

# EAST AFRICAN COMMUNITY



## **MAPPING OF HEALTH SERVICES ALONG MAJOR TRANSPORT CORRIDORS IN EAST AFRICA**

**MARCH 2015**

## FORWARD

Migrants such as long-distance truck drivers and their assistants, migrant female sex workers and other populations associated with major transport hubs often face increased vulnerability to infectious diseases, including HIV, tuberculosis (TB) and malaria. Although mobility in itself does not cause disease, conditions surrounding the migration process increase migrants' vulnerability to ill health. Available literature highlights challenges faced by migrant workers and vulnerable populations along transport corridors and in cross-border areas in accessing quality health services. While the barriers are similar to those of many other underserved populations, migrant workers and vulnerable populations face the additional burden of having to search for new health care options as they move. Their mobility means that they sometimes find themselves with no access to health care at all or they must seek episodic care at health facilities.

In 2013, under the umbrella of the East African Community (EAC), a regional task force on integrated health and HIV and AIDS programming along transport corridors in East Africa was established. The key task force mandate was to support the EAC's Technical Working Group on HIV and AIDS, Tuberculosis and Sexually Transmitted Infections in developing a regional strategy aimed at scaling up integrated health and HIV programming along the major transport corridors in EAC. Critical outputs include developing a regional strategy for scaling up integrated health and HIV programming along transport corridors, including a minimum package of health services for mobile, vulnerable and key populations; and conducting a mapping of health services along major transport corridors in the five EAC countries. The findings from the mapping exercise will inform the strategy.

On behalf of the EAC, I would like to express my gratitude to the Partner States; the regional and international bodies namely the International Organization for Migration (IOM), FHI 360 Kenya and North Star Alliance; and the technical experts that contributed to the compilation of this report. Findings from this mapping exercise will guide the EAC towards integrating health and HIV and AIDS programming along transport corridors in the region, in the spirit of *One People, One Destiny*.

It is my earnest hope that the production of this report will be institutionalized, and I trust that users will find it a most valuable resource.



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Deputy Secretary General (Productive and Social Sectors)  
East African Community

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In support of the larger goals of the EAC HIV and AIDS, TB and STI Unit, the Regional Task Force, this regional report was conceived and carried out by IOM, in collaboration with Makerere University, with financial support from the Swedish International Development Cooperation Agency (Sida). The regional report was based on data collected from the five EAC Partner States. FHI 360 conducted the mapping exercise in Burundi and Rwanda, IOM was responsible for Uganda and North Star Alliance covered Tanzania and Kenya; each conducted the country study, analysed the data and produced national reports.

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## **ABBREVIATIONS AND ACRONYMS**

ADRA	Adventist Development and Relief Agency
AHF	AIDS Healthcare Foundation
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral Treatment
BCC	Behaviour Change Communication
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
DCMC	Dodoma Medical Christian Centre
DOTS	Directly Observed Treatment, Short Course
DRC	Democratic Republic of Congo
EAC	East African Community
EU	European Union
FBO	Faith-Based Organization
FP	Family Planning
FSW	Female Sex Worker
GIS	Geographical Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPPS	Health Promotion and System Strengthening
ICAP	International Center for AIDS Care and Treatment Programs
IDU	Injecting Drug User
IPPF	International Planned Parenthood Federation
IOM	International Organization For Migration
LGBTI	Lesbian, Gay, Bisexual, Transgender and Intersex
MJAP	Mulago-Mbarara Teaching Hospitals' Joint AIDS Programme
MOH	Ministry of Health
MSM	Men Who Have Sex with Men
NGO	Non-governmental Organization
PEPFAR	President's Emergency Plan for AIDS Relief

PLHIV	People Living with HIV
PWID	People Who Inject Drugs
SADC	Southern African Development Community
SBCC	Social and Behaviour Change Communication
Sida	Swedish Development Cooperation Agency
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
TB	Tuberculosis
TWG	Technical Working Group
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

# EXECUTIVE SUMMARY

## Introduction

Evidence suggests that migrants such as long-distance truck drivers and female sex workers (FSWs) and other key and vulnerable populations associated with major transport hubs are highly vulnerable to HIV, tuberculosis (TB) and malaria. The International Organization for Migration (IOM), FHI 360 and North Star Alliance, on behalf of the East African Community (EAC) Member States, conducted a systematic mapping of existing health facilities, HIV and AIDS service providers and actors along major transport corridors in Burundi, Kenya, Rwanda, Tanzania and Uganda. It is hoped that the findings from this mapping exercise will serve as a guide for the EAC in the development of an integrated health and HIV and AIDS strategy and programming along transport corridors in the region.

## Methods

The mapping followed a multi-method, multi-site design. Data was collected through records review, a quantitative survey of health workers and facilities providing health services (including HIV/AIDS prevention, basic treatment and support and care services, etc.) for key populations and vulnerable communities at selected hotspots/towns/truck stops along different transport corridors. The survey targeted all functional government and private-for-profit health facilities, dispensaries, non-governmental organizations (NGOs), community-based organizations (CBOs) and faith-based organizations (FBOs) along the major transport corridors in the EAC region. Overall, a total of 341 health facilities were surveyed. In addition, geographic positioning information was collected using GIS devices. The mapping was conducted in the second half of 2014 along the major transport corridors in all five of the EAC Member States.

## Key Results

### ***Health service providers are varied***

Key populations around transport hubs have often faced difficulties in accessing health services. This study sought to identify and describe the nature of existing services and service providers along the major transport corridors in the EAC. The majority of the assessed facilities were found to be government owned. This was particularly the case for Burundi, Rwanda and Tanzania. On the contrary, in Uganda and Kenya, over-three quarters of facilities surveyed were privately owned.

### ***Health facility clientele***

Across the 341 health facilities surveyed, on average facilities reported a comparably higher proportion of female clients compared to males for both adults and children. Notably, there were nearly half the numbers of children as there were adult clients.



### ***Health services needs for clients along transport corridors***

Findings revealed similar patterns of health service needs for populations along major transport corridors across all of the five EAC countries mapped. The major reasons why selected key and vulnerable populations visited the sampled facilities were for treatment of common ailments including malaria and cough, screening and testing for sexually transmitted infections (STIs) and HIV counselling and testing (HCT). Other services sought included treatment for accident-related injuries and condoms.

### ***Health service provision to key and vulnerable populations***

The study found that some population groups had more access to health services than others at the majority of facilities in the five EAC countries. Specifically, truck drivers and their assistants and FSWs were reported to access health services more frequently than people who inject drugs (PWID) and trafficked persons.

### ***Health management information systems***

The majority of assessed facilities in the five countries reported utilizing a health management information system (HMIS); proportions ranged from 84 per cent in Uganda to 100 per cent in Burundi and Kenya. In all countries, some health facilities – ranging from 30 per cent in Burundi and 78 per cent in Kenya – reported that they collect information on key and vulnerable populations including truckers and sex workers. Additionally, a significant number were still found to use paper-based systems of collecting information.

### ***Health service provision***

The study examined the availability of specific HIV/AIDS interventions including provision of HCT and antiretroviral therapy (ART). Across all countries, most health facilities reported providing both HIV counselling and testing services. Fewer than 40 per cent of the facilities reported providing HIV treatment services, however. Health service providers also reported conducting behaviour change communication (BCC) targeting key and vulnerable populations and the general community. However, the majority did not have customized BCC materials, with most using nationally produced materials.

## **Summary of Findings**

- A total of 341 health facilities were surveyed in the five EAC countries (i.e. Burundi, Kenya, Rwanda, Tanzania and Uganda). The majority of the facilities in Burundi, Rwanda and Tanzania were government owned—at 88, 75 and 62 per cent, respectively. Conversely, in Uganda and Kenya, more than three-quarters of the facilities were privately owned.
- Most facilities mapped were either private clinics (44%, n=153) or health centers (27%, n=91). Hospitals comprised only 12 per cent (n=41) of the facilities mapped along major transport corridors in the EAC region.

