solutions

# Acronyms

AIDS – Acquired Immuno-deficiency Syndrome

ALU/LAC – AIDS Law Unit / Legal Assistance Centre

ART – Antiretroviral Treatment

ARV – Antiretroviral (medicine)

BEN Namibia – Bicycling Empowerment Network Namibia

CAA – Catholic AIDS Action

KACOSODEC – Karasburg Community Organisation for Social Development and Care

CBHC – Community-based Health Care Programme, MoHSS

CBO – Community-based organisation

CHPS – Community-based Health Planning and Services, Ghana

DAPP – Development Aid from People to People

DOTS – Directly Observed Treatment Short Course

ELCAP – Evangelical Lutheran Churches AIDS Programmes

ELCIN – Evangelical Lutheran Church in Namibia

FABIO – First African Bicycle Information Office

GIS – Geographic Information System

HBC – Home-based Care

HIV – Human Immuno-deficiency Virus

ICW-Namibia – International Community of Women Living with HIV/AIDS Namibia

IFRTD – International Forum for Rural Transport and Development

ITDP – Institute for Transportation and Development Policy

MDG – Millennium Development Goals

MoHSS – Ministry of Health and Social Services

MTWC – Ministry of Transport, Works and Communications

NHIES – Namibia Household Income & Expenditure

NMT – Non-motorised Transport

NPC – National Planning Commission

OVC – Orphans and Vulnerable Children

PLWHA – People Living With HIV/AIDS

UNAIDS – United Nations AIDS Programme

UNDP – United Nations Development Programme

VCT – Voluntary Counselling and Testing

VSO – Voluntary Service Organisation

## Executive summary

Transport has a crucial role to play in increasing Namibian communities' access to health services, particularly for people living with HIV/AIDS (PLWHA). Research conducted by the Bicycling Empowerment Network Namibia in partnership with the International Community of Women Living With HIV/AIDS and the AIDS Law Unit from the Legal Assistance Centre, from August to October 2007, demonstrated that there is strong need for intersectoral initiatives to provide appropriate and affordable transport solutions to patients and health workers in the country.

Funded by Yelula/U-khâi, the National Paralegal Association, and with the technical support of GEO Business Solutions, the assessment took place in two regions. Omusati, a communal region on the northern border with Angola, is one of the most populated regions in the country, with more than 12 people per km<sup>2</sup>. The southernmost region of Karas has less than one person per km<sup>2</sup>, and is formed mostly of commercial farms. The methodology combined qualitative data collected at local and national level, and existing quantitative data. Focus groups and semi-structured interviews were conducted with informants on the demand and service provision side, as well as with local authorities.

As the first Namibian initiative focusing on the impact of transport on health service access, the assessment raised a range of issues that can be addressed at different levels. While the relationship between transport and health is clear, the route to solving transport problems is not so straightforward. Although there is wide awareness in Namibia that lack of transport is a barrier to accessing services, transport itself has always been treated as a peripheral issue. Since transport limitations have not been properly qualified or quantified, addressing them has never been a priority on the national agenda.

Lack of appropriate and affordable transport hinders individual access to health facilities. Transport costs combined with medical fees represent a burden to PLWHA, particularly women, who spend between N\$20 and N\$40 every month to collect medications, directly affecting treatment adherence. Participants in the research consider 5 km the reasonable distance to access treatment, however 77 per cent are more than 20 km away from the nearest health facility. Lack of reliable transport is a barrier to emergency care, when transportation depends solely on patients' capacity to access cash. Rural dwellers pay up to N\$400 to reach hospital in an emergency. Transport

is also an important yet underestimated component in the drug distribution system. Initiatives to promote effective decentralisation such as mobile clinics and improved mobility for healthcare community volunteers are still *ad hoc* and uncoordinated.

Recommendations focus on the need to involve stakeholders at all levels of the supply and demand chain. Cooperation between health and transport policy-makers, local communities, health workers and PLWHA are crucial in order to develop a holistic approach to access to health services.

# I. Introduction

Transport has a crucial role to play in increasing Namibian communities' access to health services. It facilitates individual access to health facilities and the movement of health workers for outreach activities. It enables better servicing of health outposts, timely emergency care, and improved drug distribution. It is intrinsic to the achievement of the Millennium Development Goals (MDG), particularly in reducing child mortality, improving maternal health and combating HIV/AIDS, malaria and other diseases. However, the importance of transport is largely understated or neglected by researchers, policy-makers and development workers.

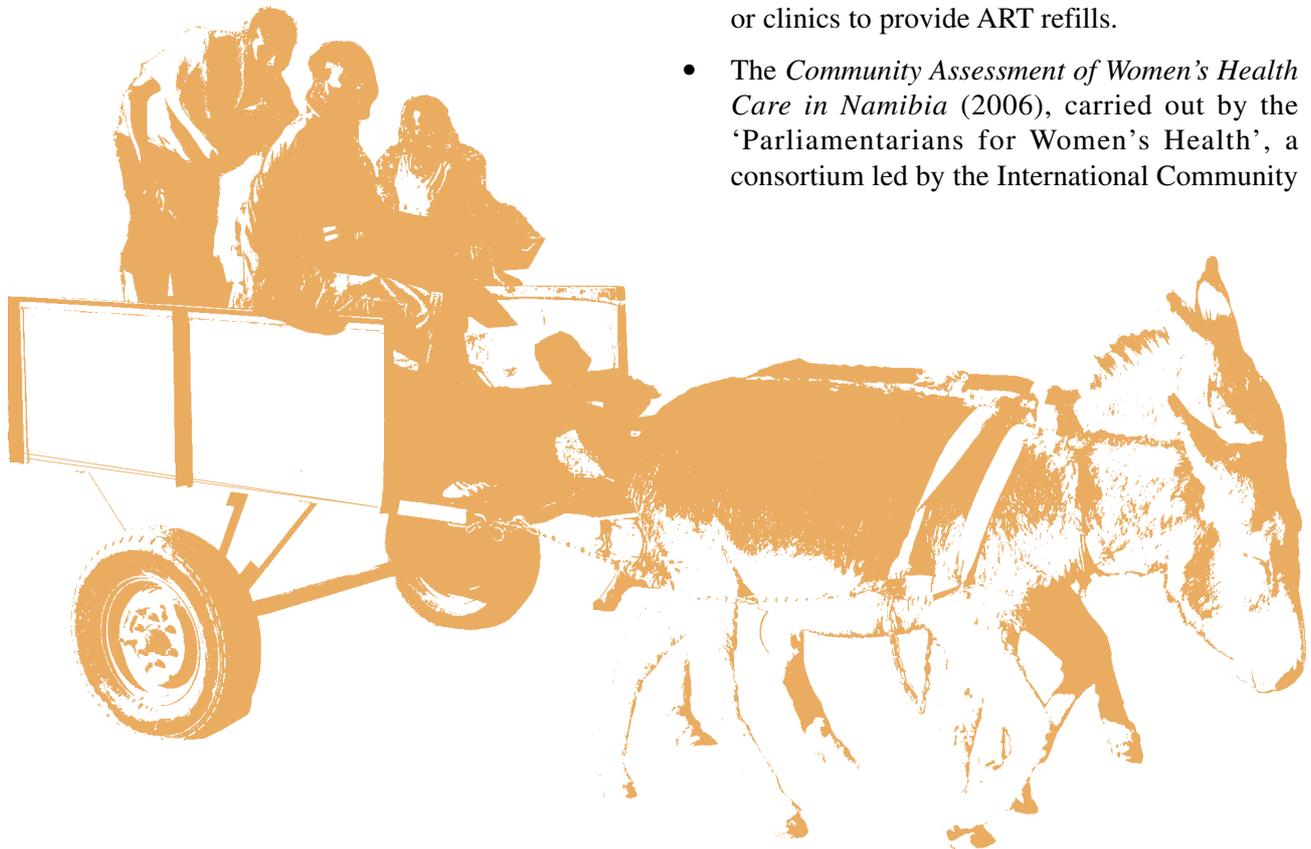
Namibia is one of the youngest and most stable democracies in sub-Saharan Africa. Since its independence in 1990, the Government and the international community have made an enormous effort to change its position as one of the most unequal countries in the world, currently with a 0.6 Gini Coefficient. Despite the efforts to date, the legacy of Apartheid pervades Namibian life and the majority of the black population still lives in poverty. The country has one of the world's lowest population densities with less than two million people in an area of about 2.5 times the size of Germany. More than 60 per cent of the population lives in the Northern regions, and about 65 per cent inhabits rural areas (NHIES 2003-04). What characterises the rural

setting are distances between villages, homesteads, schools, clinics, markets and churches. Namibia is a country of great inequality and vast empty spaces.

Difficulties with distances are exacerbated as Namibia faces the combination of ineffective social services delivery and a 19.9 per cent prevalence of HIV/AIDS amongst the adult population (2006 National HIV Sentinel Survey). The health system has struggled to cope with the number of people admitted to hospitals with AIDS-related illnesses, and the shortage of health workers remains a hindrance. In rural areas, lack of appropriate and affordable transport systems and infrastructure isolates communities from access to health services.

Previous studies examining access to health services in the country pointed to distances and lack of transport as significant hindrances faced by communities.

- The *HIV and AIDS Treatment Survey (2005)*, released by IBIS Namibia, Lironga Eparu and The Rainbow Project, highlighted the negative impact of distance to health facilities on anti-retroviral treatment (ART) adherence for people living with HIV/AIDS (PLWHA) throughout the country. It recommended potential solutions to address the issue such as transport subsidies, free transport, prescriptions for two to three months, or clinics to provide ART refills.
- The *Community Assessment of Women's Health Care in Namibia (2006)*, carried out by the 'Parliamentarians for Women's Health', a consortium led by the International Community



of Women living with HIV/AIDS (ICW-Namibia), identified distance to health facilities as a direct barrier women face in accessing a comprehensive range of health services in Khomas, Kavango and Caprivi regions.

- The assessment on *Barriers for PLWHA in accessing care, support and treatment in Namibia* (2007), conducted by Voluntary Service Organisation (VSO) UK and ActionAid, underlined distance as an important barrier faced by women and girls in Oshana and Ohangwena regions. Forty-one per cent of their sample travels more than 20 km to reach health facilities.
- The *Assessment of Community Volunteers and Community-Based Health Care (CBHC) Programmes* (2006), published by the Ministry of Health and Social Services (MoHSS), emphasised transport as a problem for community-based programmes in all regions, and recommended bicycles as part of the volunteer incentive packages.

