


State of Healthcare in Zimbabwe: Access to healthcare in Mutare Urban District

March 2022

UBUNTU CLINIC

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Special thanks to the residents of Dangamvura, Gimboki, Sakubva and Chikanga Townships who participated in focus group discussions, household and key informant interviews. The intellectual property of this baseline survey rests with these communities about which this report is written. The primary quantitative and qualitative data collected throughout the baseline survey process remain the property of communities and households described in this report. Ideally, information and data in this report must be used with their consent.

A number of individuals participated directly or indirectly in the baseline survey processes that included data collection; data editing; data entry; data analysis; compilation and peer review of the final report. They are:

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Ubuntu Clinic and its Partners

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Ubuntu Clinic CEO: Munyaradzi Chakonda;

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Africa University Lecturer: Kenneth Maregere and Africa University Dean, College of Health, Agriculture and Natural Sciences : Prof. Sungano Mharakurwa

FlexID Technologies CEO: Victor Mapunga

Foreword

Munyaradzi Chakonda
Founder and CEO, Ubuntu Clinic

Mortality due to a pervasive lack of access to healthcare facilities in Sub-Saharan Africa despite a few improvements, remains extremely high. The numbers are sobering - one in five children born in this region today will die before the age of five, African women face more than a hundred times the risk of maternal mortality than women in the developed world, and the average life expectancy is only a mere 51 years.

The challenge of providing accessible health service has taken top shelf in the global policy debates, and Zimbabwe is not an exception to this anomaly and challenge.
It is in view of this challenge that Ubuntu Clinic found it imperative to undertake a baseline survey. Its findings, that are detailed in this report, will be used to inform the design of a solution that can mitigate the risk, a lack of access to healthcare facilities brings to vulnerable communities.

Victor Mapunga
Founder and CEO, FlexID Technologies

The challenge for healthcare systems worldwide, is 'doing more for less.' At FlexID Technologies, we believe that harnessing the power of technology in the healthcare sector is paramount in driving cost down and most importantly improving patient outcomes.

It is with this mind, that may team I found it necessary to involve ourselves in the compilation of this report. The findings and insights that came from this baseline household survey are important in shaping FlexID Technologies's blockchain enabled digital identity solution for patients, community health workers, doctors, nurses, and any other health service provider across the continent. Built on the Algorand blockchain, we know that by leveraging digital identity we bring instant and secure authentication of patient data; protection of patients against the potential for medical identity theft; reduction in operating expenses and related admin costs; and brings a positive experience for user and medical professionals.

We aim on bringing all these aforementioned benefits and many more to our healthcare system, so we can 'do more for less!'

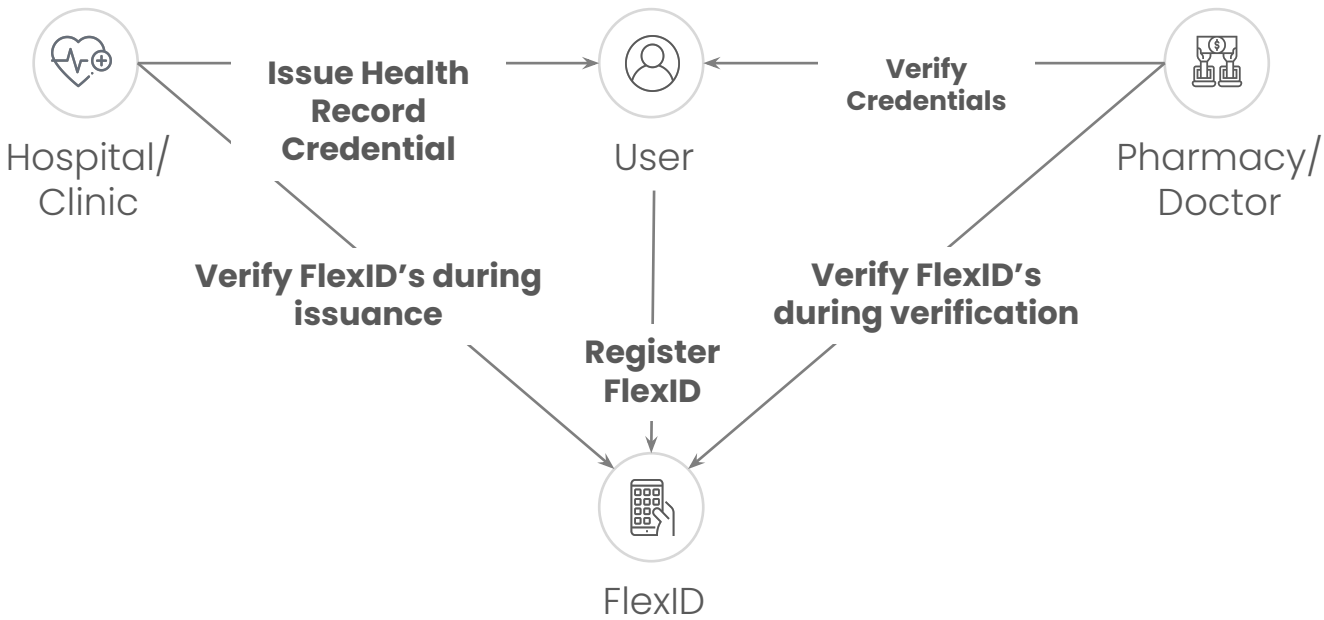
FlexID Technologies

FlexID is a self-sovereign decentralized identity platform, built on Algorand's public blockchain.

It's a solution that replaces paper-based physical credentials, which are expensive to issue, manage, and verify in Emerging Market countries where there is no trusted identity infrastructure. and over 1 billion people lack proper identity. With easy access to verified credentials,

FlexID aims to enable individuals to get broader and faster access to a wide range of financial, insurance, healthcare, and agriculture services.

How it works



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Acronyms and Abbreviations

ART	Antiretroviral Therapy
AU	Africa University
BP	Blood Pressure
CI	Confidence Interval
CRC	Clinical Research Centre
DDC	District Development Coordinator
DEHO	District Environmental Health Officer
EA	Enumeration Area
FDG	Focus Group Discussion
GPD	Global Performance Designs Private Limited
HQ	Household Questionnaire
KII	Key Informant Interview
MDH	Mutare District Hospital
MFS	Medicines sans Frontier
MoHCC	Ministry of Health and Child Care
MPH	Mutare Provincial Hospital
MUD	Mutare Urban District
OR	Odds Ratio
PPS	Probability Proportional to Size
UC	Ubuntu Clinic
USS	Ultra Sound Scan
VMA	Village Medical Aid

Key Terms

In the context of Ubuntu Clinic baseline survey report, the following terms were used:

Access – a process and an outcome of a 'client' getting near to a healthcare facility or healthcare service provider for purposes of receiving medical care.