- About 51 per cent (n=174) of facilities along the transport corridors in the EAC region were funded privately, including through user fees.
- A considerable proportion of health facilities partnered with NGOs/CBOs/FBOs to provide services, ranging from 46 per cent in Uganda to 79 per cent in Rwanda.
- The most common areas for partnership were provision of medicines and essential supplies (e.g. test kits, laboratory reagents and equipment); delivery of care (e.g. vaccination, antenatal care, family planning, food supplements and transport for people living with HIV (PLHIV)); and administrative costs (e.g. salaries, communication, stationery, utilities bills, fuel for transport, renovation or construction of infrastructure).
- The monthly caseload for the 341 health facilities assessed was estimated to be 238,151 adults; about 59 per cent of the clients were females. Similarly, there were 104,692 children seen monthly, 54 per cent of whom were girls.
- Key population groups represented 16 per cent of the total adult facility caseload per month.
- The health service needs of key and vulnerable populations included the following: treatment of common ailments such as malaria and cough; STI screening and treatment; and HIV counselling and testing.
- The majority of assessed facilities in the five countries utilized a health management information system, ranging from 84 per cent in Uganda to 100 per cent in Burundi and Kenya. The majority of facilities collected information using a paper-based system.
  - Some health facilities, ranging from 30 per cent in Burundi to 78 per cent in Kenya, collected information on key and vulnerable populations including truckers and sex workers;
  - Some facilities disaggregated information by nationality, ranging from 31 per cent in Rwanda to 82 per cent in Tanzania.
- Nurses and nursing aides comprised more than two-thirds of professional staff (67%). Medical doctors comprised less than 7 per cent of professional staff in the health facilities.
- Provision of ART and TB treatment is low: fewer than 40 per cent of the facilities reported providing HIV treatment services, and only 31 per cent of the facilities offered TB treatment.
- The majority of the facilities surveyed – ranging from 66 per cent in Uganda to 100 per cent in Kenya – reported conducting BCC targeted to key and vulnerable populations and the general community. However, most of these facilities did not have customized BCC material and instead relied on nationally produced materials. Few BCC materials on TB prevention and management existed in these facilities.

## **Conclusion and Recommendations**

In light of the findings outlined above, it is recommended to strengthen the capacity of public health care facilities as well as private facilities in the areas in which they were found to be the major providers of health services along transport corridors. While it is critical to support governments and

public facilities in providing migrant-friendly health services, the health-seeking behaviour of key and vulnerable populations along transport corridors must be catered to as well. Similarly, the responses to TB and HIV/AIDS should be strengthened to enable key and vulnerable populations along transport corridors to easily access them.

Moreover, one of the major reported barriers to accessing services was the lack of client-friendly services; it is therefore recommended to avail more client-friendly, migrant-sensitive services that will attract key and vulnerable populations. The establishment of integrated health clinics or wellness centers in priority sites would furthermore enable provision of a minimum service package to key and vulnerable populations along transport corridors, particularly truckers and female sex workers.

# 1. INTRODUCTION

## 1.1. Background and Study Context

Several studies have highlighted the health risks encountered by mobile and migrant populations<sup>1</sup> such as long-distance truck drivers, FSWs, other populations associated with major transport hubs and communities along transport corridors in East Africa. Available evidence indicates that they tend to be highly vulnerable to infectious diseases, including HIV, TB and malaria (e.g. Crush et al., 2005; Ford and Chamrathirong, 2012; Haour-Knipe et al., 2013; IOM, 2013, 2012, 2010, 2004; IOM, NACC and TACAIDS, 2012; IOM and UAC, 2008; Moroka and Tshimanga, 2009; Morris and Ferguson, 2006; Ondimu, 2010; Republic of Kenya, 2005). The health risks stem not from migration itself but rather from a complex interaction of factors at individual, environmental and structural levels.<sup>2</sup> Some of the factors that have been consistently cited in literature include risky sexual behaviours, low risk perception, high levels of mobility, the nature and condition of work, repetitive work activities, unsanitary accommodation, separation and isolation and inadequate access to health and social services, among others (Morris and Ferguson, 2006; WHO, 2008; WHO and IOM, 2010).

For example, research indicates that long-distance truck drivers and female sex workers are especially vulnerable to HIV and AIDS and more generally sexually transmitted infections and remain key bridge populations for the transmission of HIV. Like other migrant populations, truck drivers spend large amounts of time away from their families and often have multiple and concurrent sexual partners. These include FSWs and other females living along transport routes, truck stops and border communities. The FSWs engage with diverse clients, of which only about 28 to 30 per cent are truckers (IOM and UAC, 2008; Republic of Kenya, 2005). Other clients of FSWs come from a range of occupations, and include fuel dealers, businessmen, bar/lodge workers, uniformed personnel (i.e. immigration officials, soldiers and law enforcement) and drivers of other types of vehicles. This highlights the extent of sexual networking and shows that vulnerability to HIV along transport corridors is not restricted to truck drivers and sex workers—supporting the idea of programming within “spaces of vulnerability.”<sup>3</sup>

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<sup>1</sup> Those commonly referred to as mobile populations are migrants. The term is used to include asylum seekers, refugees, international students, victims of trafficking, job seekers and migrant workers, including truck drivers and other transport workers. The distinction is important because international legal instruments – including WHA Resolution 61.17 on the Health of Migrants, the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) – recognize and guarantee the human rights of migrants, and it is important to use terminology consistent with these instruments for accountability purposes.

<sup>2</sup> **Environmental:** Conditions related to the migration process (“negotiating” borders), living and working conditions, inadequate access to health services and HIV prevention programmes, etc.; **Individual:** Low risk perception, high levels of multiple concurrent sexual partnerships, etc.; **Structural:** Non-inclusive health and migration policies, lack of harmonization of policies, strategies and guidelines (including treatment protocols) across borders, etc.

<sup>3</sup> Spaces of vulnerability are geographical areas where migrants and communities interact, such as where migrants live, work, pass through or originate, which can lead to increased health vulnerability. Examples include land border posts, ports, truck stops or hotspots along transport corridors, construction sites, commercial farms, fishing communities, mines, migrant communities and informal urban settlements, origin sites, detention centers and emergency settlements. In such spaces, health vulnerability among migrants

Available literature also highlights challenges faced by migratory populations in accessing health services. Populations along transport corridors struggle with problems of health care access similar to those of many other underserved populations, with the additional burden of having to search for new care options as they move. The mobility of these populations means that they sometimes find themselves with no access to health services at all or they must seek episodic care at health facilities that often are not equipped to provide the scope and quality of services they need (IOM, 2009). This mobility also results in poor continuity of care,<sup>4</sup> as populations are often unable to complete prescribed treatment regimens, provide reliable medical records or obtain routine or preventive care. For example, studies indicate that mobility complicates care for chronic illness such as HIV or TB, especially when high levels of adherence are necessary to prevent drug resistance and treatment failure (e.g. IOM, 2013).

Thus, there is a compelling need for comprehensive health programming targeting migrant populations and vulnerable communities along transport corridors. Consequently, the Regional Task Force on Integrated Health and HIV and AIDS Programming along Transport Corridors was established under the coordination of the EAC. The task force, formed in 2013, is mandated to support the EAC's TWG on HIV and AIDS, TB and STIs to develop a regional strategy aimed at scaling up integrated health and HIV and AID programming along transport corridors in East Africa. Key outputs for the regional task force for 2014 including the mapping exercise for the five EAC countries and the development of the regional strategy, which will include a minimum package of health services for key and migrant populations.

## 1.2. Study Objectives

The overall aim of the mapping exercise is to provide EAC and Partner States with systematically compiled, reliable and updated information on available health services along transport corridors in the EAC to facilitate effective engagement on integrated health and HIV and AIDS programming along the corridors.

### Objectives of the Mapping Exercise

1. Compile **reliable and up-to-date data** on available health services along transport corridors in the EAC (focusing on key and vulnerable populations);
2. Generate **evidence-based, strategic information** to inform the East Africa Regional Task Force on Integrated Health and HIV and AIDS Programming along Transport Corridors;
3. Identify gaps to inform the development of an **EAC minimum health service package** to guarantee continuity of care along the transport corridors.

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stems not only from individual but also from structural and environmental factors specific to a location, including the relationship between migrant and local populations.

<sup>4</sup> Mobility has been highlighted as one of the larger barriers to continuity of care, and it can simultaneously contribute to increased need for care.

## 2. METHODS AND PROCEDURES

### 2.1. Study Design

This report is based on cross-sectional data collected from five countries in East Africa: Burundi, Kenya, Rwanda, Tanzania and Uganda. Data collection comprised review of records and interviews with in-charges of facilities providing health services (including HIV/AIDS prevention, basic treatment and support and care services, etc.) for key populations and vulnerable communities at selected hotspots/towns/truck stops along different transport corridors. The survey targeted all functional government and private for-profit health facilities, dispensaries, NGOs, CBOs and FBOs. In addition, health facilities along the corridors were mapped using GIS.

### 2.2. Study Sites

Table 1 indicates the major transport corridors and hotspots/towns covered during the health service availability mapping exercise in the five countries.