Since 2005, BEN Namibia has discussed the relationship between transport and community-based health care initiatives, particularly home-based care (HBC) and support to orphans and vulnerable children. Community-based activities as such constitute an important support to the national health system, alleviating the burden on doctors and nurses, and involving trained volunteers on palliative care, as well as physical and emotional support of people infected or affected by HIV. Partnerships with more than 30 community-based organisations focused on distribution of bicycles and bicycle ambulances to volunteers in Northern, North-Eastern and Central parts of the country. Eighty per cent of Namibia's community volunteers are women and lack of adequate transport solutions, which is one bottleneck for the effectiveness of their work (MoHSS, 2006). Monitoring data from BEN Namibia's partnerships, combined with previous studies on access to health services in the country, reveals that transport has an important role in increasing disadvantaged communities' access to treatment, care and support. It became evident that a focussed assessment, carried out for the first time in Namibia, was needed to clearly establish the impact of transport on access to health services for PLWHA. Its main objective was to open the debate about the relation between access to health vis-à-vis access to transport, identifying areas for potential new initiatives.

The research approach was recognised by the HBC Forum in Oshakati, by the Deputy Minister of Health and Social Services, and by the sub-committee on HIV/AIDS from the Parliamentary Standing Committee on Human Resources, Social and Community Development of Namibia. In June 2007, BEN Namibia, ICW-Namibia and the AIDS Law Unit of the Legal Assistance Centre (ALU/LAC) began the assessment in Karas and Omusati regions, funded by Yelula/U-khâi and the National Paralegal Association, and with the pro-bono technical support of GEO Business Solutions.

## II. Methodology

The assessment methodology focused on the combination of qualitative data collected in Omusati, Karas and Windhoek, and existing quantitative data on the geographic areas surveyed. In order to assess the relation between access to health and access to transport, three main areas of interest were outlined:

1. Main transport constraints faced by PLWHA in accessing health services
2. Transport and emergency care
3. Transport and drug distribution
4. Ownership and access to modes of transport
5. Appropriate transport solutions to improve access to health services
6. Existing legal framework
7. Initiatives linking transport and health in sub-Saharan Africa

The methodology converged issues on health, HIV/AIDS, gender, and transport as discussed with all partners and professionals from IBIS, International University of Management, and VSO on 1 August 2007. Research techniques included:

- Focus group discussion with transport users;
- Semi-structured interviews with health service providers, transport providers, local authorities and Windhoek-based health and transport professionals; and
- Desk research on existing quantitative data, existing legal framework, and case studies in sub-Saharan Africa.

The assessment focused on three constituencies, two in Omusati region (the capital of the region, Outapi,

as the urban site, and the town of Ruacana on the Angolan border as the rural) and one in Karas (Karasburg constituency, with the town of Karasburg as the urban focus, and Aussenkehr, a cluster of grape farms on the South African border, as rural). Because the clinic in Aussenkehr is closed and residents have to travel to Noordoewer to access health services, part of the interviews were conducted there. Main findings were discussed on 25 September 2007, again with all partners and professionals from Ministry of Transport, Works and Communications (MTWC), MoHSS and Roads Authority.

### Sampling and data collection

The sampling was designed to reach key informants on the demand side (transport users) and service provision side (transport and health service providers). It also included local authorities at constituency level. The assessment did not intend to be representative of the Omusati and Karas population. Rather, it aimed to gain an understanding of different issues around the impact of transport on access to health services for PLWHA. From this perspective, the result might assist in the development of further surveys, research and pilot projects.

For the purposes of data collection and the analysis of the findings, at constituency level:

- Transport users were sampled among groups infected or affected by HIV/AIDS. The sample included HIV positive and negative men and women, members of support groups, caregivers, patients on ART, pregnant women, and single women. The sample was reached by the research team with the support of health service providers and local authorities.

Informants at constituency level	Ruacana	Outapi	Karasburg	Noordoewer Aussenker	TOTAL
<b>Transport users</b>					118
Women	31	11	5	55	102
Men	1	2	3	10	16
<b>Health service providers</b>					43
Hospitals and clinics staff	3	2	2	2	9
Home-based caregivers /support buddies	12		4	2	18
Counsellors			2	2	4
CBOs, NGOs, FBOs	3	1	3	2	9
Traditional healers	1		2		3
<b>Transport service providers</b>		9	8	6	23
<b>Local authorities</b>	4	5	3	4	16

*Table 1: Sources of information at constituency level*

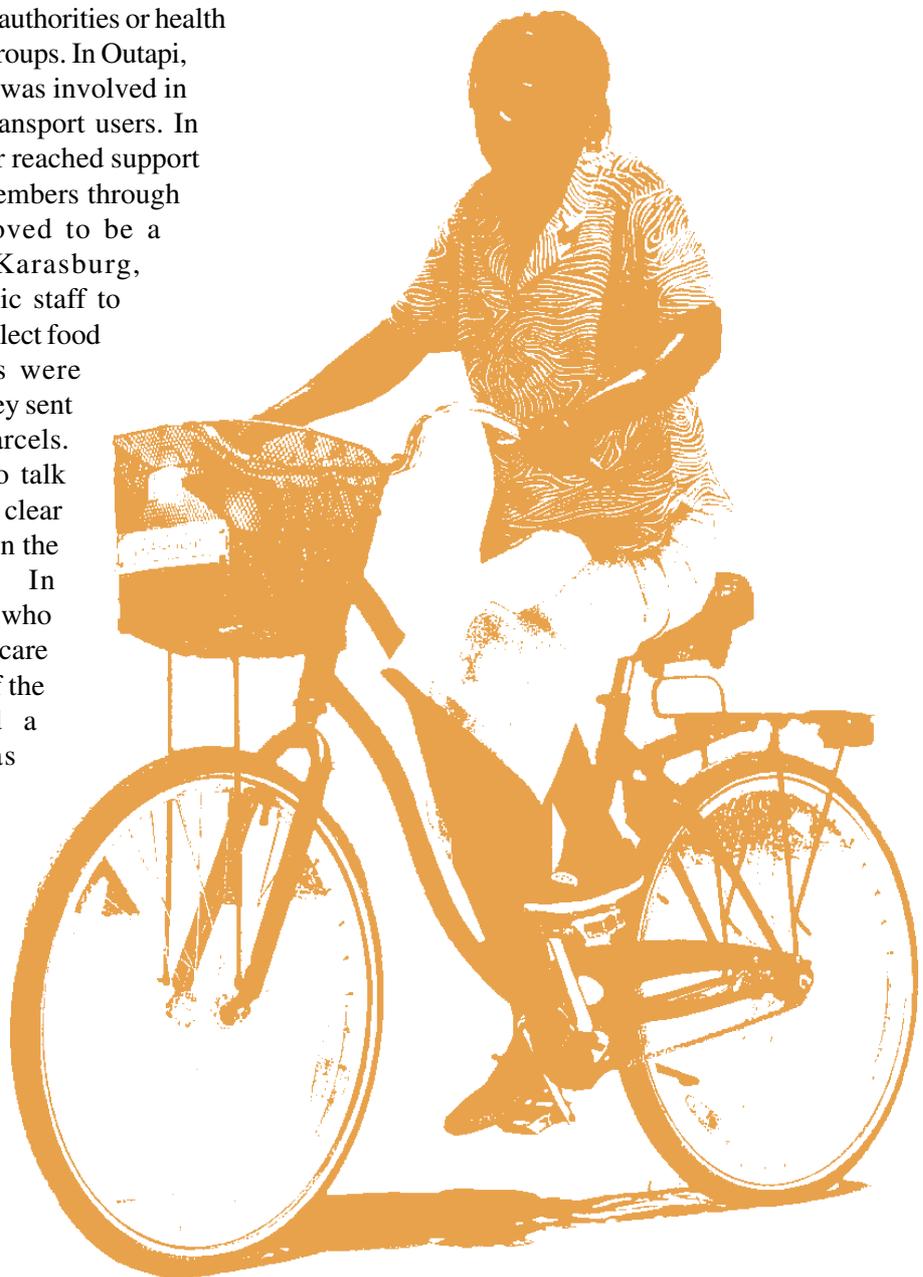
- Health service providers included doctors and nurses, HBC volunteers, treatment support buddies, family caregivers, counsellors, representatives from CBOs focusing on HIV/AIDS, and traditional healers.
- Transport providers included taxi drivers and community members owning vehicles, as these are the main modes of transport available at research areas.
- Local authorities included councillors, church leaders and traditional authorities.

As demonstrated in Table 1, the number of transport service users was very different among constituencies. This was the main challenge of the assessment, as once researchers arrived in each constituency, they relied on local authorities or health service providers to reach those groups. In Outapi, the Regional AIDS Coordinator was involved in organising the meetings with transport users. In Ruacana, the regional counsellor reached support groups and other community members through a radio broadcast, which proved to be a successful approach. In Karasburg, researchers organised with clinic staff to meet users when they came to collect food parcels. However, once users were informed of this arrangement, they sent their children to collect the parcels. Only five users were willing to talk with researchers. As it became clear from the data collected, stigma in the region is still very strong. In Aussenkehr, a community leader who assists residents with palliative care and a soup kitchen, on the site of the now defunct clinic, called a community meeting that was attended by around 150 farm workers, which enabled researchers to conduct focus groups with 65 of them. All of them were from the Northern Namibian Ovambo ethnic group, as farm workers are often recruited in the Northern regions.

Eighty five per cent of users of transport services interviewed were female, of which 37 per cent declared their

status as HIV positive. Among male users, 39 per cent declared themselves as HIV positive. However, from all the participants in focus group discussion in Aussenkehr—equivalent to 54 per cent of all users who took part in the assessment—78 per cent did not disclose their status.

Researchers observed that, in both regions, willingness to participate was greater in rural areas than in urban, and greater among women than men. This is probably due to the level of vulnerability that women and rural dwellers experience on a daily basis. Men often have more control over cash and other assets, and do not have as many domestic responsibilities as women. Likewise, urban dwellers



are not as isolated from health services in general. Women's and rural dwellers' vulnerability might generate a greater urgency among these groupings to have their voices heard.

At national level, interviews were conducted with health professionals from MoHSS, Intrahealth Capacity Project and UNAIDS; and with transport professionals from MTWC and Roads Authority.

## **Research instruments**

Research instruments were developed in order to shed light on mobility of PLWHA and health service providers, emergency care, and drug distribution. These were guidelines for focus groups and semi-structured interviews (see annex). A basic survey sheet was used to collect information at the individual level with users, focusing on age, marital status, distance to nearest clinics and hospitals and HIV status. Quantitative data from the Namibian Atlas was entered in a geographic information system (GIS) software programme to assist in the analysis of data collected in the field.

## **Limitations**

The assessment did not intend to be a survey inferring population representativeness in Omusati and Karas regions. As the first assessment focusing on this topic in the country, the main outcome is to open the debate about the relation between health and transport, identifying areas for future research and initiatives tangible to the topic.

As mentioned, the research team encountered difficulties in reaching transport and health service users, as they relied on local authorities and health service providers to connect them to these groups. Discussions were conducted with users who were willing to participate, but it led to incongruence between samples from one area to another. There was a clear need of more time for pre-consultation with participants.