Baseline – an observation or value that represents the 'normal' or 'beginning level' of a measurable quality, used for comparison with values representing response to an intervention.

Child – a person under the age of 18 years.

High density residential suburb – describes a house or dwelling unit built on a piece of land with a spatial area of between 200 – 500 m^2

Health cadre – any healthcare worker, irrespective of designation.

Healthcare – a continuum of organized provision of medical care to individuals or a community, involving consultation, treatment, admission (if required) and management (including follow-up, repeat visits as well as referrals) about an ailment(s). Alternatively, healthcare can be defined as the set of medical services provided by a country or an organization for the treatment of the sick.

Health facility – any location where healthcare is provided, irrespective of whether such location is a private or public entity.

Medical aid – a form of insurance were an individual pays a monthly contribution or premium in return for future financial cover for **medical** treatment that may be required, as well as any related **medical** expenses.

Municipality – a single administrative division having corporate status and powers of self-government or jurisdiction as granted by national and regional laws to which it is subordinate. The term may also mean the governing or ruling body of a given municipality Health facilities range from small clinics and doctors' offices to urgent care centers and large hospitals with elaborate emergency rooms and trauma centers. The number and quality of health facilities in a district, region or country is sometimes used as a measure of that area's prosperity and quality of life.

Executive Summary

The baseline survey on 'access to primary healthcare services in Mutare Urban District' of Manicaland Province of Zimbabwe was undertaken with a generous 'grant' from Chakonda Schulder Company (CSC).

The survey was conducted in 14 purposively selected Enumeration Areas (EAs) and across 14 Wards of the District on the following dates: Sakubva Township, 29 July – 30 July; Dangamvura Township, 31 July – 01 August and Chikanga on 01 August 2020. The survey was conducted during the national Covid-19 lockdown in the country.

The aim of the survey was to collect baseline data and information that would be used to inform and guide Ubuntu Clinic project design and implementation; including benchmarking of key indicators. The specific objectives of the survey were to:

- Collect demographic data from selected households in Dangamvura, Gimboki, Sakubva and Chikanga high density suburban areas;
- Assess the availability of medical diagnostic equipment, such as X-Rays, at health facilities in the District;
- Describe healthcare facilities in the District (pharmacy; laboratory, *etc.*);
- Identify the 'common' diseases and health conditions affecting communities in MUD;
- Produce an epidemiologic profile of Mutare Urban District, and
- Establish relationships, if any, between improved access to primary healthcare facilities and distal determinants of health, such as income;

Methods

A household questionnaire; key informant interviews (KII) and focus group discussions (FGD) were used to collect the survey data. Household data were analyzed using Stata, *Version* 19.0. KII and FGD data were analyzed using ATLAS *ti*.

Frequency distributions and cross tabulations were used to analyze household data. The Odds Ratio (OR) and 95% Confidence Interval (95% CI) were used to evaluate the relationships or associations between household main source of income as a key distal determinant of access to healthcare and selected 'variables' 'reasons for household not seeking treatment'; 'household member seen by a doctor or nurse'.

Photography was used to capture some of the 'moments' during fieldwork data collection in Sakubva, Dangamvura and Chikanga Townships.

Sample Size

The survey was based on a sample of 138 systematically selected households in four residential townships of Dangamvura (61); Gimboki (4); Sakubva (52) and Chikanga (21). The sample also included (9) key informant interviews and four (4) focus group discussions made up of three (3) groups of women and one (1) for men.

Summary of Key Findings

Income as distal driver of access to healthcare in Mutare Urban District

Formal employment did not affect the ability of households to pay cash for their treatment at a healthcare facility (Odds Ratio, OR = 1.0; 95% CI (0.36 – 2.78). Although this observation was not statistically significant a lack of household income is more likely to reduce access to healthcare by a household or its members. The OR of informal employment as main source of income were 0.34 times compared to formal employment and 0.83 for households relying on remittances. This result suggest households in these income categories were less likely to pay cash for their treatment at a healthcare facility.

Reasons for household not seeking treatment

Households in formal employment were 24 times more likely not to seek for treatment at a healthcare facility because it was expensive compared to facility being too far (OR = 24.0; 95% CI =3.01 – 191.30). Similarly, members of households in informal employment were also more likely not to seek for treatment for the same reason, albeit reduced odds (OR = 0.01; 95% CI = 0.0003 – 0.0864). These results were statistically significant, with p = 0.0003 and 0.0002 respectively. Financial accessibility, defined by patient incomes and willingness to pay for services, directly influences access to primary healthcare among households that were interviewed during the survey.

Household member seen by a doctor

Households with members who were formally employed were 4 times more likely to be seen by a doctor at a healthcare facility OR(95%CI): 4.0 (1.3 – 12.3). Result appears to contract findings on why the same households would not seek treatment at healthcare facilities. The result was statistically significant, with p = 0.02. Households with members in informal employment were 7.6 times less likely to be seen by a doctor (OR = 7.6; CI = 3.74 – 14.86). The result was similar to those relying on remittances (OR = 4.6; CI = 0.76 – 25.78), as a source of household income.

Household member seen by a nurse

Members from households in informal employment were 0.1 times more likely to be seen by a nurse as those with formal employment (OR = 0.1; 95% CI 0.00521 – 0.2311). This result was statistically significant, with p = 0.0001. Sources of income explained the differentials in 'health seeking behavior' between households in the two employment categories.

Medical diagnostic equipment

Evidence from this survey suggests X-Ray or ultra sound scan (USS) machines were only available at Sakubva District and Mutare Provincial Hospitals, which are the referral institutions. Some of the private healthcare facilities reportedly had these medical diagnostic machines. In public health facilities, additional fees levied to access these

services reduced their utilization, potentially worsening patient health outcomes in the District.

Distance to nearest healthcare facility

Distances to the nearest healthcare facility differed with residential area; with households in Dangamvura Township walking 'longer distances' compared to those in Sakubva and Chikanga Townships. Geographic accessibility to primary healthcare is influenced by clients' location relative to the location of the nearest healthcare facility.

Reasons for visiting health facility

In the four residential areas, respondents reported visiting local health facilities for various reasons. The main reasons were for treatment of headaches and "flus" and to collect chronic medication. Some female respondents reportedly visited their local health facility after experiencing a miscarriage.