**Table 1: Transport Corridors Mapped**

COUNTRY	TRANSPORT CORRIDOR	ROAD/ROUTE	HOTSPOTS/TOWN
BURUNDI	Burundi/Rwanda	Ruhwa/Bugarama-Rugombo Kayanza-Kanyaru	Ruhwa, Kanyaru Haut
	Burundi/Rwanda	Kirundo-Nemba/Gasenyi	Kirundo: Nemba/Gasenyi
	Democratic Republic of Congo (DRC)/Burundi	Kalembe-Rumonge Kalemi-Rumonge (Lake Route)	Gatumba
	Bujumbura City		
	Tanzania/Burundi	Muyinga-Kobero	Kobero
	Tanzania-Kigoma/Burundi	Bujumbura-Rumonge-Kigoma (Lake Route)	Rumonge
	Tanzania/Burundi	Rumonge-Nyanza Lac-Kabonga	Kabonga
KENYA	Northern Transport Corridor	Mombasa-Malaba	Amagoro, Bukebe, Burnt Forest, Chimoi, Emali, Gilgil, Jomvu, Jua Kali, Kamarr, Kamulu, Kikohey, Kiundwani, Kyumvi, Maai Mahiu, Mackinon, Mili nne, Makindu, Malaba, Malili, Mariakani, Masimba, Maungu, Mbuinzau, Mlolongo, Mtito Andei, Nakuru, Pipeline, Sachangwani, Salama, Salгаа, Samburusamburu, Sultan Hamud, Taru, Timboroa, Toboi, Total, Turbo, Webuye Weigh Bridge
RWANDA	Rwanda/Burundi	Huye-Kanyaru	Nemba
	Rwanda/DRC	Grande Barriere Kigali-Rusizi-DRC Kigali-Rusizi-Bugarama Kigali-Nyamagabe-Rusizi	Grande Petite Cyanika
	Rwanda/Tanzania	Kigali-Rusumo	Rusumo
	Rwanda/Uganda	Kigali-Gatuna Road	Gatuna (border town), Kagitumba, Cyanika
	Rwanda/business centers		Kayanza-Kigali Huye Kigali-Butare Nyanza-Kigali Road

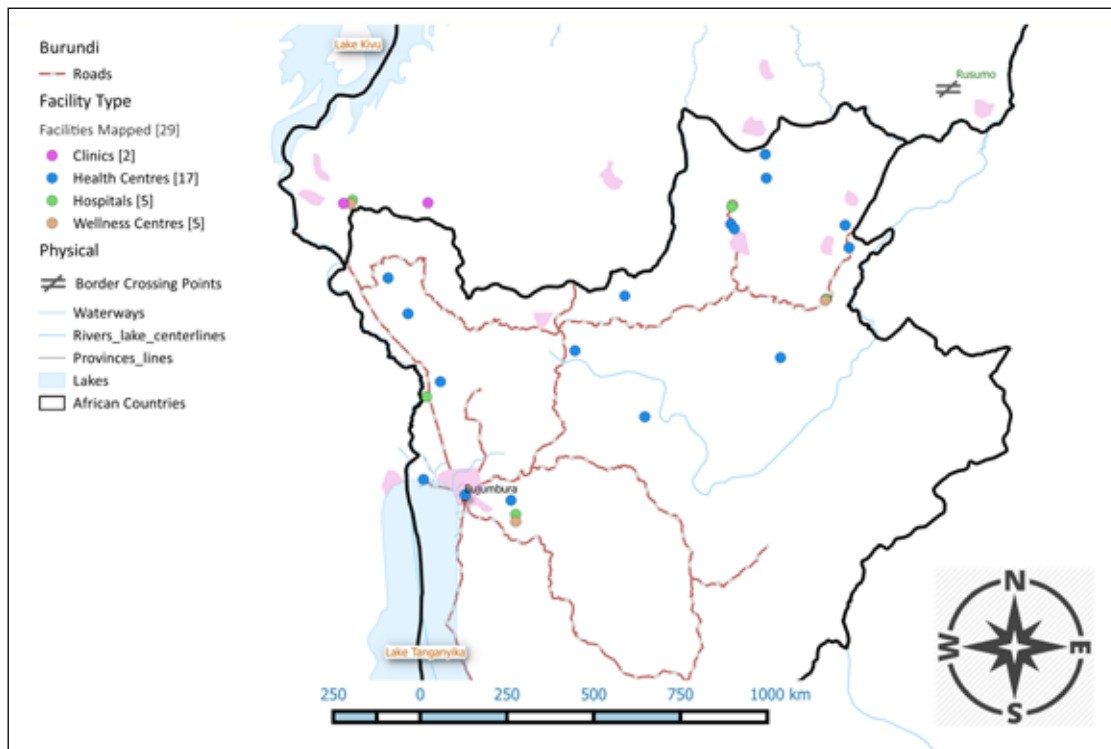
			Nyabugogo, Rugerero Nyagatare Road, Nyakarambi
TANZANIA	Southern Corridor	Dar-Kasumu-Tunduma for Tanzania/Malawi/Zambia	Dar se Salaam, Mbarali, Mbeya, Momba, Ilula, kilolo, Iringa, Njomba, Kilsoa, Morogiri, Temeke, Chalinze, Ubena, Kilwa, Makambako, Mtandika
	Central Corridor	Dar-Morogoro-Dodoma-Rusumo for Tanzania/DRC, Rwanda, Burundi	Hahi, Kongwa, Bagamoyo, Ikungi, Iramba, Rusumo, Kagongwa, Singinda, Ikungi, Puma, Misigiri, Shelui, Sokoine, Swangilwa, Mbulu, Magai, Mshikamani, kabanga, Murusanamba
UGANDA	Northern Corridor (Uganda/Sudan)	Kampala-Elegu	Arua Park, Migyera, Bweyale, Kigumba, Kiryandongo, Karuma, Kamudini Corner, Gulu, Elegu (border town)
	Western Corridor (Uganda/Rwanda)	Kampala-Gatuna + Mutukula border stretch	Lukaya, Lyantonde, Mutukula, Mirama hill, Ruti, Katuna (border town)
	Eastern Corridor (Uganda/Kenya)	Kampala-Busia + Malaba border stretch	Lugazi, Naluwerere, Busia (border town), Malaba (border town)

In Burundi, the mapping exercise covered eight hotspots. In Kenya, the exercise covered 28 hotspots/towns along the Northern Transport Corridor (i.e. Mombasa – Malaba route). In Rwanda, the mapping covered 16. In Tanzania, the mapping exercise covered the southern and central corridors. In Uganda, the mapping exercise covered 19 hotspots along three major transport corridors in Uganda – namely Northern, Western and Eastern.