Care was taken to use only researchers who were fluent in local languages. However, all the data had to be translated to English to be collated and analysed, which could have led to standardisation of answers of interviews and focus group discussions.

### III. Geographical focus

#### Karas region

Karas is the southernmost Namibian region, covering an area equivalent to 20 per cent of the total surface area of the country. It is bordered by the Hardap Region in the North, South Africa in the South and East, and by the Atlantic Ocean in the West. The region comprises of six constituencies: Keetmanshoop Urban and Rural, Berseba, Luderitz, Oranjemund, and Karasburg. The assessment focused on two distinct areas within Karasburg constituency – the town of Karasburg as the urban research location, and Aussenkehr grape farms as the rural location.

In contrast to its large surface area, Karas has a population density of less than one per km<sup>2</sup>. Over three per cent of the total Namibian population live in the area, of which 62 per cent are rural dwellers. Sex ratio is 99 males per 100 females. The region has one of highest literacy rates in the country—92 per cent compared to 84 per cent for the whole of Namibia, with no significant difference between males and females.

Although the region is mostly populated by Nama people, farm workers are often recruited from outside regions. Economic activities in the region include

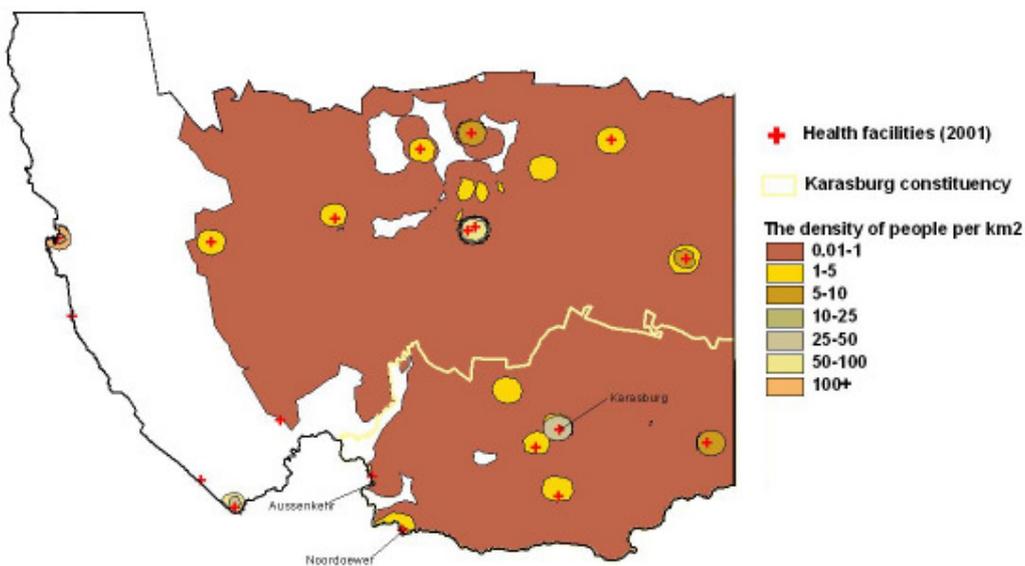


Figure 1: Distribution of health facilities vs. the density of people in Karas region

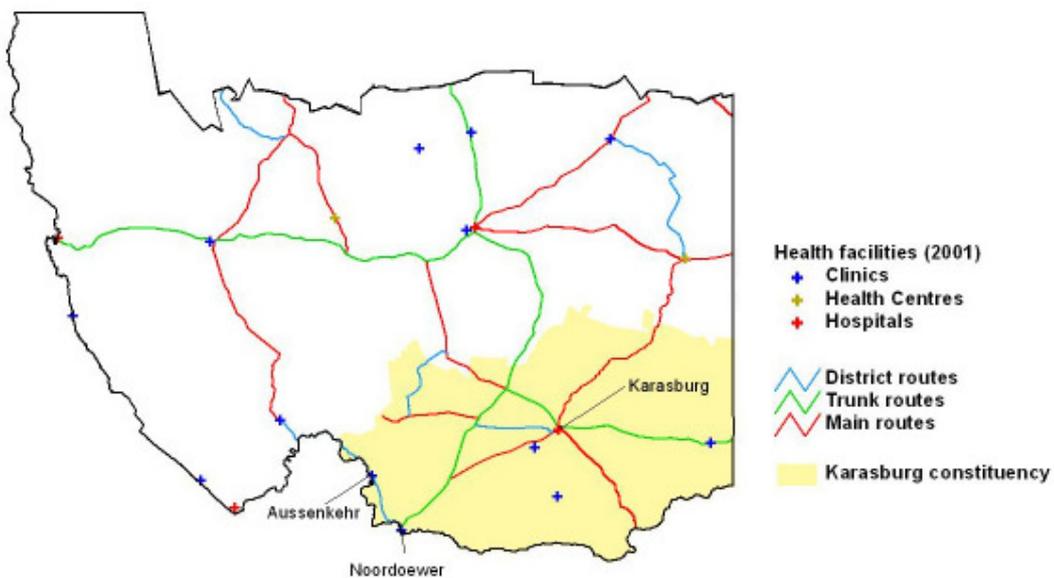


Figure 2: Distribution of health facilities vs. roads infrastructure in Karas region

mining, agriculture, fisheries, and tourism. Salaries and wages are the main source of income of households (73 per cent), and pensions also contribute significantly (10 per cent). Per capita income in the region is N\$12,707, higher than the national average of N\$10,357 (NHIES 2003-04).

The region is considered well provided for in terms of infrastructure both by the Roads Authority and Regional Council, with need and potential for further improvement. Keetmanshoop has direct air, railway and road links with Windhoek. The railway line and two main trunk roads give access to South Africa. As most land is commercial, according to Roads Authority, farmers are involved in construction and maintenance of farm roads and pathways.

Health facilities comprise three state hospitals (Karasburg, Lüderitz and Keetmanshoop as the referral centre), three health centres and 13 clinics, of which six are in Karasburg constituency. However, the clinic in Aussenkehr has been closed for more than three years, so patients have to travel 50km to Noordoewer Health Centre<sup>1</sup>, or to Karasburg District Hospital, covering a total of 194 km via district and trunk routes, as demonstrated in Figure 2.

According to the 2006 National HIV Sentinel Survey, Karasburg surveillance site has a HIV prevalence rate of 23 per cent. In the Karas region, the HIV/AIDS epidemic has caused a decline of 18 years in life expectancy over 10 years, from 60 in 1991 to 42 in 2000 (MoHSS, 2001).

### Omusati region

Omusati is situated among Namibia's populous Northern regions, sharing borders to the North with Angola, to the East with Ohangwena and Oshana regions, and to the South and West with Kunene region. There are 12 constituencies: Onesi, Tsandi, Outapi, Okalongo, Oshikuku, Elim, Anamulenge, Ogongo, Ruacana, Otamanzi, Okahao and Etayi, with Outapi as the main centre. The assessment focused on Outapi as the urban research location, and Ruacana as the rural location.

With a population density of 14 per km<sup>2</sup>, Omusati hosts 12 per cent of Namibian population, mostly Ovambo people living in rural or peri-urban areas

around Outapi. The region has one of the lowest sex ratios in the country, with 85 males per 100 females. The literacy rate is 84 per cent, with no significant difference between male and female.

This is predominantly a subsistence agriculture region in which *mahangu*, or pearl millet, is the main crop cultivated. Eighty percent of household income is generated by subsistence farming. Average per capita income is N\$5,460, half the average per capita income for the country and five times lower than urban areas such as Khomas region. Together with Kavango and Ohangwena, Omusati is one of the highest populated regions in the country with lowest percentage of annual income. (NHIES 2003-04). Both Human Poverty Index (HPI) and Human Development Index (HDI) confirm Omusati as one of the poorest regions in the country, ranking below the national position

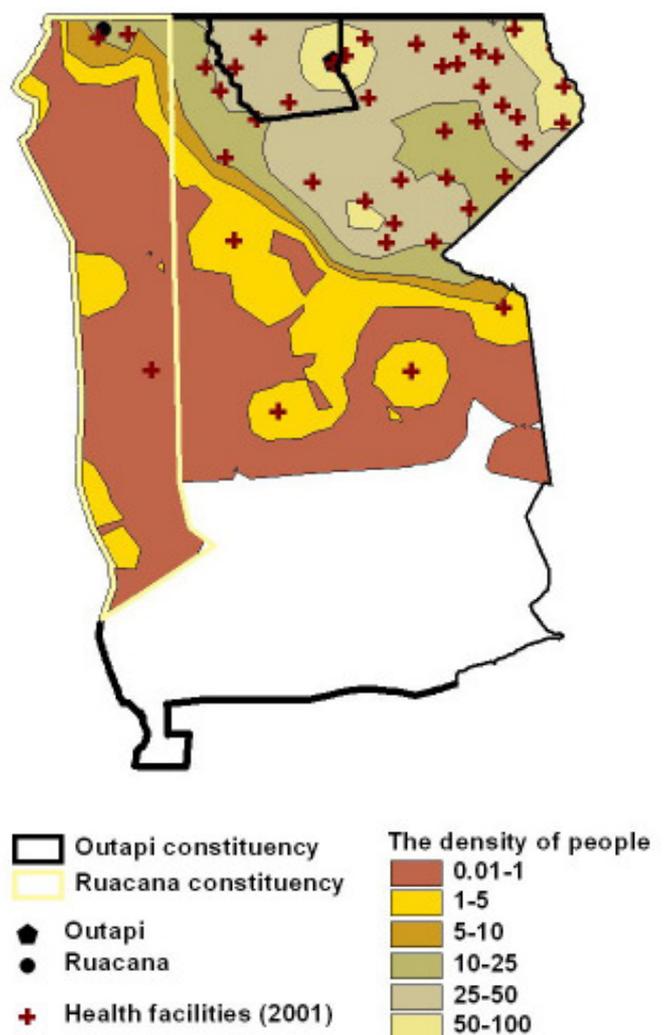
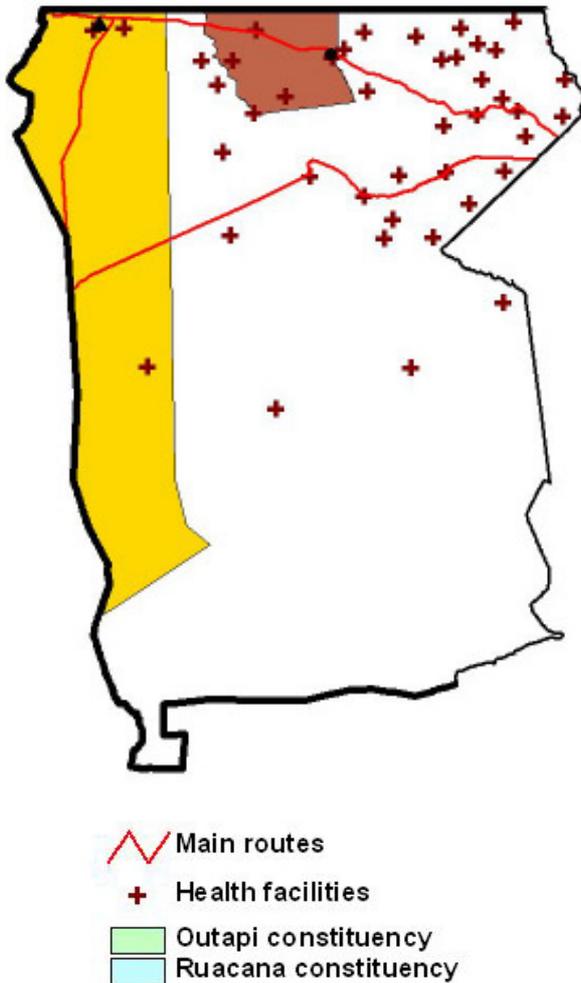


Figure 3: Distribution of health facilities vs. the density of people in Omusati region

<sup>1</sup> Noordoewer Clinic was upgraded in 2003 to a Health Centre.