Non-communicable chronic diseases reported in the District

The most common non-communicable and chronic diseases that were reported by household respondents in the District were BP and HIV-related conditions.

Fees payment at a local health facility

As elsewhere in the country, children aged under-5 and adults older than 65 years were exempt from paying consultation fees at government health facilities in the District. These two age groups were expected to pay a 'nominal card-fee' which was less than USD1. However, other age categories between 6 and 64 years were expected to pay the fees.

Fees respondents were willing to pay

Evidence from the survey suggest respondents were willing to pay consultation fees between USD1 – USD5. The willingness to pay fees declined as costs, usually denominated in the United States Dollars, increased.

Medical Aid membership

Medical aid coverage among residents in the four survey townships appeared to be 'low', with most household respondents not on medical aid. Some of the household respondents were reported to be on medical aid with the country's leading medical insurance brands such as Premier Medical Aid; Rail Med; PSMAS; CIMAS and Steward Health.

Chapter One

Introduction

As Ubuntu Clinic, our understanding of the distal drivers of health in Mutare Urban District is influenced by two ideologically charged debates. The first is a growth-oriented perspective, in which living standards or proxy such as income are seen as primary drivers of health improvements. The second is a support-led model in which health systems and interventions are viewed as the primary drivers (Pritchett and Summers, 1996; Sen, 1998).

In recent years, there has been a convergence between these two congruent models, driven by evidence of how improved living standards and health systems interact to produce better healthcare outcomes. In fact, living standards, healthcare systems and health outcomes correlate highly across time, thereby obscuring the actual patterns of causation.

A summary of distal determinants of healthcare, most of whose data and information were gathered during the baseline survey, are presented in Figure 1. The results contained in this report, will serve as an important resource to Ubuntu Clinic during project design and implementation.

Definition of the Problem

The provision of affordable healthcare in both urban and rural areas has traditionally been the responsibility of central government and local authorities in Zimbabwe. In recent years, trends are changing with private companies, churches and individuals investing in the health sector. Non-governmental organizations utilizing donor funding are providing healthcare, notably in the fight against communicable diseases such as tuberculosis (TB), HIV and AIDS; and more recently in the fight against the highly infectious and contagious new corona virus (nCovid-19) pandemic.

Despite the huge investments made in the health sector during the first decade after independence in 1980, the provision of healthcare facilities has not kept pace with increasing demands of a growing and youthful population in Mutare Urban District. Rapid urbanization, characterized by sprawling residential areas, has not seen a corresponding increase in the provision of public healthcare facilities. Most of the facilities that were inherited from the colonial government are now run-down due to many years of neglect.

The absence of investment in the sector, against a rapidly growing population in the last four decades, has seen increased burden on existing facilities.

Pressure on local facilities manifests itself in ‘disproportionate’ doctor – patient and nurse – patient ratios that are reminiscent of those obtaining at independence in 1980. The doctor - patient ratio in the country was 1: 250 000 and 1: 350 000 among the

majority African population. Evidence from this baseline survey point to 'worsening' scenarios.

The reality in newly established residential townships of Chikanga and Gimboki is that government or council healthcare facilities are overstretched. In some neighborhoods, facilities are either not available or inaccessible. At the time of the baseline survey, Gimboki Township reportedly did not have a public healthcare facility. Poor road networks, coupled with limited affordable or public transport options, mean the sick cannot readily access the only available healthcare facility – Dangamvura Polyclinic.

In some parts of the District, communities have to walk long distances for treatment as reported in Ward 7 of Dangamvura Township.

And when patients get to a healthcare facility they are faced with a myriad of challenges. Waiting times (before being attended) in few of the available facilities are long, as suggested by evidence from this survey. Similar patient experiences have also been reported in the District's old facilities of Sakubva District Hospital and Mutare Provincial Hospital.
Reported shortages or the unavailability of doctors, nurses, laboratory scientists, other critical health cadres; essential drugs and medicines at these facilities is common. Broken down medical diagnostic equipment (which is often old) and supporting services exacerbates the situation. Reports of patients dying in queues while awaiting treatment are commonplace. For these reasons, patients very often are not able to get all the required services during a single visit and from the same healthcare public or council facility. Patients reported being 'referred' from one facility to another with the hope of getting treatment. In some instances, many often returned home without receiving treatment. The once efficient, pre-independence referral system, which was operational countrywide during the early post-independence era, has broken down.

In some of the facilities, odors from uncollected healthcare waste, unhygienic facility environments and in some instances, decomposing bodies in mortuaries as a result of malfunctioning cold-rooms and frequent power outages (periodically experienced by residents of the District), compromise patient healthcare.

The above is reflective of a health sector reaching 'crisis levels' in the country. With unemployment estimated at 90 percent, most households in both urban and rural areas live in squalor and abject poverty. Poverty is exacerbated by an unstable local currency unit reportedly trading at 1USD to ZWL$110, causing inflation which is nearly 1 000%. Under such a 'hyper-inflationary environment' it means goods and services; and especially imported ones have become very expensive. Healthcare services have not been spared either. Hospitals and clinics cannot repair broken down equipment that require foreign currency which is in short supply in the formal banking system.

In the past two decades, the country lost a significant proportion of its qualified and experienced health workers to neighboring countries. Deteriorating conditions of service, poor salaries and lack of future prospects locally saw many emigrating into the

diaspora.

Consultations and fees for most services in both private and public healthcare facilities are constantly reviewed upwards, making them very expensive. The few doctors and other specialists who have remained in these public health facilities are overwhelmed. In some of these private facilities many of the doctors charge 'extortionist fees' for their services.

Against this background Ubuntu Clinic intends to provide innovative 'solutions' to address many of these well documented challenges in the healthcare sector. Its interventions are focused on taking primary health care to communities that are underserved, inaccessible and with limited disposable household income.

Through the implementation of a raft of interventions, it is anticipated the project will make quality primary healthcare accessible and affordable; to the extent of influencing and persuading residents of Mutare Urban District to regularly seek treatment and in the process contribute to building 'healthy' local communities.