**Figure 1: The East African Community**



**Figure 2: Health Facilities along the Transport Corridor in Burundi**



**Figure 3. Health Facilities along the Transport Corridor in Kenya**

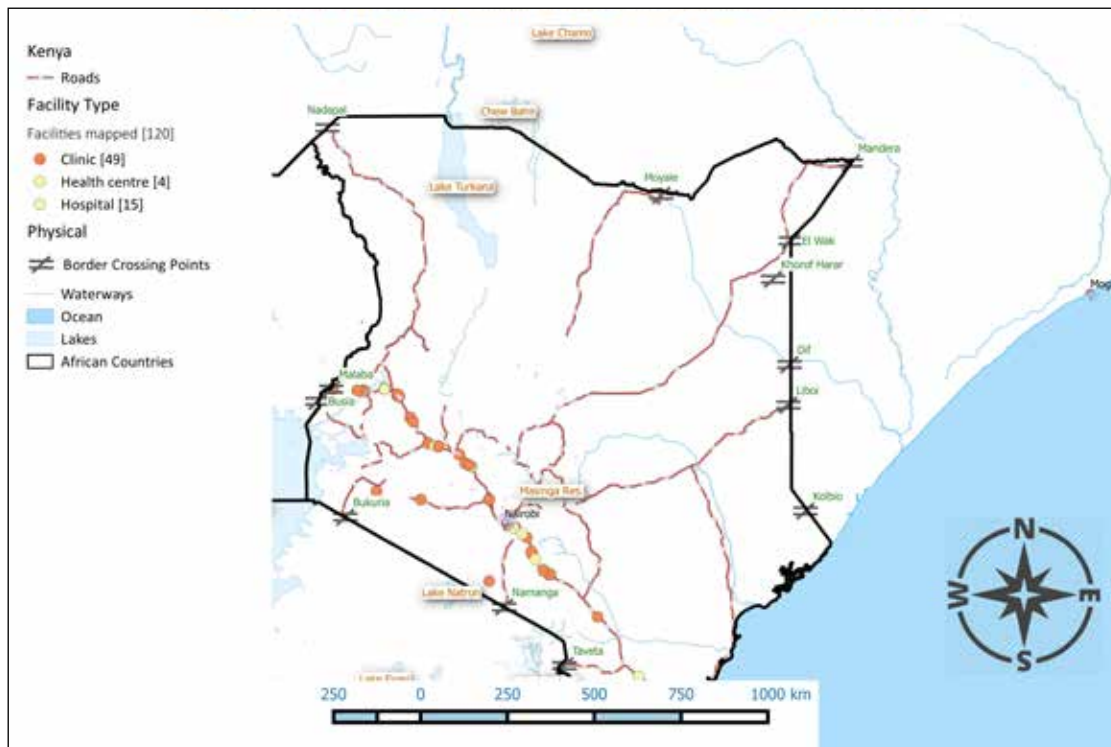




Figure 4. Health Facilities along the Transport Corridor in Rwanda

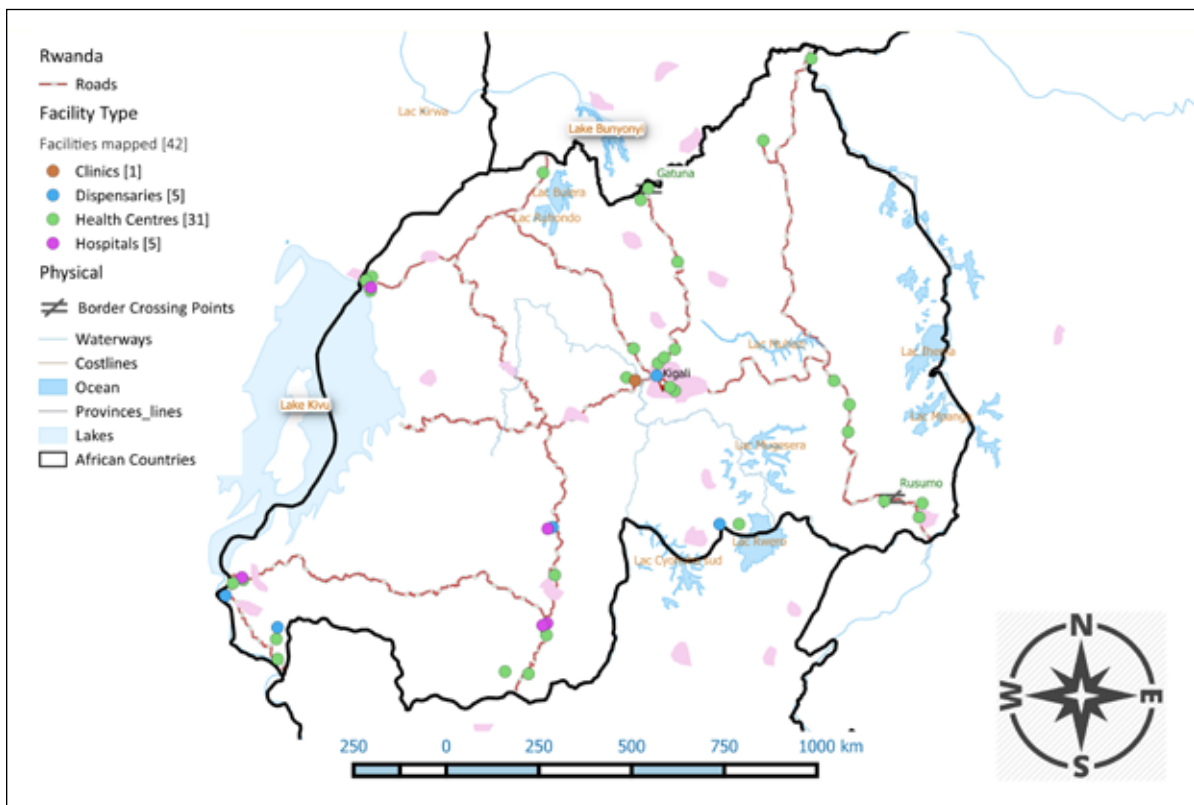
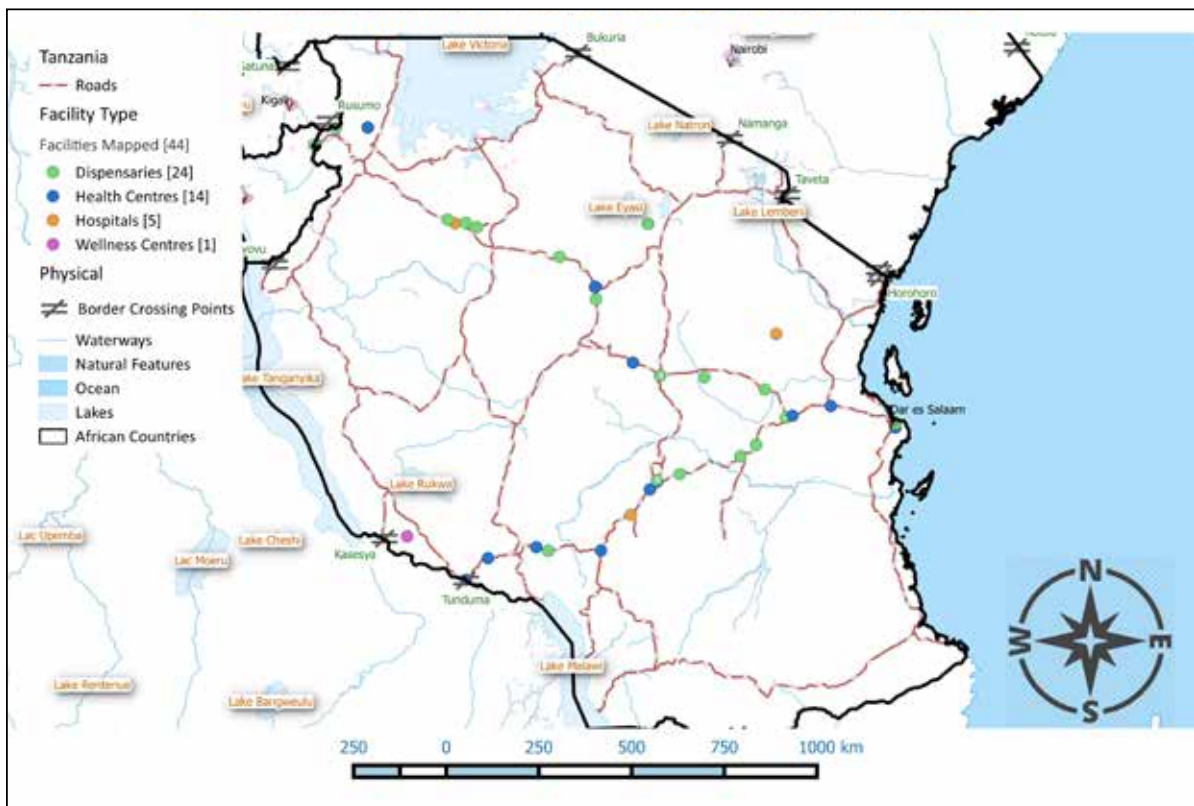
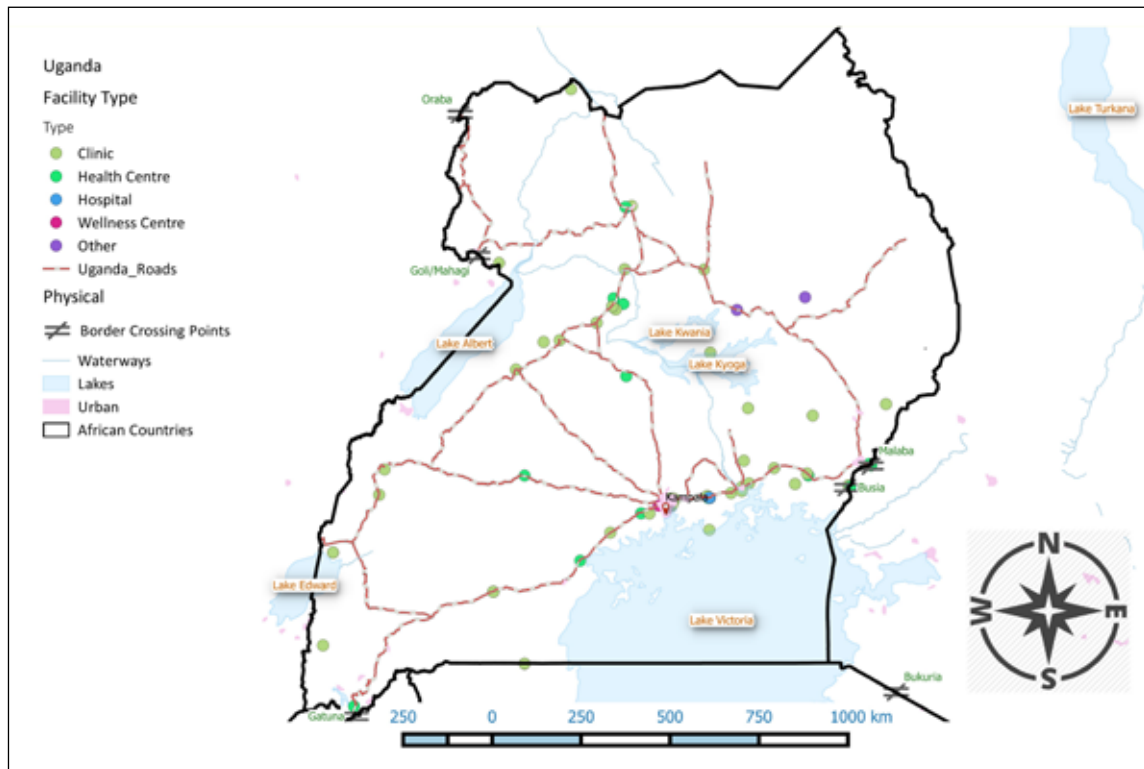


Figure 5. Health Facilities along the Transport Corridor in Tanzania



**Figure 6. Health Facilities along the Transport Corridor in Uganda**



### 2.3. Data Collection

#### *Health service availability mapping*

Data was collected using a structured questionnaire, which captured information across several domains including the following: location of the establishment, funding sources, number and type of clientele, human resource capacity and health services provided.