(45 in comparison to 33 for HPI, and 0.476 to 0.557 for HDI).

The region has a good quality trunk road, which provides a direct link to adjacent regions. Although passenger and freight transport along this route is frequent and reliable, the poor quality of the rest of the road network means passenger and freight transport is unreliable in areas not reached by the trunk road. The Network Planning Department of the Roads Authority has recently presented a programme to the National Planning Commission (NPC) to expand the network in the area, constructing 11 gravel roads, with a total length of 375 km, over five years. The programme has a budget of N\$204 million over three years, and the main parameters for the location of roads will be to reach schools and health facilities.

Health facilities in Outapi constituency comprises of two clinics, one health centre and one district hospital. In Ruacana, there are two clinics and one health centre. According to the 2006 National HIV Sentinel Survey, Outapi surveillance site has a HIV prevalence rate of 21 per cent. The HIV/AIDS epidemic has caused a decline of 22 years in life expectancy over 10 years, from 65 in 1991 to 43 in 2000 (MoHSS, 2001).

*Figure 4: Distribution of health facilities vs. roads infrastructure in Omusati region*

## IV. Findings

### Main transport constraints faced by PLWHA to access health services

All respondents in both regions emphasised the monthly visit to collect ARV as an economic burden. Whenever PLWHA travel to collect their medications, they need resources to pay for transport and for medical fees. Users who participated in the focus groups in both regions do not own means of transport. Hitchhiking and taxis are the main ways to travel, and in Namibia hitchhiking usually incurs in a fee.

In Ruacana, a round trip by taxi to Outapi District Hospital, where both ARV distribution and emergency services are available, costs N\$60. The

the main transport providers to the hospital, charging up to N\$400.

In Outapi, a round trip by taxi to the hospital might cost up to N\$20. In case of emergency, users might pay up to N\$200 for community members to hire their cars. Transport users consider these fees a significant burden on their income, particularly considering the average per capita income is N\$5,460 in Omusati region. Physical exhaustion was mentioned in Outapi as a drawback for PLWHA, as most of the time they have to walk to the hospital. Also in Outapi, users and HBC volunteers declared that doctors and nurses often blame them for not adhering to the treatment,

regardless of the fact that they do not have money to afford the monthly visit. According to health service providers in both constituencies, women are seen as more vulnerable as they are economically dependent on husbands, have lower status in the community, and child-rearing and household chores represent a daily burden.

In Noordoewer and in Karasburg, local authorities mentioned stigma

against PLWHA as the main reason for patients not to seek medical help, followed by lack of money. As Aussenkehr clinic is closed, users need to travel to Noordoewer Health Centre to access health services. ARV is available at the health centre as part of a follow-up programme, but the initial consultation with a doctor and commencement of treatment is only

### In case of emergency, Ruacana community members are the main transport providers to the hospital, charging up to N\$400.

hospital provides outreach services to deliver ARV at the health centre in Ruacana, one of the few initiatives of this kind in the country. However, about 30 per cent of participants in the focus groups mentioned being more than 20 km away from that health centre, equivalent to four walking hours. In case of emergency, Ruacana community members are

	Access to general health services and collection of ARV	Emergency care
<b>Ruacana</b>	Ruacana Health Centre (Outreach Programme) Costs n/a	Outapi District Hospital N\$300-400
<b>Outapi</b>	Outapi District Hospital N\$20	Outapi District Hospital N\$200
<b>Aussenkehr</b>	Noordoewer Health Centre (ART - follow up) N\$40  Karasburg District Hospital (ART - start treatment) N\$300	Karasburg District Hospital N\$300
<b>Karasburg</b>	Karasburg District Hospital Walking distance	Karasburg District Hospital N\$1/km

Table 2: Transport costs to access health services

available at Karasburg District Hospital. A round trip to Noordoewer costs N\$40, while to Karasburg the cost goes up to N\$300. Karasburg has no public transport, but all participants mentioned living less than 2 km from nearest clinic or hospital. In case of emergency, users are supposed to pay N\$1/km to be collected by the ambulance.

In all sites, the answer to the question “is access to transport easier for men or women?” was a disputed issue, with no clear difference between men and women’s remarks. Some mentioned it is easier for women because drivers are afraid of men (violence); women deserve more respect from the community; or men have ‘other interests’ when giving women a lift, namely sexual favours. Others say it is more difficult for women as they usually have a lot of luggage and children; and they ‘complain too much’. Payment is key to accessing transport for all, and no differences in costs for men and women were observed.

### Transport and emergency care

The main finding related to transport and emergency care, in both regions, is that reaching a health facility in an emergency situation is the patient’s responsibility.

In Ruacana, no ambulance is available for emergencies. According to users, “patients get exhausted and even die while waiting for an ambulance”. If the health centre asks for an ambulance from Outapi District Hospital, it might take two days to come. It was not clear for nurses how many ambulances are available for the health district. Community members are the main transport providers but may charge up to N\$400. On occasion police provide help, but not as a rule. Whenever available, people might use donkey carts, wheelbarrows, animal drawn-sledges or hitchhike on the main road—the latter also incurs a fee.

Families might sell assets or livestock, or borrow money from family members or friends if they need cash to cover fees in an emergency situation. Users mentioned that approaching financial institutions to access cash is not a solution, as they are often unemployed and can offer no guarantee that they will repay. All participants perceived access to cash as equal for HIV positive and negative people. Men perceived access to cash as equal for men and women, while women remarked they face more difficulty.

In Outapi, in case of emergency patients might be collected by an ambulance from the hospital if it is

available. But because the geographic coverage is too big, the hospital’s transport for emergency care is virtually nonexistent. According to health service providers, there are two ambulances but often one is broken, and the priority for the use of the ambulances is for referrals to Oshakati Hospital. Hiring cars from community members costs up to N\$200. Whenever available, they might also use wheelbarrows, bicycle ambulances, and bicycles. As in Ruacana, families sell assets or livestock, or borrow money if needed. Participants consider access to cash as equal for HIV positive and negative people, and for men and women.

Noordoewer Health Centre has no ambulances. Transport is patients’ responsibility, and costs to travel from Aussenkehr to Karasburg District Hospital go up to N\$300. Some farms have private cars available for emergencies during working hours, nights and weekends, but only for their workers. Users interviewed in Aussenkehr highlighted that even borrowing from family or friends is difficult for PLWHA who are considered as more vulnerable due to stigma. People think they will die soon and not repay their loan. Both men and women perceived women as more vulnerable as they are not economically empowered. Conversely, in a focus group with single women heads-of-household, they mentioned women are often more trusted and so get cash loans more readily.

In Karasburg, there are ambulances available at the district hospital, but they often take a long time to arrive. Health service providers mentioned users are supposed to pay N\$1/km, whereas users mentioned they have to pay N\$20. In some cases, the hospital can also send a bakkie (pick-up truck) to collect a patient, but not an equipped vehicle, and there is often a shortage of drivers. Police or community members might also help if patients pay. If it is necessary, families will sell assets and livestock, or borrow money. Access to cash is seen as equal for HIV positive and negative people, and for men and women.

According to the Primary Health Care Directorate, the MoHSS has no clear policy defining the vehicle fleet required for all different types of health facility. Referral and district hospitals always have ambulances. Health centres and clinics, nonetheless, are part of district hospitals catchments area and so will have any type of transport as per their discretion and availability. What is apparent from interviews with health service providers is that neither Karasburg nor Outapi District Hospitals have sufficient fleet or personnel to cover their own services, so facilities under their auspices are left without direct control over any form of transport.