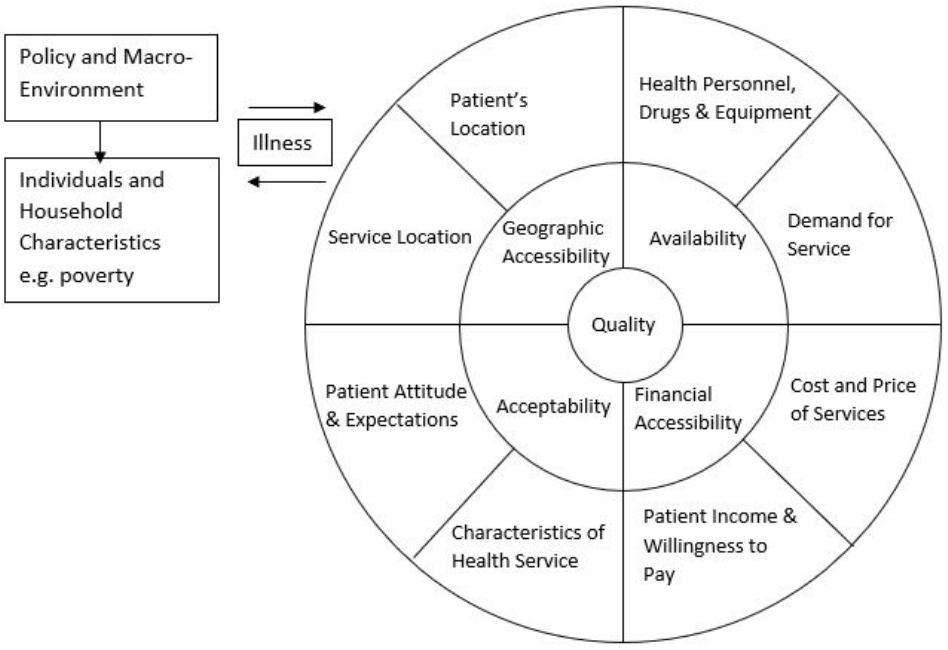

Figure 1 **Distal Determinants to Healthcare**

Lack of 'access' to healthcare is a pervasive problem. In the context of Ubuntu Clinic, the word 'access' not only refers to geographical access to healthcare facilities, but defines issues of financial accessibility (or affordability), acceptability and availability, as shown in *Figure 1*.
At the center of the envisaged healthcare service delivery system is 'quality' – defined as a 'state of adequacy'. Quality has four dimensions, namely 'acceptability; availability; financial and geographical accessibility'. Each of the dimensions is briefly defined here.

- Acceptability clarifies how responsive Ubuntu Clinic solution is to the social and

cultural expectations of residents in the District.

- Availability describes having the right type of care available to those who need it, such as hours of operation and waiting times that meet demands of those who would use care, as well as having the appropriate type of service providers and materials.

- Financial accessibility or affordability defines the relationship between the price of services (in part affected by costs) and the willingness and ability of patients to pay for those services.

- Geographic accessibility refers to the physical distance or travel time from service delivery point to the patient.

Distal determinants of access to health service includes policy and macro environment in the country; individual and household characteristics. The baseline survey collected many of these characteristics.

Aims and Objectives of the Baseline Survey

The aims and objectives of the baseline survey are presented here:

Aims

The aim of the survey was to collect baseline data and information that would be used to inform and guide project design and implementation; including benchmarking of key Ubuntu Clinic project indicators in Mutare Urban District of Manicaland Province.

Objectives of the Baseline Survey

The specific objectives of the survey were to:

- Collect household, healthcare facility and client or patient data and information from selected households in Mutare Urban District (MUD);
- Collect demographic data from selected households in Dangamvura, Gimboki, Sakubva and Chikanga high density residential areas;
- Assess the availability of medical diagnostic equipment, such as X-Rays, at health facilities in the District;
- Describe healthcare facilities in the District (pharmacy; laboratory, *etc.*);
- Identify the 'common' diseases and health conditions affecting communities in MUD;
- Produce an epidemiologic profile of Mutare Urban District;
- Establish relationships, if any, between improved access to primary healthcare facilities and distal determinants of health, such as income;
- Quantify or determine the healthcare market in MUD (based on population size, income and willingness to pay for primary healthcare services), and
- Estimate the demand for standardized primary health care in MUD.

Structure of the Baseline Survey Report

The baseline survey report is divided into 4 Chapters, as follows:

Chapter 1 – presents the introduction; definition of the problem; aims and objectives of the survey.

Chapter 2 – describes the methods that were used, including limitations of the baseline survey.

Chapter 3 – presents the results of the baseline survey.

Chapter 4 – presents the conclusion and recommendations of the baseline survey for consideration by Ubuntu Clinic.

Chapter Two

Methods

Chapter 2 presents the methodology and preferred methods that were used in Ubuntu Clinic baseline survey.

Baseline Survey Design

Cross-sectional baseline survey data were collected at three different levels, namely household, focus group discussion and key informant interviews.

At the household level, data were collected in four residential townships of Dangamvura, Gimboki, Sakubva and Chikanga. The households were selected from 14 wards of Mutare Urban District. *Table 1* shows selected, households by enumeration area ward and number of interviews that were completed for the baseline survey

Cross-sectional qualitative data were also collected from key informant interviews (KIIs) and focus group discussions (FGDs).

Key informant interview participants were drawn from a list of categories of healthcare workers usually 'registered' in the health sector in the country (Annexure 1).

Enumeration Area	Ward		Number of Households or Dwelling Units	Interviews Completed
	Name	No.		
Nyachowa Road	Dangamvura Area 14	9	12	12
NHB House Nos 1 – 10	Two (Sakubva)	2	19 (1 respondent not available; 48 – 51 not done)	13
Zamba Primary School	Four (Sakubva)	4	8 (74 duplication)	7
Zororo Block No. 208	Five (Sakubva)	5	12 (137; 163; 180 not done)	9
Sheni Mountain	Dangamvura	7	21 (17 not done, rural ward)	4
Federation Phase 2	Dangamvura Area 13	15	11 (excluded from sample)	0
Dangamvura Polyclinic	Dangamvura	08	8	8
Houses 870 A/B – 904; N134 – N140	Dangamvura	06	10	10
Mazhambe Blocks	Three (Sakubva)	3	12 (187; 189; 187 not done)	9
House Number 283	Eighteen	18	13 (293 no respondents available)	11
Municipal Camp One	One	1	12 (14; 19 not done)	10
Hobhouse One 529	Seventeen	17	20 (511; 618; 5177 not done)	17
Chikanga II	Zimta	16	7	7
Chikanga II 3258, 2495, 243, 2427, 247	Chikanga	14	1 2 (2370; 2417; 2432 not done)	9
Totals			**176**	**139**

Table 1 **Selected Households by Ward and Enumeration Area in Mutare Urban District**

Participants for the focus group discussions were 'randomly selected' from a similar list of categories of healthcare workers and ordinary residents in selected Enumeration

Areas (EAs).