#### *GIS mapping*

GIS mapping of facilities and NGOs providing health services (including HIV/AIDS prevention, basic treatment, support and care services) for migrant populations and vulnerable communities at identified hotspots along selected transport corridors was conducted. GIS tracking targeted all functional government and private-for-profit health facilities, dispensaries, NGOs, CBOs and FBOs. The study utilized GIS devices (eTrex Vista HCx by GARMIN Ltd) to capture waypoints (GPS coordinates) of every facility within a 5 kilometer radius of the identified hotspot.

### 2.4. Data Management

Quantitative data was captured using Census and Survey Processing System (CSPro) Version 5.0.3 (2013)<sup>5</sup> and analysed in STATA Version 11.2 for Windows (StataCorp LP, US, 2012), using descriptive and univariate statistics to compare the distributions by site. The Chi-square test was used to test the significance of observed variations across key variables.

<sup>5</sup> CSPro was developed by the US Census Bureau, ICF International and Serpro S.A. with funding from the United States Agency for International Development.

## **2.5. Ethical Considerations**

The mapping exercise was conducted as a formative programmatic activity as agreed by the EAC task force. It was thus determined that approval from the provincial and site authorities to collect information on service delivery would suffice. In addition, data collectors were trained on ethical issues and to fully explain the purpose of the assessment and estimated time required. Study rationale, objectives, potential risks and benefits and participant rights to withdraw from the study at any time without affecting service access were explained to all participants, and clear verbal consent was obtained from each. As such, IRB approval was only sought in Uganda, where additional qualitative data was collected from clients at the health facilities. The study was approved by Makerere University School of Public Health Higher Degrees, Research and Ethics Review Committee and was registered with Uganda National Council for Science and Technology (Registration No. SS 3610).

### 3. RESULTS

#### 3.1. Description of Health Service Providers along Transport Corridors

Overall, a total of 341 facilities were surveyed in the five countries of the EAC (i.e. Burundi, Kenya, Rwanda, Tanzania and Uganda). Table 2 below shows the distribution of health facilities by selected characteristics including ownership, type of facility and funding mechanism.

The majority of the facilities in Rwanda, Tanzania and Burundi were government owned—at 88.4, 75 and 61.8 per cent, respectively. Conversely, in Uganda and Kenya, more than three-quarters of the facilities were privately owned. Overall, most facilities mapped were both private-for-profit (51.9%, n=177).

**Table 2: Characteristics of Health Service Providers along Transport Corridors**

	Countries					TOTAL N(%)
	Burundi	Kenya	Rwanda	Tanzania	Uganda	
	n(%)	n(%)	n(%)	n(%)	n(%)	
<b>Number of facilities surveyed</b>	34	127	43	44	93	341
<b>Ownership of facilities</b>						
Government	21 (61.8)	15 (11.8)	38 (88.4)	33 (75.0)	13 (14.0)	120 (35.2)
Private (for profit)	5 (14.7)	96 (75.6)	1 (2.3)	2 (4.5)	73 (78.5)	177 (51.9)
NGO/FBO/CBO	8 (23.5)	16 (12.6)	4 (9.3)	9 (20.5)	7 (7.5)	44 (12.9)
<b>Type of facilities</b>						
Hospital	7 (20.6)	17 (13.4)	5 (11.6)	5 (11.4)	7 (7.5)	41 (12.0)
Health center (HC IV, HC III, HC II)	18 (52.9)	6 (4.7)	32 (74.4)	14 (31.8)	21 (22.6)	91 (26.7)
Clinic	8 (23.5)	83 (65.4)	1 (2.3)	0 (0.0)	61 (65.6)	153 (44.9)
Wellness center	0 (0.0)	9 (7.1)	0 (0.0)	1 (2.3)	2 (2.2)	12 (3.5)
Dispensary	1 (2.9)	12 (9.4)	5 (11.6)	24 (54.5)	0 (0.0)	42 (12.3)
Others	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (2.2)	2 (0.6)
<b>Funding source*</b>						
Public funding	5 (14.7)	10 (7.9)	13 (30.2)	27 (61.4)	12 (12.9)	67 (19.8)
Private funding	0 (0.0)	92 (72.4)	3 (7.0)	14 (31.8)	65 (69.9)	174 (51.0)
Donor funding	20 (58.8)	6 (4.7)	27 (30.2)	3 (6.8)	2 (2.2)	58 (17.2)
Public and donor	-	14 (11.0)	0	0	3 (3.2)	17 (5.0)
Private and donor	-	5 (3.9)	0	0	11 (11.8)	16 (4.7)

\* Note that this data is missing for some of the facilities.

#### Types of Health Service Providers along the Transport Corridors

In terms of facility type, clinics comprised the largest proportion of the sample (44.9%, n=153), followed by health centers (26.7%, n=91). Hospitals comprised only 12 per cent (n=41) of the facilities mapped along major transport corridors in the EAC region.

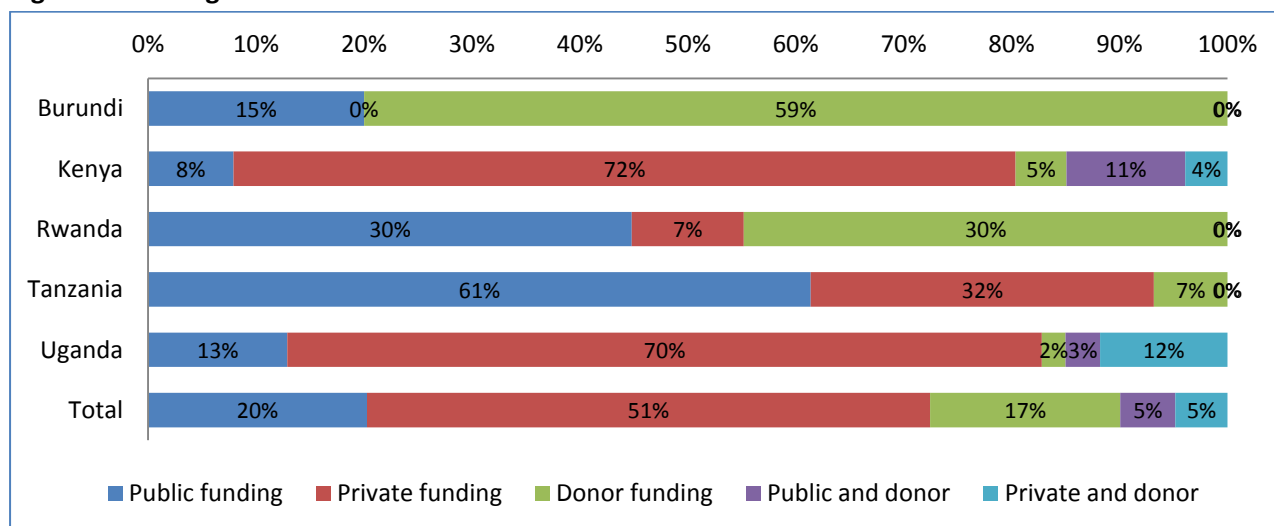
The table above demonstrates substantial differences by country. For instance, in Uganda, clinics represented the most common type of health facility along the transport corridors (65.6%, n=61),

followed by health centers (22.6%, n=21), while in Rwanda, health centers comprised 74.4 per cent of facilities, followed by both hospitals and dispensaries (11.6% each).

## Funding

Table 2 shows that 51 per cent (n=174) of the facilities along the transport corridors in the EAC were funded privately. This is especially the case with Kenya, Uganda and Tanzania—at 72.4, 69.9 and 31.8 per cent, respectively. Most of these private facilities also charge user fees. Many of the facilities were funded through a combination of funding sources.

**Figure 7: Funding Sources for Selected Facilities**



## Location of Health Facilities

In all studied countries, most of the facilities were located along the main road in a town along one of the mapped transport corridors. For example in Uganda, 12 out of 93 facilities were located, on average, 1.3 kilometers (SD=1.15) from the nearest town along the selected corridor. In Burundi and Rwanda, the average distance of sampled facilities from towns along the transport corridor was 13.9 KM (11/34) and 21.9 KM (23/43), respectively.

A substantial proportion of health facilities along the transport corridors were located close to a border town, ranging from 25 per cent in Tanzania to 61.8 per cent in Burundi (Table 3).

**Table 3: Location of Health Facilities along Transport Corridors**

Facility Location	Countries				
	Burundi	Kenya	Rwanda	Tanzania	Uganda
	n(%)	n(%)	n(%)	n(%)	n(%)
Located on the main road	23 (67.6)	119 (93.7)	23 (53.5)	40 (90.9)	63 (67.7)
Close to the border	21 (61.8)	8 (6.3)	19 (44.2)	11 (25.0)	40 (43.0)

## Partnership for Health Service Provision

Across all the countries, a considerable proportion of facilities assessed reported partnering with NGOs/CBOs/FBOs to provide health services, ranging from 46.2 per cent in Uganda to 79.1 per cent in Uganda. The most common areas for partnership were as follows:

- Provision of medicines and essential supplies (e.g. test kits, laboratory reagents and equipment);
- Delivery of care (e.g. vaccination, antenatal care, family planning, food supplements and transport for PLHIV); and
- Administrative costs (e.g. salaries, communication, stationery, utilities bills, fuel for transport, renovation or construction of infrastructure).