## Transport and drug distribution

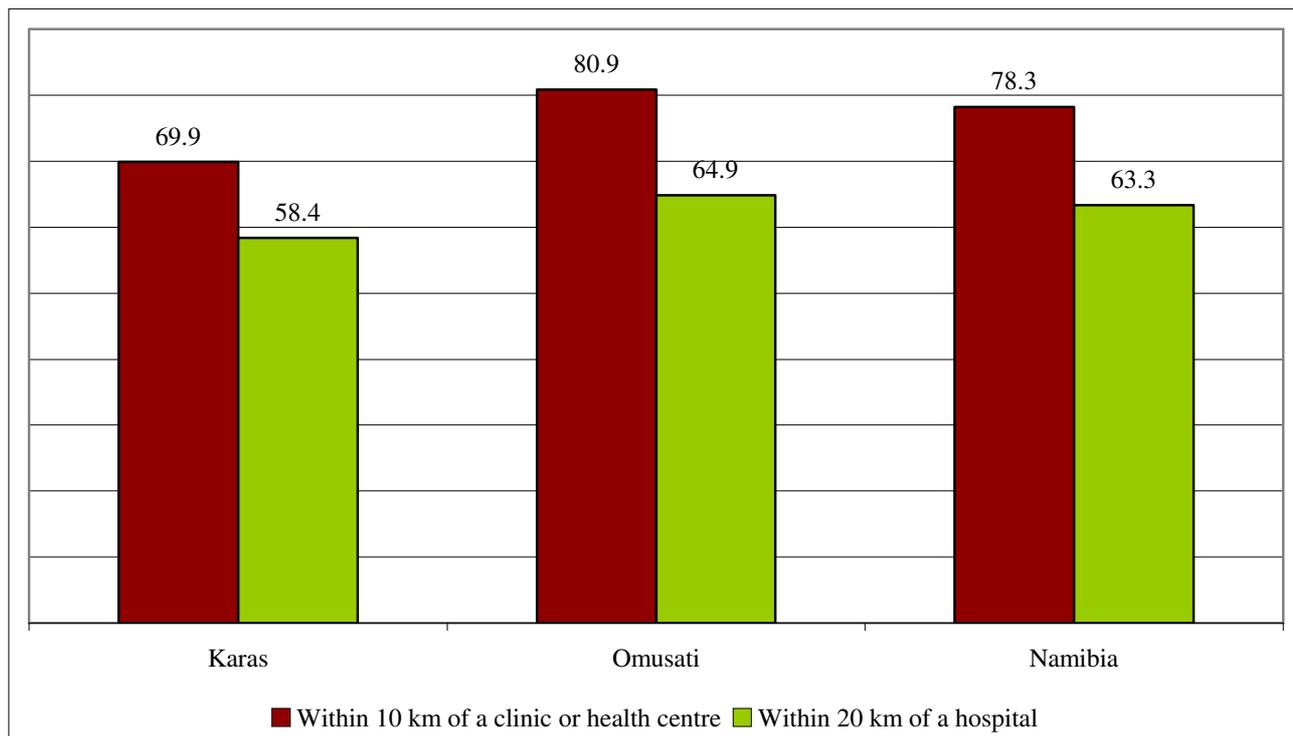
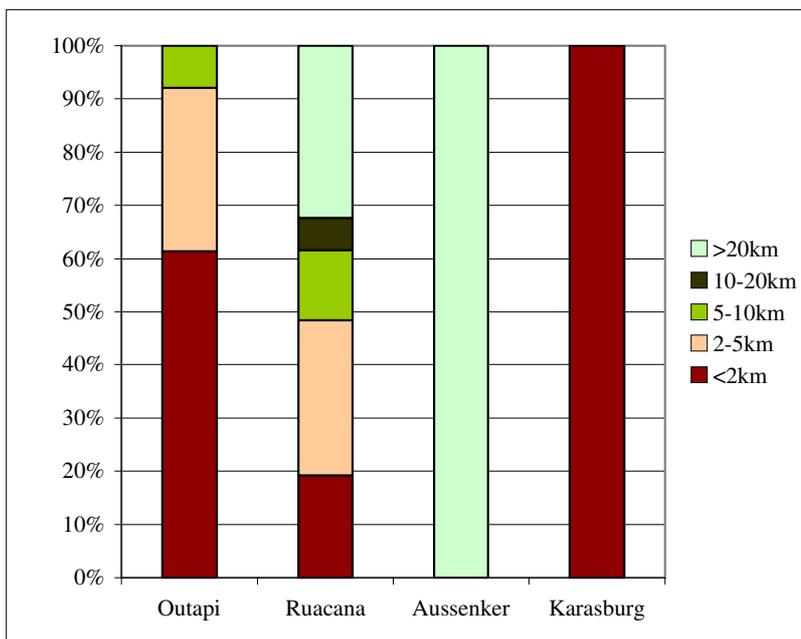
In all constituencies, the need to collect ARVs every month is considered a burden to patients due to transport costs and medical fees combined. Users mentioned that a third person, often a HBC volunteer or a treatment support buddy, can collect ARVs if the patient does not require an appointment with a doctor—and this practice is already happening on an *ad hoc* basis.

In Omusati region, there are five main organisations delivering HBC: Catholic AIDS Action (CAA), Evangelical Lutheran Church in Namibia (ELCIN),

Anglican Diocese of Namibia, and MoHSS. Development Aid from People to People (DAPP) also coordinates volunteers in the region, but focus on prevention information. In Karas, the Karasburg Community Organisation for Social Development and Care (KACOSODEC), Evangelical Lutheran Church in the Republic of Namibia - AIDS Program (ELCAP), and CAA all offer HBC services, though it was not clear for all participants in the assessment that these organisations offer services in the region. The field researchers' perception is that it is related to stigma, as no one wants to be associated with AIDS.

**Figure 5 (right): Distances to nearest clinic for participants in the assessment.**

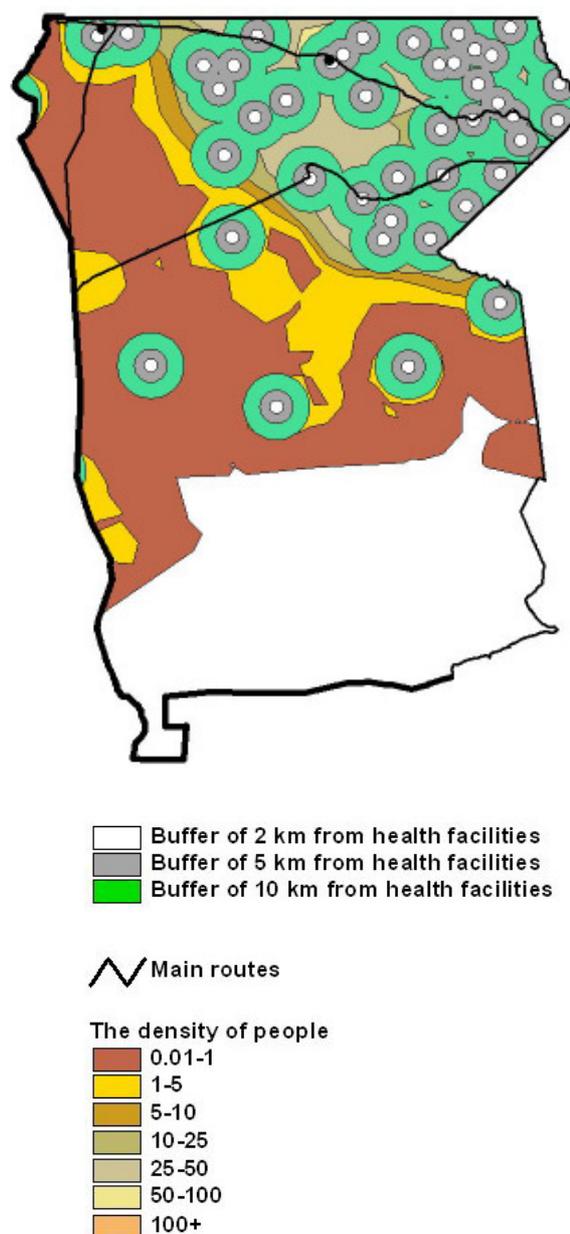
**Figure 6 (below): Official data from MoHSS stating distances to nearest health facilities by region. Note that data on Karas was collected before Aussenkehr clinic was closed. (2001).**



CBOs have already begun discussing how to implement a systematic programme for collection of ARV, involving HBC volunteers and treatment support buddies. The topic was discussed at the HBC Forum in Oshakati (July 2007), and it was considered by participants in the assessment as the way forward to decentralise drug distribution. Health service providers in both regions, however, did not confirm there are volunteers collecting ARVs for patients, and reinforce that this practice is not advisable. They regard decentralisation as crucial to the expansion of any ARV roll out programme, but focusing on outreach programmes by which a team from the district hospital staff travel monthly to surrounding villages to distribute medication. There is a task-shift approach being implemented by MoHSS and international agencies aiming to make the health service delivery at the community level more nurse-driven and less doctor-dependent. The new approach considers more involvement from community members on palliative care, but might not impact on ARV distribution, as it legally requires a doctor. Health professionals in Windhoek also highlighted that involving volunteers is not an appropriate solution, as besides the need to examine patients, involvement of treatment support buddies or HBC volunteers requires a lot of work in terms of literacy and commitment. Moreover, transport is also a problem according to the Community-Based Health Care Programme from MoHSS, given that it is one of the main constraints faced by volunteers. In order to address it, it is necessary to develop incentive packages as well as minimum standards of tools and materials for volunteers, and this should include appropriate transport solutions such as bicycles (2006).

Even though government policy advocates outreach programmes, it is up to the district hospitals to plan, budget and implement these initiatives. During this assessment, two successful outreach programmes were mentioned; one from Outapi District Hospital in Ruacana, and another from Tsumeb District Hospital in Oshivelo. However, these are isolated experiences, often initiated by an individual from the district hospital, that require top-up funding from an international agency. There seems to be a lack of clear data about experiences, outcomes, and challenges at the national level. The immediate reaction from professionals interviewed is that outreach programmes are ‘too complex’ and resource intensive. Hospitals do not have enough staff and physical resources (i.e. equipment and vehicles) to implement such initiatives. The complexity lays in the need for

these programmes to be integrated with other components of health service provision, and cannot be isolated activities. One example given was how problematic it might be if a mobile Voluntary Counselling and Testing (VCT) initiative does not have direct linkages with care and support activities on the ground, leaving people who have just tested without appropriate follow up assistance. However, experience proves that it is possible to overcome this challenge. Ruacana’s outreach programme integrates



*Figure 7: Comparison of coverage area of 10 km from health facilities in Karas region, as defined by MoHSS, with 2 and 5 kms distance considered reasonable by participants in the assessment.*

ARV distribution with local support groups, who are responsible for following up activities with clients, raising interest from community members in receiving treatment and ensuring adherence. In one year, the number of patients went from 10 to about 100.

In all constituencies researched, the directly observed treatment short course (DOTS) strategy, used to distribute tuberculosis treatment, is seen as the best example of decentralisation. In Noordoewer/Aussenkehr the Family Planning programme is also recognised as having good coverage, and in Karasburg the strategies for immunisation activities are well regarded. Findings on perceptions of decentralisation suggest that health service users look for solutions that are closer to them, rather than the ones that they have to travel to access.

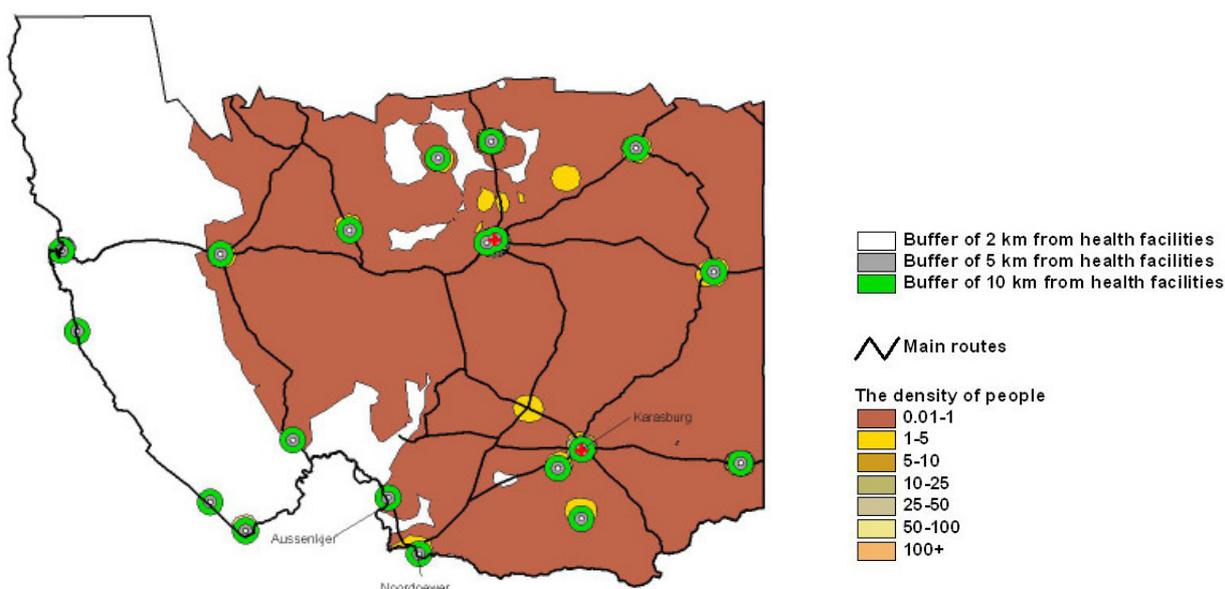
All users who participated in focus group discussions from Outapi, Ruacana and Aussenkehr are more than 20 km away from the nearest hospital, while all from Karasburg are within 2 km distance. In the case of Outapi, even though they were interviewed in town, most people lived in the surrounding villages, or peri-urban areas. Distances to the nearest clinics vary for Outapi and Ruacana participants, as noted in Figure 5. For Aussenkehr, all users are more than 50 km from the nearest health facility, which is in Noordoewer. Indicators used by MoHSS to discuss access to health services focus on populations within

“10 km from health centre of clinic” and “20 km from hospital”, as demonstrated in Figure 6 below. However, when asked what is a reasonable distance to access treatment, answers vary from one to five km, often with the remark that it needs to be within walking distance. Five kilometres is equivalent to one hour walking.