Sampling Frame

'The sampling frame used for this survey was based on the 2002 Zimbabwe Master Sample that was developed from the 2002 Zimbabwe Population Census'. The sampling frame is based on a stratified two-stage sample design. According to the Zimbabwe Master Sample, households were stratified by urban and rural strata. Within each stratum, the master sample EAs were selected using Probability Proportional to Size (PPS), where the measure of size was based on the number of households and population size of the EA from the 2012 Population Census frame. The Enumeration Areas (EAs) were the primary sampling units.

The final baseline survey sample was a stratified sample consisting of 13 EAs; which excluded Federation Phase 2. Only 4 household interviews (17 out of 21 households not interviewed) were conducted in Sheni Mountain EA, which was recently incorporated into Mutare Urban District. The household was the unit of analysis, except where specific reference was made to other individuals – for example, key informants.

Nine (9) key informants were randomly selected from the list of healthcare worker categories on the 'key informant interview question guide' (Annexure 2). Focus group discussions were 'constructed from randomly selected local residents' in the townships. Four (4) focus group discussion groups made up of three (3) groups of women and one (1) for men participated in the survey (Annexure 3). Three (3) of the FGDs were conducted in Sakubva Township and one (1) at Mutare Provincial Hospital. The number of participants in the focus group discussions varied between 2 (minimum number of participants at MPH) and 6 (maximum number in Sakubva Township).

Data Collection Tools

Three (3) data collection tools – a household questionnaire (HQ); key informant and focus group discussion question guides were used for data collection.

Household Questionnaire

The household questionnaire (HQ) (Annexure 4), made up mostly of pre-coded questions, was designed to collect data and information on general household characteristics as well as the health seeking behavior of the households. The household questionnaire was administered in all the selected households. The household head was interviewed**, irrespective of sex or age** of the respondent. The household questionnaire had four sections that were designed to gather information on the following:

- Household Composition – Data were collected on age; sex; racial group; religion; education; income and household size;

- Healthcare Facility – Questions were designed to understand the health status of household members, including knowledge of health facilities close to the households;

- Healthcare Cadres in Local Community – Questions were designed to evaluate household knowledge on health workers in their local facilities, and

- Patient Healthcare in Local Community – Data were collected on household healthcare seeking behavior; common diseases in the community; services available at local health facilities including issues on medical aid.

Key Informant Interview Question Guide

The key informant question guide provided a list of categories of healthcare workers; health and other important institutions in the District, as well as categories of ordinary residents from where key informant respondents were selected.

Key informant questions were designed to collect information on challenges experienced by households in accessing primary healthcare; differences between private and public healthcare facilities; diseases reported at medical facilities and ownership of health facilities in the four selected residential townships.

Focus Group Discussion Question Guide

Focus groups were conducted with healthcare workers from local healthcare facilities and other important institutions. Survey participants were drawn from a list prepared by the AU, GPD and Ubuntu Clinic teams before the interviews.

Focus group discussion questions gathered information on challenges experienced by households in accessing primary healthcare and possible solutions to address the challenges.

Fieldwork Planning and Preparations

The important steps that were followed prior to data collection are described in this next sub-section.

Pre-Testing of Survey Tools and Fieldwork Procedures

A pre-test was conducted on 29 July 2020 in Mazhambe Section of Sakubva Township. All pre-test households were excluded from the final survey sample. One team, consisting of four data collectors and a supervisor pre-tested the survey tools. *Figure 2* shows one of the data collectors interviewing a survey respondent during pre-testing of the household questionnaire. The data collection process was compliant with Covid-19 requirements of 'social distance' and wearing of a 'mask' when in public, as shown in *Figure 2*.

Based on the results from the pre-test, further modifications were made to the wording, flow and translations of the household questionnaire.

Key informant and focus group discussion question guides were not pre-tested. Both tools had open ended questions which allowed data collectors to follow-up on responses by interviewees.

Figure 2 **A Member of the Baseline Survey Team Pre-testing the Household Questionnaire**

Training of Survey Interviewers

Four enumerators and two survey fieldwork supervisors attended a day long comprehensive training workshop on 29 July 2020 at Africa University Clinical Research Centre (CRC). *Figure 3* below shows the baseline survey team outside the CRC, in Mutare.

From Left to Right: Blandina Muzunze; Anyway Katanha; Samuel Marinda; Munyaradzi Chakonda; Micah Katuruza (GPD); Blessing Magocha; Kenneth Maregere

Blandina Muzunze, State Registered Nurse, PSI Zimbabwe;
Anyway Katanha, PhD (Zimbabwe Open University);
Munyaradzi Chakonda, Ubuntu Clinic CEO;
Micah Katuruza, PhD Director, Global Performance Designs (Pvt) Limited;
Blessing Magocha, PhD (North West University, South Africa).

Among other things, the survey training workshop was designed to ensure that all team members had the same understanding of the purpose of the survey; and would follow the same data collection processes and procedures during fieldwork.

Ethical Considerations

All ethical issues which were followed relating to collecting information from households and children are discussed in this report. The survey had to comply with the ethical requirements of interviewing children.

Informed Consent

All key informant interviewees, focus group discussion and household survey respondents were asked for their informed consent before participating in the survey interviews.

The baseline survey information was read to respondents who were considered minors (13 – 17 years). Data collectors requested for a verbal consent from all respondents before they could participate in the survey.

The informed consent 'form' reiterated to participants that information they provided would be anonymous and confidential; and that their decision regarding their participation was voluntary and their decision would have no bearing on their access to healthcare or relief services as individuals or their household members.

Data Processing

All completed household questionnaires were first edited for consistency. Free

responses were coded before data entry. Data was entered using the statistical software, Stata, Version 19.0.

The variable of interest was household income (dependent variable). Household income was cross tabulated with a list of selected independent variables such as, health seeking behavior of household members (D1); 'paid cash for treatment' (D10) and 'membership to a medical aid scheme'. The Odds Ratio (OR) and Confidence Interval (CI) were used to evaluate the associations or relationships between the dependent and selected independent variables.

Theme and content analyses of key informant interviews and focus group discussion

responses for the important survey questions was carried out on a plotted data matrix table. The purpose of the data matrix was twofold. *First*, it made it possible to search for convergence, consensus or divergence of views and data for each survey question and key issues from a variety of sources. *Second*, it revealed areas of potential 'contradiction' in planned project activities – a process sometimes referred to as triangulation. This process enabled validation of survey data.