**Table 4: Partnership for Health Service Provision**

Partnership for health service provision	Countries					TOTAL N(%)
	Burundi n(%)	Kenya n(%)	Rwanda n(%)	Tanzania n(%)	Uganda n(%)	
Facilities that partner with NGOs/CBOs/FBOs to provide services	24 (70.6)	76 (59.8)	34 (79.1)	28 (63.6)	43 (46.2)	205 (60.1)
<b>Partnership by Facility Ownership</b>						
Government	13 (54.2)	15 (19.7)	30 (88.2)	24 (85.7)	11 (25.6)	93 (45.4)
Private (for profit)	2 (8.3)	45 (59.2)	0 (0.0)	0 (0.0)	27 (62.8)	74 (36.1)
NGO/FBO/CBO	8 (33.3)	16 (21.1)	4 (11.8)	4 (14.3)	5 (11.6)	37 (18.0)
<b>Facility Type</b>						
Hospital	4 (16.7)	17 (22.4)	4 (11.8)	5 (15.2)	4 (9.3)	34 (16.2)
Health center (HC IV, HC III, HC II)	14 (58.3)	6 (7.9)	27 (79.4)	12 (36.4)	16 (37.2)	75 (36.6)
Clinic	6 (25.0)	32 (42.1)	0 (0.0)	0 (0.0)	19 (44.2)	57 (27.8)
Wellness center	0 (0.0)	9 (11.8)	0 (0.0)	1 (3.0)	2 (4.7)	12 (5.9)
Dispensary	0 (0.0)	12 (15.8)	3 (8.8)	15 (45.5)	0 (0.0)	30 (14.6)
Others	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (4.7)	2 (1.0)

**Table 5: Partnership for Health Service Provision, by Country**

Country	Finding	Main Partners
<b>Burundi</b>	22 of 34 facilities partner with NGOs/CBOs/FBOs to provide health services	FHI 360, Belgium Cooperation, Germany Cooperation (GIZ), World Vision, MEMISA, Magarameza, NAC (Global Funds), PRIDE PROJECT, GAVI, IPPF, ADRA, European Union (EU) and Care International
<b>Kenya</b>	76 of 127 facilities partner with NGOs/CBOs/FBOs or church to provide health services	Catholic, ACK Church, FHI 360, CDC, Ministry of Health, AHF, North Star Alliance, AMPATH, Marie Stopes, Tunza, PEFAR, SOS, AGP, HCBC, Aphia Plus and USAID
<b>Rwanda</b>	34 of 43 facilities partner with NGOs/CBOs/FBOs to provide health services	FHI 360, Rwanda Family, Global Fund, COG, Government, Partners in Health, CDC, Ministry of Health, COAG, UNICEF, HDP, Chemonics, Word Vision and We ACT
<b>Tanzania</b>	28 of 44 facilities partner with NGOs/CBOs/FBOs to provide health services	Swiss Tropical & Public Health Institute (HPSS), Dodoma Medical Christian Centre (DCMC), PSI, I – Tech, Tunanjali, Engender Health, Jhpiego, ICAP, FHI 360, Aga Khan, HJF Medical Research

		International (HJFMRI).
<b>Uganda</b>	43 of 93 facilities partner with NGOs/CBOs/FBOs to provide health services	IOM, MJAP, AIDS Healthcare Foundation, Rakai Health Science Project, Mild may, Knowledge Centre (Naluwerere), North Star Alliance (G/Katuna), etc.

### 3.2. Health Facility Clientele

The caseload for the 341 health facilities assessed was estimated to be 238,151 adults (97,291 males, and 140,860 females) and 104,692 children (48,200 male and 56,492 female) per month. On average, facilities across all of the countries reported a comparably higher proportion of female clients. Table 6 shows the average and median number of clients served per month by country. The average number of adult clients served by each of assessed facilities was 682.

**Table 6: Monthly Health Facility Caseload by Country**

Number of clients per month	Countries					TOTAL
	Burundi	Kenya	Rwanda	Tanzania	Uganda	
<b>Adults</b>						
Female	18,357	33,089	36,968	36,216	16,230	140,860
Male	11,611	20,940	22,775	29,540	12,425	97,291
Overall	29,968	54,029	59,743	65,756	28,655	238,151
<b>Children</b>						
Female	20,213	3,835	13,253	9,546	9,645	56,492
Male	14,566	1,831	10,428	9,083	12,292	48,200
Overall	34,779	5,666	23,681	18,629	21,937	104,692

#### Health Service Provision to Key Populations

Table 7 shows the proportion of facilities by country that reported providing health services to key and vulnerable populations. The majority commonly provided services to truck drivers and their assistants, and FSWs; PWID and trafficked persons were the least served populations.

Table 8 indicates the proportion of assessed facilities providing health services to key and vulnerable populations and the estimated average number of monthly clients accessing services by key population group. The average number of clients from key population groups attended to per month was 38,349, which represents 16 per cent of the total facility caseload per month. These data should be interpreted with caution as not all facilities provided health services to key and vulnerable populations and/or collected data on them.

**Table 7: Proportion of Health Facilities Serving Key Populations by Country**

Percentage of facilities that provide services to the following key and vulnerable populations	Countries				
	Burundi	Kenya	Rwanda	Tanzania	Uganda
	N=34	N=127	N=43	N=44	N=93
Trucker drivers and their assistants	30.0	53.5	61.5	100.0	70.0
Other transport workers	53.3	0.0	53.9	34.9	55.6
Female sex workers	60.0	44.1	88.5	60.5	58.9
Other migrant workers	46.7	12.6	38.5	39.5	45.6

<b>PWID</b>	3.3	0.8	30.8	16.3	10.0
<b>Trafficked persons</b>	0.0	0.0	26.9	0.0	12.2
<b>Uniformed personnel</b>	76.7	37.8	0.0	59.1	66.7
<b>LGBTI</b>	10.0	0.8	0.0	13.6	0.0
<b>Other at-risk groups*</b>	25.9	0.8	38.5	9.1	44.4

\* This category includes persons who could not readily be categorized under the other labels, including, e.g., children, refugees, prisoners, boda-boda (motorcycle taxi) riders.

In Tanzania, six (13.6%) facilities reported to have provided services to lesbian, gay, bisexual, transgender and/or intersex (LGBTI) populations while four (9.1%) facilities provided services to specifically to men who have sex with men.

**Table 8: Number of Key Populations Served per Month\*\***

Number of clients in key population groups served per month	Countries				
	Burundi	Kenya	Rwanda	Tanzania	Uganda
	N=34	N=127	N=43	N=44	N=93
<b>Truck drivers and their assistants</b>	43	1,324	716	2,712	1,829
<b>Other transport workers</b>	127	0	854	0	1,380
<b>Female sex workers</b>	353	1,069	1,466	668	1,450
<b>Uniformed personnel</b>	385	449	642	1,420	1,015
<b>Other migrant workers</b>	778	0	354	0	2,021
<b>PWID</b>	0	156	58	70	153
<b>LGBTI</b>	10	2	5	67	-
<b>Trafficked persons</b>	0	0	104	0	372
<b>Other at-risk groups*</b>	11,813	137	24	171	2,414

\* This category includes persons who could not readily be categorized under the other labels, including, e.g., children, refugees, prisoners, boda-boda (motorcycle taxi) riders.

\*\* Note that missing data is represented by dashes (-).

### 3.3. Health Services Needs for Clients along Transport Corridors

Study findings revealed similar patterns of health service needs for populations along major transport corridors across all five EAC countries mapped. The top three reasons why selected key and vulnerable populations visited the sampled facilities were treatment of common ailments such as malaria and cough; STI screening and testing; and HCT. Other services sought included treatment for accident-related injuries and provision of condoms.