### Ownership and access to transport modes

Around nine per cent of households in Omusati own a motorised vehicle, one of the lowest levels of ownership in the country as demonstrated in Figure 9. More than fifty per cent have no access to this mode of transport. Bicycle ownership, however, is one of the highest in the country. Participants in focus groups from Ruacana and Outapi did not own motorised transport, and their main transport modes were walking, taking taxis or hitchhiking with costs that will depend on distances, space available in the car, destination, children, and luggage. They also mentioned using bicycles, bicycle ambulances, donkey carts, sledges, and wheelbarrows.

Taxi drivers in Outapi consider their work a sustainable business, with profits from N\$3,000-8,000 per month. Costs of cars vary from N\$25,000 to more than N\$150,000, depending on the model and its year, and including licenses. Bicycles can cost



**Figure 8: Comparison of coverage area of 10 km from health facilities in Omusati region, as defined by MoHSS, with 2 and 5 kms distance considered reasonable by participants in the assessment.**

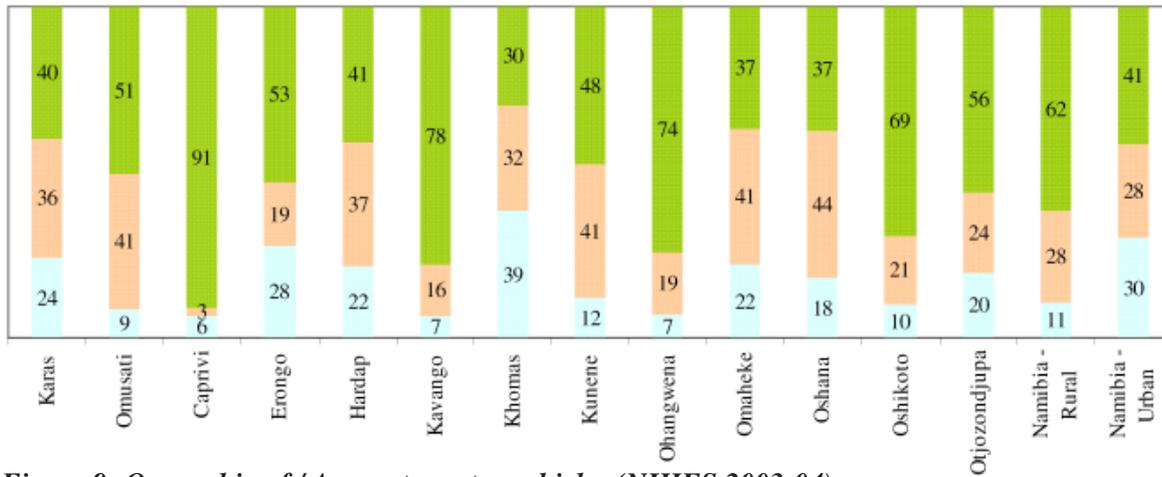


Figure 9: Ownership of / Access to motor vehicles (NHIES 2003-04)

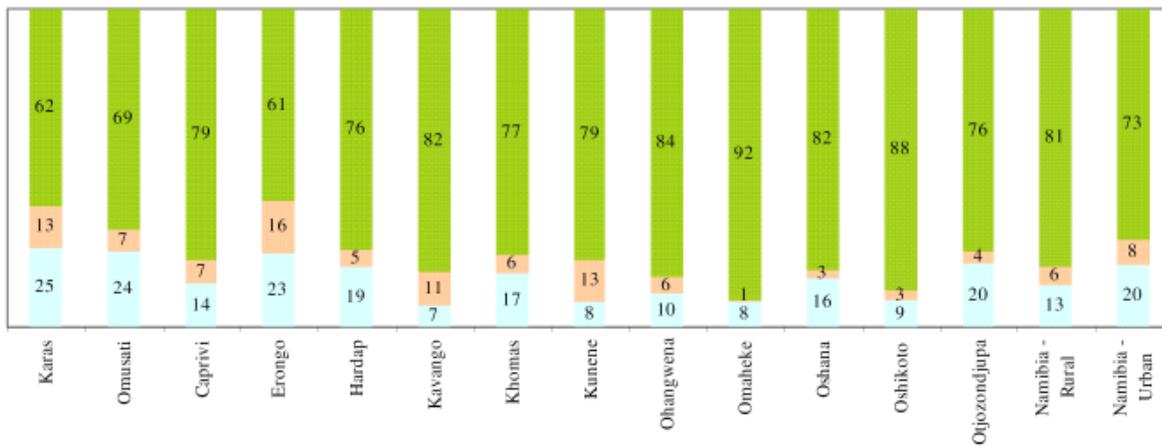


Figure 10: Ownership of / Access to bicycles (NHIES 2003-04)

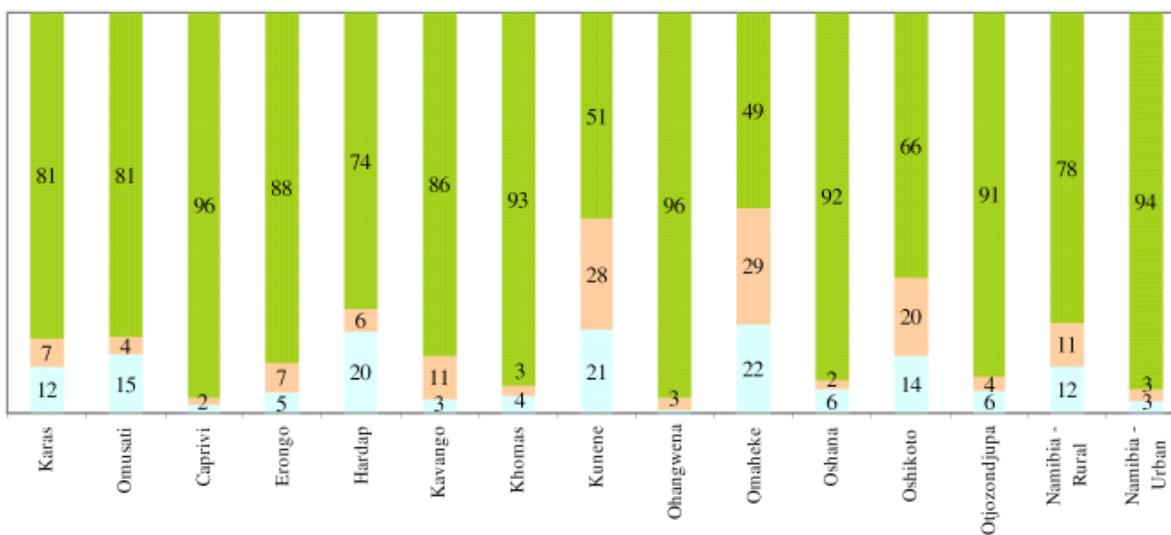
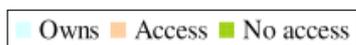


Figure 11: Ownership of / Access to donkey carts (NHIES 2003-04)



up to N\$1,000 at local markets in both regions and there are no hiring services available. Overall there is a lack of service provision, with few workshops specialised in bicycle repair and maintenance. Since 2006, BEN Namibia has implemented Bicycling Empowerment Centres as community-based bicycle workshops. The first project in Okathitu village, 20 km from Outapi has distributed more than 300 bicycles, and provides ongoing maintenance services, improving rural transport access. Donkey carts in Omusati region can cost anywhere between N\$3,000-7,000. Carts can also be manufactured from N\$2,000-3,800. There are no hiring services available.

In Karas, forty per cent of households have no access to motorised transport, and 25 per cent own a bicycle, the highest ownership level in the country. Transport users surveyed in Aussenkehr and Karasburg also did not own motorised vehicles, and their main transport is hiking with farm owners, with fees that can go up to N\$300 from Aussenkehr to Noordoewer. Community members might also use donkey carts and bicycles. Donkey carts in this region will cost around N\$1,000 and second-hand ones can cost half this price. There are no hiring services.

### **Appropriate transport-related solutions to improve access to health services**

In all the areas surveyed, the main solution stated by participants to improve access to health services was not transport but decentralisation of services, with clinics better equipped, staffed, and with capacity to deliver ART. In Aussenkehr, this translates to the reopening of the clinic. Participants highlighted the urgent need to equip all health facilities with motorised ambulances. In Ruacana, a better communication system between health facilities was also mentioned.

In Ruacana and Karasburg participants would like to see HBC groups trained to take part in the distribution of drugs. In Outapi and Karasburg, there is a demand for outreach programmes, such as mobile clinics.

In both rural locations, Ruacana and Aussenkehr, users demanded more non-motorised transport (NMT) solutions such as donkey carts and bicycles. Interestingly, it is coherent with field researcher's

observation that people living in rural areas—particularly transport users—demand simpler, local and affordable solutions for transport, which can be managed and controlled by them.

According to Russell Hay, from the Donkey Welfare of Namibia organisation, donkey carts in Namibia are expensive to buy because there is little manufacturing for sale. They are also too heavy, which might be one reason why they are not often

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## **In both rural locations, Ruacana and Aussenkehr, users demanded more non-motorised transport (NMT) solutions such as donkey carts and bicycles.**

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used. Together with the Polytechnic and the University of Warwick (UK), Donkey Welfare of Namibia planned an engineering student project to design a lightweight cart, to be manufactured locally using recycled materials. The initiative was not implemented due to lack of funds.