Limitations of the Baseline Survey

The Ubuntu Clinic baseline survey had some of the following limitations. *First*, the survey was intended to provide 'estimates' which are representative at District level. However, the household sample size was not large enough. *Second*, only a limited number of interviews were conducted from the available resources (financial and enumerators). *Third*, the survey was conducted during the national covid-19 lockdown with predictable consequences. Data collectors could not 'freely' move around data collection sites although the team had 'clearance letters' from both the local Zimbabwe Republic Police (HQ) and Ministry of Health and Child Care (MoHCC). Data collection was 'restricted' to sites that were deemed safe.

Chapter Three

Demographic and Socio-economic Characteristics of Households Respondents, Sample Coverage

The demographic and socio-economic characteristics of household respondents, including their distribution by residential area are presented in this Chapter. The household survey response rate was 80%. **Sample Coverage**

A total of 138 households were interviewed during the baseline survey. Most of the households that were interviewed where in Dangamvura Township (44.2%; *n* = 61); while Gimboki Township had the least (2.9%; *n* = 4). *Table 2* shows the distribution of household respondents by residential

Residential Area	Frequency	Percent
Dangamvura Township	61	44.2
Sakubva Township	52	37.7
Chikanga Township	21	15.2
Gimboki Township	4	2.9
Total	**138**	**100.0**

Table 2 **Distribution of Respondents by Residential Area**

Demographic and Socio-economic Characteristics of Household Respondents

The demographic and socio-economic characteristics of household respondents who participated in the survey are presented in this section.

Distribution of household respondents by sex

Most of the household respondents that were interviewed were female (71.7%; *n* = 99) and 28.3% (*n* = 39) were male, as shown in *Figure 4*.

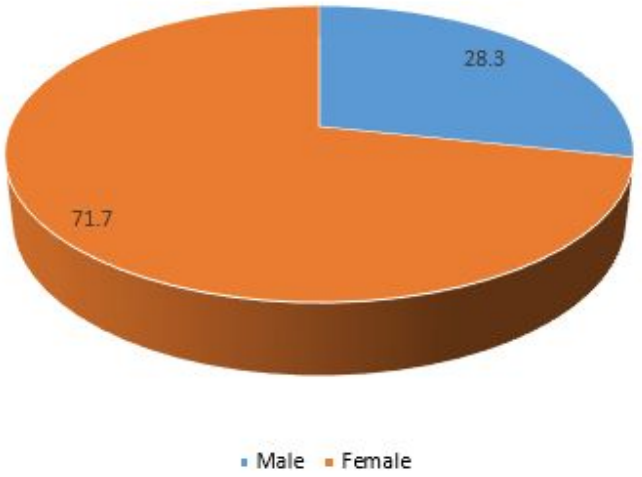

Figure 4 **Distribution of Household Respondents by Sex**

Generally, there were more female household respondents interviewed in all the 4 townships of Dangamvura: male = 20, female = 42; Sakubva: 20, 38; Chikanga: 5, 16 and Gimboki: 0, 3. No male household respondents were interviewed in Gimboki.

Distribution of household respondents by age

Approximately 5% (*n* = 7) of the household respondents were minors or children below the age of 18 years; while 6.5% (*n* = 9) were older than 65 years. *Figure 5* shows the distribution of household respondents by age.

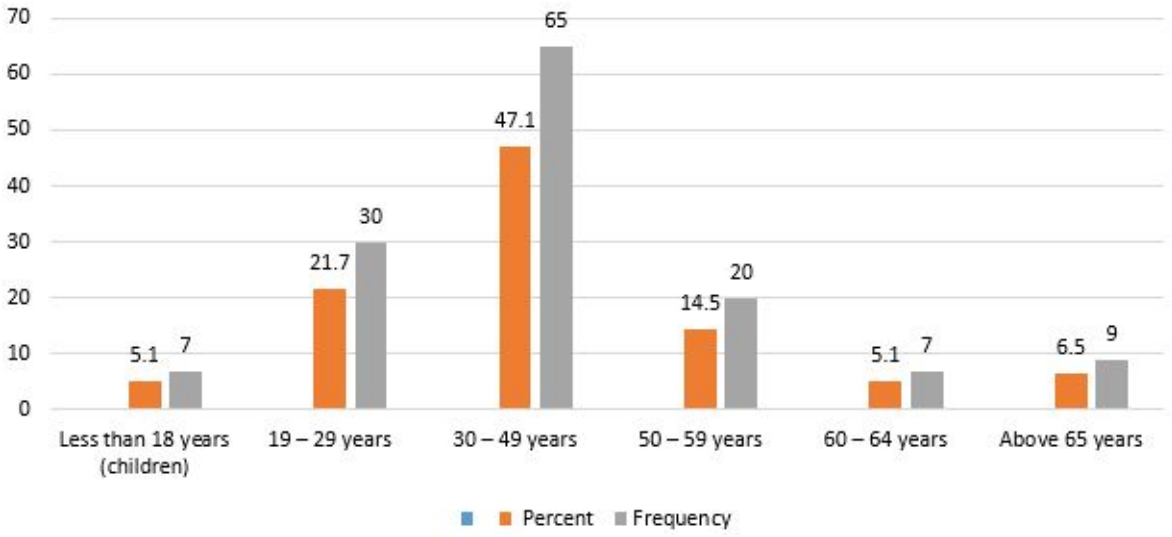

Figure 5 **Distribution of Household Respondents by Age**

Approximately 69% (actual 68.8%, *n* = 95) of household respondents were in the reproductive age group 19 – 49 years. The majority of respondents interviewed in this age group were in Dangamvura (44.9%, *n* = 42). Sakubva Township had the second highest number of respondents in the same age group (27.5%, *n* = 38); Chikanga had 9.4% (*n* = 13) and Gimboki 1.5% (*n* = 2).

The survey results suggest both Dangamvura and Sakubva had 'older household respondents' compared to Chikanga and Gimboki Townships.

Distribution of household respondents by religion

The majority of respondents interviewed (84.9%, *n* = 110) belonged to either Protestant Christian or Catholic religion. At least 2.8% (n = 4) had membership to Muslim or Traditional religious groups, while the remainder of 10.1% (n = 14) were members of other religious groups that were not specified.

Religion	Frequency	Percent
Protestant Christian	103	74.6
Protestant Catholic	17	12.3
Muslim	2	1.4
Traditional	2	1.4
Other	14	10.1
Total	**138**	**100.0**

Table 3 **Distribution of Respondents by Religion**

Table 3 shows the distribution of respondents by religion in the four residential townships that participated in the baseline survey.