**Table 9: Health Service Needs of Key Populations**

Key Population	Countries				
	Burundi	Kenya	Rwanda	Tanzania	Uganda
<b>Trucker drivers and their assistants</b>	Accident related injuries, STI screening, treatment for common ailments**	Treatment for common ailments, STIs and HCT services	Treatment for common ailments, HCT services, STI screening and treatment	ARV, general health services, treatment of common ailments	Treatment for common ailments, STI screening and treatment, HCT
<b>Other transport workers</b>	Treatment for common ailments, STI services,	Treatment for common ailments, STI screening and	HCT, condoms, accident related injuries	STI screening and treatment, accident related injuries, ART	Treatment for common ailments, STI services, HCT,



	accident injuries	treatment, HCT			accident injuries
<b>Female sex workers</b>	STIs, ARV, treatment of common ailments	Treatment for common ailments, STI services, HCT	STI screening and treatment, HCT services, FP/SRH services	HCT, STI services, condoms	STI services, HCT, treatment of common ailments
<b>Uniformed personnel</b>	Treatment for common ailments, HCT, STI screening and treatment	Treatment for common ailments and STIs	HCT, STI services, treatment for common ailments	Treatment of common ailments, HCT, STI screening and treatment	Treatment for common ailments, HCT, STI screening and treatment
<b>PWID</b>	STI, accidents, HIV services	STI services, HCT services	HCT services, accident related injuries, STIs screening and treatment	Medical advice and health services	Treatment for common ailments, HCT, ARVs
<b>LGBTI</b>	-	HCT, STI services	HCT services, drugs abuse and condoms	HCT services, condoms, STI services	-
<b>Trafficked persons</b>	HCT and STIs	Treatment for common ailments, HCT and STI services	Counselling, VCT services, consultations	Medical advice and health services, treatment of common ailments	Treatment for common ailments, HCT, STI services
<b>Other migrant workers</b>	Treatment for common ailments, HCT	Treatment of common ailments, STI services, condoms	HCT services, STI counselling and treatment	HCT, ARVs, treatment for common ailments	Treatment for common ailments, HCT, condoms
<b>Community members</b>	Treatment for common ailments, HCT	Treatment for common ailments, HCT, STI services	HCT services, treatment of common ailments	Treatment for common ailments, HCT, ART	Treatment for common ailments, HCT, STI services

*\*\*Cough, diarrhea, malaria, fever, etc.*

\* Note that missing data is represented by dashes (-).

### 3.4. Health Management Information Systems

The majority of assessed facilities in the five countries utilized HMIS, ranging from 83.9 per cent in Uganda to 100 per cent in Burundi and Kenya.

**Table 10: Availability of Health Management Information Systems\***

Country	% of facilities that utilize HMIS	Type of system for collecting data			% of facility that disaggregate information by nationality	% of facilities that collect information on any key and vulnerable populations
		Paper-based	Electronic	Both electronic and paper-based		
<b>Burundi (N=34)</b>	100.0	86.7	13.3	0.0	36.7	30.0
<b>Kenya (N=127)*</b>	100.0	100.0	54.3	54.3	35.4	78.0
<b>Rwanda (N=43)*</b>	93.0	46.5	27.9	18.6	20.9	51.2
<b>Tanzania (n=44)</b>	95.5	81.8	20.5	20.5	81.8	27.3
<b>Uganda (N=93)</b>	83.9	68.8	3.2	10.8	26.9	36.6

\*The health facilities in Kenya and Tanzania that collect data electronically also have paper-based HMIS. The MOH consolidates the paper-based information once reported on a monthly basis; hence, there is no double reporting despite the parallel systems.

In all countries, some health facilities reported that they collect information on key and vulnerable populations including truckers and sex workers, ranging from 30 per cent in Burundi to 78 per cent in Kenya.

However, a lesser number of facilities reported disaggregating information by nationality, ranging from 20.9 per cent in Rwanda to 35.4 per cent in Kenya. An exception was in Tanzania, where 81.8 per cent of facilities were reported to disaggregate clientele information by nationality.

### 3.5. Human Resources for Health

Table 11 shows that the 341 facilities surveyed had a total of 10,017 staff (7,106 professional staff). Nurses and nursing aides comprised more than two-thirds of professional staff (66.5%). Medical doctors comprised only 6.6 per cent of professional staff. Notably, the majority of doctors were found in hospitals, suggesting that the majority of clients seeking health care along transport corridors are not served by highly trained personnel.

**Table 11: Human Resources for Health by Country**

Staff Categories	Countries					TOTAL
	Burundi	Kenya	Rwanda	Tanzania	Uganda	
	N=34	N=127	N=43	N=44	N=93	
<b>Professional Staff</b>	2,937	826	1,371	593	1,379	7,106
Doctors	172	9	141	7	140	469
Clinical officers	138	89	125	88	127	567
Nurses	1,982	377	560	177	562	3,658
Midwives	17	43	131	26	130	347
Counsellors	38	97	29	39	29	232
Nursing aides	420	27	297	27	298	1,069
Other staff (e.g. laboratory technicians / Radiologists / Anesthetic)	170	184	88	229	93	764
<b>Support Staff</b>	963	840	489	125	494	2,911
<b>Total Number of Staff (Professional and Support)</b>	3,900	1,666	1,860	718	1,873	10,017

### 3.6. Health Service Provision

The following section provides information about provision of key health services, including testing and treatment for HIV and tuberculosis as well as other health conditions, as well as outreach and BCC, at the facilities mapped. It is important to note that although not reflected in the tables presented, multiple health professionals interviewed perceived a need for specialized training and knowledge about key and vulnerable populations, including cross-border traders, truck drivers and other migrants, in order to sufficiently serve them.

## HIV and AIDS Service Provision

The study examined the availability of specific HIV and AIDS interventions including provision of HIV counselling and testing and antiretroviral therapy (ART) (Table 12). Across all countries, most (92.1%) health facilities reported providing both HIV counselling and testing services. Nevertheless, only 36.7 per cent of the facilities reported providing HIV treatment services.

**Table 12: Proportion of Facilities Providing HIV Services by Country and Facility Ownership**

Service and Facility Type	Countries					TOTAL N (%)
	Burundi	Kenya	Rwanda	Tanzania	Uganda	
	N=34	N=127	N=43	N=44	N=93	
	N (%)	N (%)	N (%)	N (%)	N (%)	
<b>HIV and AIDS Services</b>						
HIV counselling and testing	29 (85.3)	127 (100.0)	38 (88.4)	38 (86.4)	82 (88.2)	314 (92.1)
HIV treatment (ART)	23 (67.6)	26 (20.5)	35 (81.4)	12 (27.3)	29 (31.2)	125 (36.7)
<b>Facilities that Provide HIV Treatment, by Facility Ownership*</b>						
Government	15 (44.1)	8 (6.3)	32 (74.4)	9 (20.5)	12 (12.9)	76 (22.3)
Private (for profit)	1 (2.9)	17 (13.4)	0 (0.0)	0 (0.0)	12 (12.9)	30 (8.8)
NGO/FBO/CBO	7 (20.6)	6 (4.7)	3 (7.0)	3 (6.8)	5 (5.4)	24 (7.0)

\* Note that in Kenya, information was provided for this answer for more facilities than initially stated they provide HIV treatment.

## Tuberculosis Screening and Treatment

The study examined availability of specific TB services and indicated that about 89.1 per cent (n=304) of the health facilities surveyed across the five countries provided TB counselling services, but only 31.4 per cent (n=107) offered TB treatment; 37.8 per cent offered sputum testing and 29.9 per cent offered rapid screening and testing (Table 13).

**Table 13: Provision of TB Related Services by Country**

Service and Facility Type	Countries					TOTAL N (%)
	Burundi	Kenya	Rwanda	Tanzania	Uganda	
	N=34	N=127	N=43	N=44	N=93	
	N (%)	N (%)	N (%)	N (%)	N (%)	
<b>Tuberculosis Services</b>						
TB Counselling Services	26 (76.5)	127 (100.0)	40 (93.0)	44 (100.0)	67 (72.0)	304 (89.1)
TB Treatment (DOTS)	20 (58.8)	21 (16.5)	32 (74.4)	7 (15.9)	27 (29.0)	107 (31.4)
TB Test/Screening (Sputum)	8 (23.5)	28 (22.0)	33 (76.7)	11 (25.0)	49 (52.7)	129 (37.8)
TB Test/Screening (Rapid)	2 (5.9)	47 (37.0)	21 (48.8)	17 (38.6)	15 (16.1)	102 (29.9)
TB Referral	27 (79.4)	99 (77.9)	29 (67.4)	26 (59.1)	82 (88.2)	263 (77.1)
<b>Facilities that Provide TB Treatment (DOTS), by Facility Ownership*</b>						

<b>Government</b>	14 (41.2)	12 (9.4)	30 (69.8)	6 (15.9)	8 (8.6)	70 (20.5)
<b>Private (for profit)</b>	0 (0.0)	8 (6.3)	0 (0.0)	0 (0.0)	15 (16.1)	23 (6.7)
<b>NGO/FBO/CBO</b>	6 (17.6)	1 (0.8)	2 (4.7)	1 (2.3)	4 (4.3)	14 (4.1)

\* Note that this data is missing for some of the facilities.

### Other Health Services

Table 14 indicates the proportion of facilities that reported providing condoms, STI screening, malaria diagnosis and treatment and other health care services. Overall, more than 80 per cent of the facilities provided condoms, STI screening and malaria diagnosis and treatment. However, fewer than 25 per cent of the facilities conducted hepatitis B and C screening and treatment, and cervical cancer screening and treatment.