The demand for NMT solutions is in harmony with two initiatives that are being taken at the National level. The first, already described, refers to the expansion of gravel roads network in Omusati region, which will improve mobility between villages, health facilities and schools at grassroots level. The second initiative refers to a programme planned by the Transport and Infrastructure Planning Department from MTWC, focusing on integrating NMT policies with road infrastructure policies. The proposal is currently being analysed by the NPC. With a five year budget of N\$65 million, it would expand the network for NMT solutions, i.e. walking, cycling and donkey carts, not only in urban but mostly in rural and peri-urban areas.

Finally, both in Ruacana and Outapi there was a high demand for income generating activities that would assist users, decreasing the impact of transport costs in their monthly budget.

### **Existing legal framework**

The Government of Namibia is a party to all major international and regional instruments dealing with

human rights, which includes the right to health. At the international level, the right to health is highlighted in the International Covenant on Economic, Social and Cultural Rights (ICESCR, 1995), the Optional Protocol to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 2000), and the Convention of the Rights of the Child (CRC, 1990). At the regional level, the right to health is highlighted in the African Charter on the Rights and Welfare on the Child (ACRWC, 1999) and in the African Charter on Human and People's Rights (ACHPR, 1992), which declares, "Every individual shall have the right to enjoy the best attainable state of physical health. States party to the present charter shall take the *necessary measures to protect the health of their people and to ensure that they receive medical attention when they are sick*". The Southern Africa Development Community (SADC) Health Protocol (1999) urges SADC countries to harmonise policies and approaches in the health sector and to develop regional plans to work towards an inter-sectoral approach to health care.

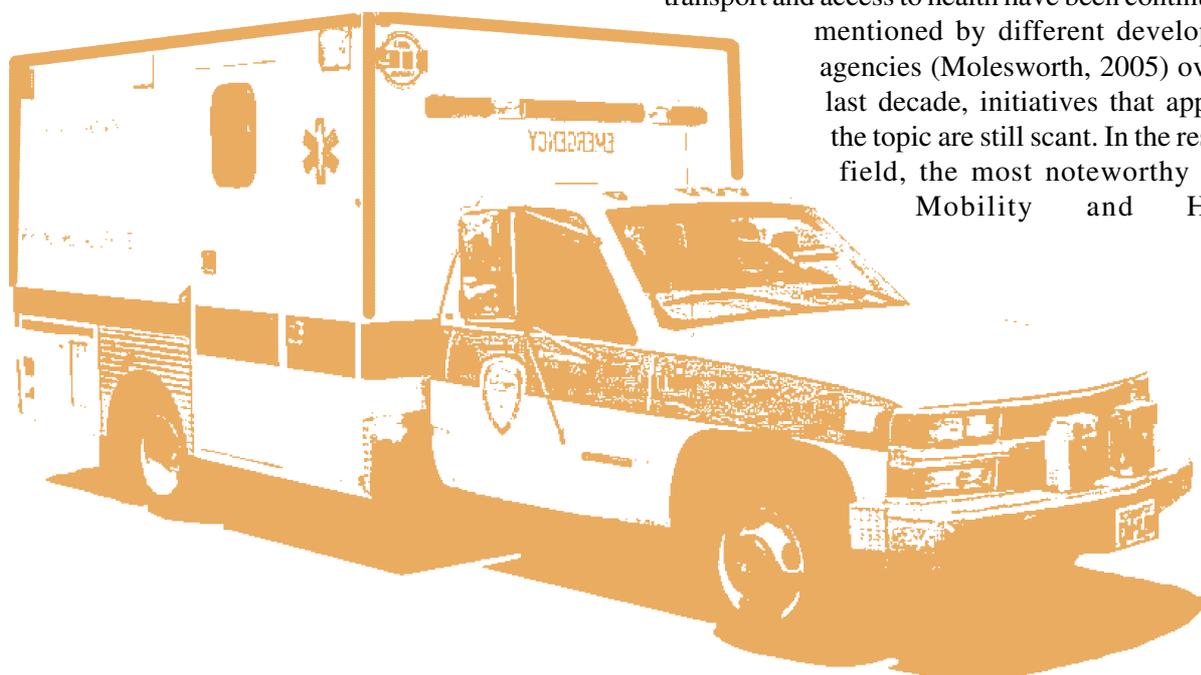
At the national level, the Namibian HIV/AIDS Charter of Rights (2000) emphasises the equal access to public and private facilities and benefits and the need for a supportive and enabling environment for vulnerable groups infected and affected by HIV/AIDS. The HIV/AIDS Policy (2007) approaches access to health services from a multi-sectoral perspective, and that is where it is possible to emphasise the need to approach access to transport as an important component of access to the health

system. The policy recognises that communities are best placed to provide support to those infected and affected by HIV/AIDS and that more tangible assistance is required at the local level for monitoring of patients, access to food and clean water, and access to medications. It also recognises the need for effective referral and discharge plans by the providers of HIV/AIDS related services, and the need to foster strong linkages between the community response and the health sector in providing comprehensive treatment, care and support. Finally, it reinforces that there is significant scope and need for research in the non-health fields of HIV to inform policy, practice and related interventions.

The legal framework in place does not assure that access to health services is for all, or for PLWHA in particular. During Apartheid, health facilities were concentrated in urban areas and their main focus was on curative services. The shift to primary health care that has taken place since Independence, implies that services should be closer to people, and therefore decentralised. Indeed, the number of public health facilities in the country increased from 98 in 1981 to 317 in 2001 (MoHSS). However, the transport infrastructure has not yet advanced in order to provide real mobility to all Namibian communities, ensuring, among other things, their right to access health services.

### Initiatives linking transport and health in sub-Saharan Africa

Although the direct linkages between access to transport and access to health have been continuously mentioned by different development agencies (Molesworth, 2005) over the last decade, initiatives that approach the topic are still scant. In the research field, the most noteworthy is the **Mobility and Health**



International Network, coordinated by the International Forum for Rural Transport and Development (IFRTD). In sub-Saharan Africa, local organisations conducted assessments during 2006 examining the relation between transport and health in South Africa, Uganda, Ethiopia and Kenya. Another interesting initiative in the region took place in 2005, when the World Bank carried out a research project in Lesotho mapping mobility and access with the use of GIS, with a chapter focusing on health services.

Implementation of programmes and projects in the region has mushroomed over the last years, varying from transport management systems for health facilities to motorised and NMT solutions.

Riders for Health focuses on two and four wheeled vehicles for health service delivery in Gambia, Zimbabwe, Nigeria, Kenya, and Tanzania. Their programmes are based on the implementation of a transport resource management package. In Zimbabwe, the Uhuru project shed light on the use of a multi-purpose vehicle; based on the traditional motorcycle and sidecar, designed to carry a stretcher and a pop-up seat for women in labour. A pilot project was carried out in 2003 and, over three months, the Uhuru motorcycle was used in Marowa village primarily as an ambulance for 16 pregnant women and six children, with 72 referrals made to the hospital, 36 km away. The incidence of HBC visits also increased by 60 per cent.

The British e-Ranger has also focused on a vehicle that combines motorcycle and sidecar in Mali, South Africa, Ghana, Malawi, and Lesotho. Their products are adapted depending on the cargo, with ambulances, immunisation units, emergency water units, and education units available. Ambulance units as part of the Safe Motherhood Project in the Dowa district, Malawi, improved referral to hospital and saved over four-wheel drive ambulances in capital and maintenance costs.

Transaid activities focus on transport management systems for motorised transport in Ghana, Sierra Leone, Nigeria, Kenya, Malawi, and Zambia. In Nigeria, their work was a component of the Reviving Routine Immunisation project in Northern Nigeria to reduce deaths from vaccine preventable diseases. From 2003-05, Transaid introduced a pilot project in Malawi and Zambia to examine the impact of bicycle ambulances at the district level. Eight ambulances were produced and distributed to four rural communities in both countries.

Bicycle ambulances have also been present in other countries in the region. Disacare distributed 50 units in Zambia, while The First African Bicycle Information Organisation & Workshop (FABIO) distributed around 100 units in Uganda since 2001. BEN Namibia is currently manufacturing and distributing bicycle ambulances in Namibia. Fifty-five were distributed since March 2007, and 40 more will be delivered until March 2008.

Since 1992, Practical Action has a Transport Programme in Kenya focusing on transport-related income generating activities, including bicycles, trailers, animal carts, pack animal, and pushcarts. Bicycle ambulance services were introduced in which operators hire at rates between N\$2-N\$54 per trip, depending on distance.

Bicycles delivered for health care workers is the main focus of BEN Namibia, BEN Cape Town and World Bicycle Relief, in Zambia. BEN has distributed both second-hand and new bicycles, the latter usually in partnership with the California Bike Coalition, a programme developed by the US-based Institute for Transportation and Development Policy (ITDP). Besides South Africa and Namibia, ITDP has also introduced the California Bike in health programmes in Ghana, Senegal and Tanzania via Government or local organisations. In Ghana, their partner was the Community-based Health Planning and Services (CHPS), that through a pilot project found that “When shifting the transport burden away from the patient to the health care provider, [...] a single nurse on a motorbike or a bicycle relocated to a village health centre can outperform an entire subdistrict health centre, increasing the volume of health service encounters by eight times” (Gauthier, 2004). CHPS is part of the Government of Ghana’s poverty reduction strategy to increase equity and quality of health care. USAID donated 128 motorbikes, 224 bicycles and accessories, worth US\$270,000 (USAID, 2007).

Household level surveys can provide reliable and comprehensive travel data. Two experiences in the region are the *2004 Nairobi Urban Household Travel Patterns Survey*, which revealed that transport accounted for over 10 per cent of expenditure for at least 68 per cent of households in the city, and the *2005 South Africa National Household Travel Study*, which recorded transport difficulties for approximately 82 per cent of rural households (Czuczman, 2007).

## V. Final remarks and the way forward

As the first Namibian initiative focusing on the impact of transport on health service access, this assessment raised a range of issues that can be addressed at different levels. While the relationship between transport and health is clear, the route to solving transport problems is not so straightforward. Although there is wide awareness in Namibia that lack of transport is a barrier to accessing services, transport itself has always been treated as a peripheral issue. Since transport limitations have not been properly qualified or quantified, addressing them has never been a priority on the national agenda.

This assessment demonstrates that lack of appropriate and affordable transport solutions hinders individual access to health facilities.

Transport costs combined with medical fees represent a burden to PLWHA, particularly women, who might spend between N\$20 and N\$40 every month to collect medications. Lack of money to pay transport costs has a direct impact on treatment adherence. Participants in the research consider 5 km the reasonable distance to access treatment, however 77 per cent are more than 20 km away from the nearest health facility. Neither Omusati nor Karas has a public transport system that addresses the needs of communities. Although they are private businesses, taxis are the main “public transport” available in Omusati, followed by hikes with community members. The latter is the main transport solution in Karas.

Lack of affordable and reliable transport is a barrier to emergency care, and transport in an emergency situation depends solely on patients’ capacity to access cash. Rural dwellers pay up to N\$400 to reach hospital in an emergency. According to community members and health workers, “patients get exhausted and even die while waiting for an ambulance”.