Distribution of household respondents by education

Table 4 presents the distribution of household respondents by level of completed education. More than half of the respondents interviewed (52.2%, *n* = 72) had completed secondary school (Forms 4 or 6). A modest 13% (*n* = 18) had completed a diploma (post Form 4 or 6).

Education in Zimbabwe is based on the British system; where 7 years are spent in primary school; 4 or 6 years in secondary school and 3 years required to complete a basic undergraduate degree. The system is sometimes simply referred to as 7 – 6 – 3; which denotes the number of years spent in primary, secondary and tertiary institutions respectively.

Highest Level of Completed Education	Frequency	Percent
Did not go to school	2	1.4
Attended some but did not complete primary school	12	8.7
Completed primary school, Grade 7	5	3.6
Attended some but did not complete secondary school	24	17.4
Completed secondary school, Form 4; Form 6	72	52.2
Completed a Diploma (Post Form 4; Form 6)	18	13.0
Do not know	3	2.2
Total	**136**	**100.0**

Table 4 **Distribution of Household Respondents by Highest Level of Completed Education**
Notes: Missing data = 2 (1.4%)

The survey results further showed that 1.4% (*n* = 2) of the household respondents interviewed were 'illiterate' and reported that they 'did not go to school' or had 'never been to school'. A further 2.2% (*n* = 3) did not know if they had ever been to school.

Distribution of respondents by main source of income

Most of the household respondents interviewed (91.2%, *n* = 99) were informally employed, while 18.4% (*n* = 25) were formally employed.

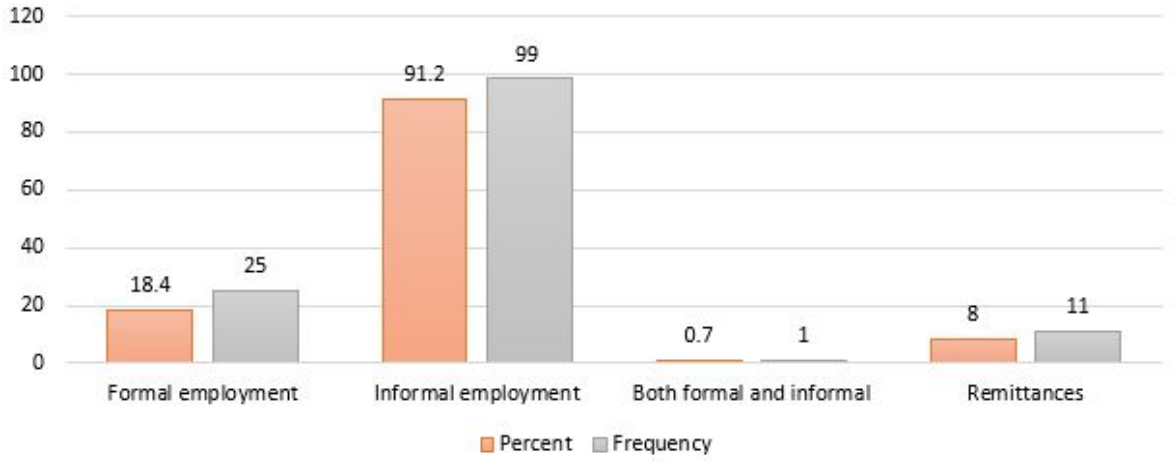

Figure 6 **Distribution of Household Respondents by Main Source of Income**

About 8% (*n* = 11) of households that were interviewed rely of remittances as a main source of income. Only 0.7% (*n* = 1) reportedly derived income from both formal and informal sources. Employment contributed to household income(s) and is an important distal determinant of healthcare.

The survey results in *Figure 6* show that 91.2% (*n* = 99) of households that were interviewed were informally employed. Persons participating in the informal sector of an economy are usually considered as 'unemployed' (Standing, 1980). For this reason, the results suggest most that the majority of households in MUD are unemployed.

Distribution of respondents by household size

The average household size in Zimbabwe was 3.2 persons in 2012 (CSO 2012). *Table 5* shows the distribution of respondents by household size.

Household Size	Frequency	Percent
1 – 2	12	8.7
3 – 4	49	35.5
5 – 6	45	32.6
7 – 8	21	15.2
9 – 10	9	6.5
Above 10	2	1.4
Total	**138**	**100.0**

Table 5 **Distribution of Respondents by Household Size**

Approximately 56% (*n* = 87) of those interviewed reportedly had larger household sizes than the national average.

Household Respondents' Health Status and Healthcare Facilities in Selected Areas

Household health status and healthcare facilities in the four survey sites are described in this section of the report.

HIV sero-positivity status in households

The survey results show that 16.7% (*n* = 23) of household members interviewed were reportedly HIV positive or had a member who was HIV positive. The results on responses to the question, 'Is someone in your household HIV positive?' are shown in *Table 6*

Response	Frequency	Percent
Yes	23	16.7
No	114	82.6
Do not know	1	0.7
Total	**138**	**100.0**

Table 6 **Is someone in your household HIV positive?**

Dangamvura Township had most of the reported household HIV positive cases (48%, *n* = 11). Sakubva had 30% (*n* = 7) and Chikanga Township had 21% (*n* = 5). There were no reported household HIV + cases in Gimboki Township (0%).

Blood pressure

Figure 7 shows households that reported someone was suffering from BP. Approximately 28% (actual 27.5%, *n* = 38) of households in the four residential areas had someone with BP; with 71% (*n* = 98) reporting that none of the household members had BP. Only 1.5% (*n* = 2) of households did not know if a member had BP.

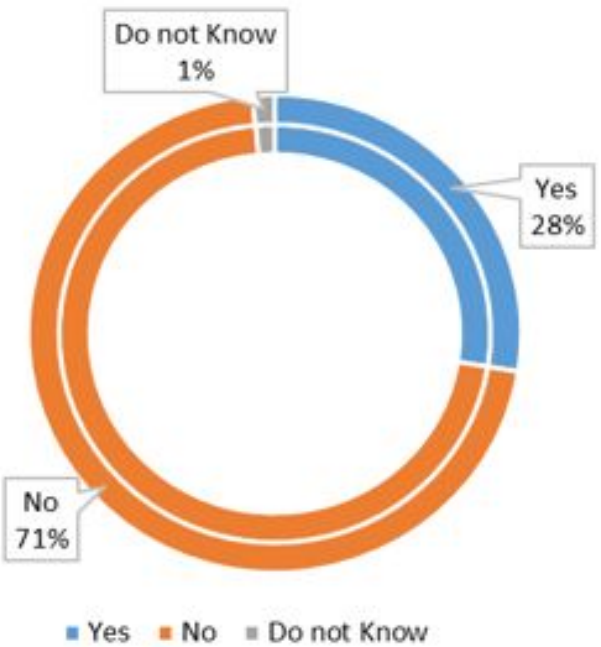

Figure 7 **Does someone in your household suffer from BP**

Normal blood pressure (BP) is less than 120/80. When systolic blood pressure is elevated to 120 – 129 and the diastolic blood pressure is less than 80, such individuals would generally need to be checked by a physician every 3 to 6 months.