**Table 14: Proportion of Facilities that Provide Other Health Services by Country**

Countries	Percentage of Facilities Providing the Following Services								
	Condoms	STI Screening	FP /RH Services	Malaria diagnosis and treatment	Eye/Vision Test/Screening	Diabetes testing	Hepatitis C screening and treatment	Hepatitis B screening and treatment	Cervical cancer screening and treatment
<b>Burundi (N=34)</b>	96.7	83.3	86.7	93.3	6.7	70.0	16.7	20.0	10.0
<b>Kenya (N=127)</b>	100.0	100.0	76.4	100.0	24.4	100.0	2.4	2.4	0.1.6
<b>Rwanda (N=43)</b>	95.4	97.7	88.4	95.4	90.7	72.1	14.0	23.3	23.3
<b>Tanzania (n=44)</b>	100.0	100.0	100.0	100.0	34.1	100.0	6.8	6.8	2.3
<b>Uganda (N=93)</b>	82.8	87	87.1	96.8	31.2	72.0	12.9	23.7	20.4

### Social and Behavioural Change Communication (SBCC) and Outreach Services

BCC programmes targeting key population groups of people living in HIV hotspots are important, as studies have underscored. Overall, the majority of the facilities surveyed – ranging from 65.6 per cent in Uganda to 100 percent in Kenya – reported conducting behaviour change communication, primarily targeted to truck drivers, sex workers and the general community around hotspots along selected transport corridors. However, most facilities did not have customized BCC material, with the majority relying on materials produced by national government initiatives on HIV and AIDS. The BCC materials focused on issues such as HIV/STI risk reduction, family planning and condom use. Not many materials were focused on TB care or management.

**Table 15: Social and Behavioural Change Communication**

Countries	Proportion of facilities conducting SBCC				
	% of facilities that carry out BCC	% of facilities that carry out social change communication	% of facilities that provide edutainment	% of facilities that provide any form of entertainment e.g. television, movies	% of facilities that that provide outreach services
<b>Burundi (N=34)</b>	76.7	63.3	66.7	60.0	63.3
<b>Kenya (N=127)</b>	100.0	100.0	61.4	61.4	100.0
<b>Rwanda (N=42)</b>	88.4	72.1	67.4	67.4	76.7
<b>Tanzania (n=44)</b>	95.5	95.5	69.9	65.9	100.0
<b>Uganda (N=93)</b>	65.6	36.6	16.1	33.33	44.1

Results further indicate that a considerable number of facilities conducted outreach such services targeting key and vulnerable populations, ranging from 44.1 per cent in Uganda to 100.0 per cent in Kenya and Tanzania. The particular populations of focus varied by facility.

## 4. DISCUSSION AND RECOMMENDATIONS

### 4.1. Discussion

This study mapped health services along major transport corridors in the EAC region and established that key and vulnerable populations remain underserved despite their increased vulnerability to poor health.

The World Health Organization (WHO) highlights four basic principles for a public health approach to addressing the health of migrants and host communities such as those examined in this mapping exercise (WHO, 2008):

1. Avoid disparities in health status and access to health services between migrants and the host population.
2. Ensure migrants' health rights. This entails limiting discrimination or stigmatization, and removing impediments to their access to preventive and curative interventions, which are the basic health entitlements of the host population.
3. Put in place lifesaving interventions so as to reduce excess morbidity among migrant populations; this is of particular relevance in situations of frequent mobility such as along the transport corridors of East Africa.
4. Minimize the negative health outcomes of the migration process on migrants' health outcomes. High levels of mobility such as among truck drivers and sex workers generally render them more vulnerable to health risks and expose them to potential hazards and greater stress arising from adaptation to new environments.

The study revealed several limitations in health service delivery across all EAC countries. These included insufficient numbers of higher-level health facilities. Most facilities along the highways were clinics; there were very few hospitals. In Kenya and Uganda, the majority of facilities were private-for-profit clinics, which were considered to be costly to the average member of the key population groups. Additionally there were several health professionals who perceived a need for specialized training and knowledge about key and vulnerable populations, including cross-border traders, truck drivers and other migrants, in order to sufficiently serve them. Previous studies have shown that in some countries, perception of restrictive health policies affected the health outcomes of key and vulnerable populations, especially those in an irregular situation (Benítez, 2013; Kontunen et al., 2014; Royo-Bordonada et al., 2013). This study revealed similar perceptions among health workers, particularly regarding the practice of disaggregating information by nationality or category of key population.

Even though mobility remains a facet of life and societies in the EAC region are increasingly diverse, public policies remain insufficiently integrated with the health needs of key and vulnerable populations and other migrants. Policymakers within the health sector as well as outside the health sector, such as the labour, immigration and foreign affairs ministries, should take into account the

impact of public policies on the health determinants of these key and vulnerable populations, as well as on health systems across sectors, in order to realize health-related rights and improve accountability for key population health and health equity. Moreover, they do not sufficiently address the existing health services limitations, including barriers to accessing health services. For example, truckers and other key and vulnerable populations along the transport corridors are not routinely integrated in health service delivery systems of the countries they traverse.

## 4.2. Recommendations

Based on these findings from the mapping exercise, the following recommendations are suggested:

- **Strengthen the capacity of health care facilities:** While it is critical to support public facilities in providing migrant-friendly health services, the health-seeking behaviour of key and vulnerable populations must be catered to as well. Private facilities are key providers of health services along transport corridors in some locations. There is therefore need to enhance their capacity to provide a minimum service package that addresses basic primary care, STI screening and treatment, malaria prevention and treatment, as well as provision of integrated tuberculosis and HIV responses.

It is important to put measures in place to ensure that private facilities collect and desegregate data on key and vulnerable populations as well, and report to the government health management information system.

- **Strengthen tuberculosis and HIV and AIDS responses along transport corridors:** Findings reveal that not many facilities along the transport corridors provide HIV and TB treatment services. Efforts are therefore required to scale up the provision of such services, especially by the private health care facilities in the areas where they are most prevalent. Where private facilities lack infrastructure and resources to provide such services, referral systems between private and government facilities should be developed to ensure that key and vulnerable population groups are linked to services.
- **Strengthen referral mechanisms:** Functioning referral systems are essential to ensure that clients are linked to treatment and care services. There is need to establish an affective referral network for facilities within the hotspots. Particularly, there is need to (i) map out and support development of direct referral between facilities within and between hotspots, and (ii) support innovative ways of developing capacity to capture client data in terms of location, for example by using a health passport or smartcard.
- **Key population and migrant-friendly health service provision:** Health services, where available, must be more client-friendly, migrant-sensitive and attractive to key and vulnerable populations. Although there is health care provision close to some hotspots, there are still challenges relating to the level of responsiveness of the services to the needs of migrant and key and vulnerable populations. Therefore, it is necessary to do the following:
  - Train health workers on how to provide migrant friendly services, addressing both the clinical and social aspects. Training is an essential element in improving service delivery in facilities, as noted by multiple health care personnel interviewed.

Training should cover multiple areas, such as identification and treatment of health problems faced by all populations; issues such as guidelines and confidentiality; and sensitization about key and vulnerable populations, including problems of stigma and discrimination, as well as health-related issues faced by particular populations, including FSWs.

- Develop and disseminate guidelines on providing migrant-friendly services. This will ensure health services at the different hotspots are uniquely suited to address the needs of migrants.
- **Support the establishment of integrated health clinics or wellness centers in priority sites** that will provide a minimum service package to key and vulnerable populations and migrants along transport corridors, particularly truckers, cross-border traders and female sex workers.

Strengthening existing health facilities – along with establishing new centres to ease the high burdens on existing services – will help improve access to quality care for the people who live, work and travel along the EAC transport corridors.

- **Strengthen structural interventions and SBCC.**

### 4.3. Conclusion

Key and vulnerable populations including migrant workers in the EAC region have limited access to appropriate health care. In addition to a potential infringement of their right to health, there is a likelihood of increased undiagnosed diseases and possible negative impacts on public health given that the existing facilities are either incapable of providing the services (such as TB screening and treatment) – which is the case for most public health facilities that were mapped – or inaccessible to key and vulnerable populations due to prohibitive costs in the case of private clinics.

These health services limitations need to be addressed in order for key and vulnerable populations to attain their development potential and to concurrently contribute to sustainable development, while reducing the health costs of mobility for both migrants and communities where they originate and are hosted. The study revealed that health facilities along the major transport corridors partner with NGOs/CBOs/FBOs to provide health services. This is an encouraging trend in collaborative health care delivery and referral, which needs to be harnessed in order to improve the current state of health care delivery along major transport corridors in the East Africa region. This also provides opportunities for addressing the structural drivers of ill-health including vulnerability to HIV infection along the transport corridors and cross border points.

The mapping exercise described herein will thus be used to inform the development of an EAC regional strategy on integrated health and HIV and AIDS programming along transport corridors, which will include a minimum package of health services for key and migrant populations. The strategy will also be informed by existing national strategies and policies on health programming along transport corridors in Kenya and Uganda, as well as Zambia in the Southern African Development Community (SADC).



## 5. ANNEX

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