This assessment found an overwhelming demand for decentralisation of drug distribution, of which transport is an important yet underestimated

component. Outreach programmes focusing on drug distribution such as mobile clinics are still provided on an *ad hoc* basis. Because there is no centralised data collection and redistribution for these experiences, lessons learned apparently get lost in the channels of communication between district hospitals, MoHSS and development agencies. Requirements in terms of transport are not clear, even though this is a core issue for the effectiveness of these programmes. Outreach focusing on care and support are an important component of the health system and rely heavily on community volunteers. Even though communities would like to see more involvement of the volunteers in the drug distribution system, this is a disputed issue in the health sector as professionals regard it as inadvisable.

In order to address all the issues raised, it is important to involve stakeholders at all levels of the supply and demand chains. To start with, it is necessary to empower communities with information linking transport and health, enabling them to better advocate for appropriate transport solutions. This means feeding into broader initiatives, such as the treatment literacy campaigns; and into local initiatives such as HIV/AIDS support groups. The

pressing need for adequate emergency transport provision, and indeed wider policies on medical vehicle fleet management, should also be incorporated into advocacy initiatives that aim to improve services delivered at health facilities.

Transport-related income generation projects also offer opportunities to empower individuals at the grassroots level. Sales, servicing, manufacturing and hiring of bicycles, bicycle ambulances, motorcycles, donkey carts, and other small-scale transport solutions, are niches to be explored. This could improve people’s access as well as ownership of means of transport. Likewise, labour-based transport infrastructure projects could also improve access to health facilities as well as creating local employment.



A comprehensive database of experiences aiming to decentralise the drug distribution system, including transport as a component, might shed light on the topic and be an important tool in encouraging or requiring district hospitals to implement outreach programmes. In relation to the involvement of community volunteers, there is scope for advocacy

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## **Patients get exhausted and even die while waiting for an ambulance**

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at the national and local levels. At the national level, close work with MoHSS could define training packages and monitoring systems for community volunteers, expanding the current task-shifting approach that focuses on nurses' roles and responsibilities. At the local level, support groups for PLWHA and HBC groups could coordinate systems for collection and distribution of drugs. Again, reliable and affordable transport for volunteers is an important component for effective initiatives.

Experience in other sub-Saharan African countries highlights a need to have better data and indicators informing policy. For this, household travel information should be part of regular national surveys. The current indicators for access to health facilities should be reviewed to take account of what communities consider reasonable distances to access treatment. Surveys of Namibian regions other than those covered by this assessment would be useful.

This assessment points to the need for cooperation between health and transport policy-makers, local communities, health workers and PLWHA in order to improve health service access. An inter-sectoral steering committee could constitute a permanent platform for consultation and information sharing, making possible a holistic approach to access to health services.

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BEN Namibia – [www.benbikes.org.za/namibia](http://www.benbikes.org.za/namibia)

Disacare – [www.disacare.org.zm](http://www.disacare.org.zm)

e-Ranger – [www.eranger.com](http://www.eranger.com)

FABIO – [www.bspw.org/fabio.html](http://www.bspw.org/fabio.html)

IFRTD – [www.ifrtd.org](http://www.ifrtd.org)

IFRTD / Mobility and Health Programme – [www.mobilityandhealth.org](http://www.mobilityandhealth.org)

ITDP – [www.itdp.org](http://www.itdp.org)

Practical Action - [www.itdg.org](http://www.itdg.org)

Riders for Health - [www.riders.org](http://www.riders.org)

Transaid – [www.transaid.org](http://www.transaid.org)

World Bicycle Relief – [www.worldbicyclerelief.org](http://www.worldbicyclerelief.org)

## Annex: Research tools

### Guidelines for focus groups with transport and health service users

1. What are the health services (treatment, care and support) you are currently receiving? From hospitals/clinics, from your family, from your community, from the local faith community, from networks/support groups, and others.
2. How much is it to access health services? Medical fees, drugs, transport, any other related cost.
3. What do you consider the main constraints to access health services (treatment, care and support)? Physical, economic, social barriers? Do you consider transport a barrier to access to health services?
4. Are you happy with the health services available in your area? Why?
5. Do you think HIV/AIDS positive people are more vulnerable when accessing health services? Why?
6. Do you think women who are HIV/AIDS positive are more vulnerable than men when accessing health services? Why?
7. What modes of transport do you use in this area? Does anyone in this group have a car? A bicycle? Other modes of transport? How many? What are the modes of transport that people usually use? Where do you get it (include ranks)? How much does it cost? Do you consider it cheap? Expensive? Fair? Is it easy to access transport? Is it safe? Is it appropriate for your need?
8. How far do you need to travel to access health services? Is this expensive/ problematic in any way? How far do you consider reasonable to travel to access treatment?
9. Is there any time in the year when it is more difficult to travel to access health services? Why? Weather, economic activities.
10. Do you think accessing transport is different for men and women? Why? How different?
11. What do you think would be appropriate transport solution for you to access health services, considering: need, reliability, affordability, security, seasonality, social-cultural issues (gender, social relations).
12. Do you receive any treatment free from charge? What? Where do you collect it? How often? Can someone else collect it for you? Are you happy with this system? What would you like to change?

Which mode of transport do you think is appropriate for drugs distribution?

13. In case of emergency, how do you access health services? Does the hospital/clinic collect you at your house? If yes, how much does it cost? How long does it take? Do you have to pay? Are you happy with this system? What would you like to change about it? If no, how do you travel to hospital/clinic? Are you happy with this system? What would you like to change about it? Which mode of transport do you think is appropriate in case of emergency?
14. Do community members help you in case of emergency? How? Example: if someone has a car, do they take you to the hospital/clinic? Do they charge you? And if you don't have money?
15. If you need cash for an emergency (for example, pay for an ambulance, or pay for medical fees, or pay for transport), how do you get it? Family? Financial institutions? Selling livestock? Other way?
16. Do you think HIV/AIDS positive people are more vulnerable when accessing cash for an emergency? Why?
17. Do you think women are more vulnerable when accessing cash for an emergency? Why?

### Guidelines for interviews with health service providers

1. Name, sex, role as a health service provider (doctor, nurse, home-base care volunteer, traditional healer, family caregiver, others), location where the interviewee works (hospital, clinic, health centre, coverage area, if a mobile caregiver or an organisation).
2. What are the health services offered in this constituency? Treatment / Care – what type? Home-based care? Others? How many groups in this area? How do they see the patients? Do they travel? / Support – what type? Support groups? Others? How many groups in this area? Where do they meet?
3. How much is it to access health services?
4. Does the health centre (hospital, clinic, centres) where you work offer any treatment free from charge? What? How do patients collect it? How often? Can someone else collect it for them? Are

you happy with this system? What would you like to change? Which mode of transport do you think is appropriate for drugs distribution? Do you think drugs distribution could be de-centralised? Why and how? In the case of ARTs, how could it be distributed outside of hospitals? What are good examples of de-centralised treatment?

5. In case of emergency, how do patients access health services? Does the hospital/clinic collect them at their house? If yes, how much does it cost? How long does it take? Do they have to pay? Are you happy with this system? What would you like to change about it? If no, how do they travel to hospital/clinic? Are you happy with this system? What would you like to change about it? Which mode of transport do you think is appropriate in case of emergency?
6. When patients need to be referred to other clinics/hospitals, how does it happen? Is there transport available for that? Who is in charge of that? Who pays for that? Is it often available when you need? How long does it take to arrive? Which geographical area does it cover? How do you communicate with staff from other clinics and hospitals?
7. What do you consider patients' main constraints to access health services? Physical, economic, social barriers? Do you consider transport a barrier to access to health services?
8. Do you think HIV/AIDS positive people are more vulnerable when accessing health services? Why?
9. Do you think women who are HIV/AIDS positive are more vulnerable than men when accessing health services? Why?
10. Do you think children who are HIV/AIDS positive are more vulnerable than men when accessing health services? Why?
11. Do you travel to visit patients? (in case of family caregiver or support buddy – do you travel with patients to visit clinics?) How do you travel? Is this expensive/problematic in any way? Is it easy to access transport? Is it safe? Is it appropriate for your need?
12. How far do you consider reasonable for patients to travel to access treatment?
13. Do you think accessing transport is different for men and women? Why? How different?

14. What do you think would be appropriate transport solution to improve people's access to health services, considering? Patients' needs, reliability, affordability, security, seasonality, social-cultural issues (gender, social relations)

### Guidelines for interviews with transport service providers

1. Name, sex, role as a transport provider (taxi driver, taxi owner, community member with vehicle, etc), location where the interviewee works (coverage area).
2. How much do you charge for clients to use your transport? Do you consider it cheap, expensive, or fair for the client?
3. Do you think accessing transport is different for men and women? Why? How different?
4. Adapt these questions as appropriate, in order to cover different modes of transport available in the area: How much is it to buy a vehicle? And hire to use as taxi? (cost per day) How much profit can you have in one month as a taxi driver? Is it sustainable business? How much is it to buy a bicycle? Is there any place where you can hire it? How much does it cost? How much is it to buy a donkey cart? Can you hire it? How much does it cost? And how much to manufacture?
5. What do you think would be appropriate transport solution to improve people's access to health services, considering: People's needs, reliability, affordability, security, seasonality, social-cultural issues (gender, social relations).

### Guidelines for interviews with local authorities

1. Name, sex, role as a local authority, location where the interviewee works.
2. What are the facilities available in this constituency? Health facilities, churches, multipurpose centres, schools, VCT, financial institutions, pharmacies
3. What are the health services offered in this constituency? Treatment / Care – what type? Home-based care? Others? How many groups in this area? How do they see the patients? Do they travel? / Support – what type? Support groups?

Others? How many groups in this area? Where do they meet?

4. In case of emergency, how do patients access health services? Does the hospital/clinic collect them at their house? Does the hospital/clinic collect them at their house? If yes, how much does it cost? How long does it take? Do they have to pay? Are you happy with this system? What would you like to change about it? If no, how do they travel to hospital/clinic? Are you happy with this system? What would you like to change about it? Which mode of transport do you think is appropriate in case of emergency?
5. Do community members help others in case of emergency? How? Example: if someone has a car, do they take you to the hospital/clinic? Do they charge? And if the person in need doesn't have money?
6. What do you consider patients' main constraints to access health services? Physical, economic, social barriers? Do you consider transport a barrier to access to health services?
7. Do you think HIV/AIDS positive people are more vulnerable when accessing health services? Why?
8. Do you think women who are HIV/AIDS positive are more vulnerable than men when accessing health services? Why?
9. Do you think children who are HIV/AIDS positive are more vulnerable than men when accessing health services? Why?
10. Do you think accessing transport is different for men and women? Why? How different?
11. What do you think would be appropriate transport solution to improve people's access to health services, considering: People's needs, reliability, affordability, security, seasonality, social-cultural issues (gender, social relations).