In recent years, BP of a hypertensive nature and usually requiring emergency care (especially in *Stages 1, 2 or 3*) is slowly becoming a major public health issue. BP, like most other non-communicable diseases, is a 'life-style disease' that requires individuals to be checked regularly by medical doctors.

Distance to nearest health facility

The majority of households interviewed (41.3%, *n* = 57) in the four residential areas walk more than a kilometer to get to the nearest healthcare facility, as shown in *Table 7*. Approximately 44% (actual = 43.9%, *n* = 25) of households in Dangamvura Township walk more than a kilometer to reach the nearest health facility compared to fewer households in Sakubva (15.9%); Chikanga (5.8%) and Gimboki (1.4%) walking the same distance.

Residential Area	Distance to Nearest Health Facility				Total
	0-05km	0.5-1km	More than 1km	Do not Know	
Dangamvura	26 *(57.8)*	8 *(25.8)*	25 *(43.9)*	3	62
Sakubva	13 *(28.9)*	15 *(48.4)*	22 *(15.9%)*	2	52
Chikanga	5 *(11.1)*	8 *(25.8)*	8 *(5.8)*	0	21
Gimboki	1 *(2.2)*	0 *(0)*	2 *(1.4)*	0	3
Total	**45** *(33.6)*	**31** *(22.5)*	**57** *(41.3)*	**5** *(3.6)*	**138** *(100.0)*

Table 7 **Distance to Nearest Health Facility by Residential Area**
Notes: Figures in parentheses denote percentages

Approximately 58% (actual =57.8, *n* = 26) of residents in Dangamvura Township reportedly walked between 0 – 0.5 kilometers to get to the nearest health facility; compared to Sakubva (28.9%, *n* = 13); Chikanga (11.1%, *n* = 5) and Gimboki (2.2%, *n* = 1) for the same distance. Households in Gimboki were expected to walk longer distances because of reported non-availability of health facilities in the area.

Availability of a laboratory at a local health facility by residential area

Nearly 69% (actual = 68.8%, *n* = 95) of household respondents reported that there were no laboratories at their local health facilities. The results on responses to the question, 'Is there a laboratory at the local health facility?' are shown in *Table 8*.

Residential Area	Responses – Availability of a Laboratory			Tot al
	Yes	No	Do not Know	
Dangamvura	8 *(28.6)*	48 *(50.5)*	6	62
Sakubva	16 (57.1)	34 *(36.8)*	11	52
Chikanga	4 *(14.3)*	11 *(11.6)*	6	21
Gimboki	0 *(0)*	2 *(2.1)*	1	3
Total	**28** *(20.3)*	**95** *(68.8)*	**15** *(10.9)*	**138** *(100.0)*

Table 8 **Is there a laboratory at a local health facility?**
Notes: Figures in parentheses denote percentages

In Sakubva Township, 57.1% (*n* = 16) of household respondents reported that a laboratory was available at some of their local health facilities compared to Dangamvura, 28.6% (*n* = 8) and Chikanga, 14.3% (*n* = 4). No households reported the availability of laboratories in healthcare facilities in Gimboki Township. This was expected since the township reportedly did not have public healthcare facilities at the time of the survey.

Availability of a pharmacy at a local health facility by residential area

Approximately 60% (actual = 60.1%, *n* = 83) of household respondents reported that there were pharmacies at their local health facilities. The results on responses to the question, 'Is there a pharmacy at the local health facility?' are shown in *Table 9*.

Residential Area	Responses – Availability of a Pharmacy			Total
	Yes	No	Do not Know	
Dangamvura	26 *(31.3)*	33 *(64.7)*	3	62
Sakubva	40 *(48.2)*	12 *(23.5)*	6	52
Chikanga	15 *(18.1)*	5 *(9.8)*	1	21
Gimboki	2 *(2.4)*	1 *(2.0)*	0	3
Total	**83** *(60.1)*	**51** *(37.0)*	**4** *(2.9)*	**138** *(100.0)*

Table 9 **Is there a pharmacy at a local health facility?**
Notes: Figures in parentheses denote percentages

About 48% (actual = 48.2%, *n* = 40) of household respondents in Sakubva reported that pharmacies were available in their local health facilities, compared to Dangamvura 31.3%, (*n* = 26); Chikanga 18.1%, (*n* = 15) and Gimboki 2.4%, (*n* = 2). The pharmacies available in Gimboki Township were reportedly privately owned since the residential area did not have government or council owned healthcare facilities.

Availability of X-Ray or Ultra Sound Scan Machines at a local health facility

The results on responses to the question, 'Is there an X-Ray machine or ultra sound scan machine at the local health facility?' are shown in *Table 10*.

Residential Area	Responses – Availability of X-Ray or USS Machines			Total
	Yes	No	Do not Know	
Dangamvura	1 *(6.3)*	56	5	62
Sakubva	9 *(56.3)*	40	3	52
Chikanga	6 *(37.5)*	14	1	21
Gimboki	0 *(0)*	3	0	3
Total	**16** *(11.6)*	**113** *(81.9)*	**9** *(6.5)*	**138** *(100.0)*

Table 10 **Is there an X-Ray machine or ultra sound scan machine at the local health facility?**
Notes: Figures in parentheses denote percentages

Approximately 82% (actual = 81.9%, *n* = 113) of household respondents reported that X-Ray or ultra sound scan (USS) machines were not available in their local health facilities.

The majority of household respondents who reported the availability of X-Ray and USS machines where from Sakubva (56.3%, *n* = 9) and Chikanga (37.5%, *n* = 6). This was expected since a number of council as well as government healthcare facilities are dotted around the oldest township in the District, which include Mutare District Hospital.

Availability of healthcare workers in local communities

The availability of healthcare workers that include doctors, nurses, pharmacists, laboratory scientists and radiologists in local health facilities is highlighted in this section.

Availability of doctors

The results on responses to the question, 'Are doctors available at your local health

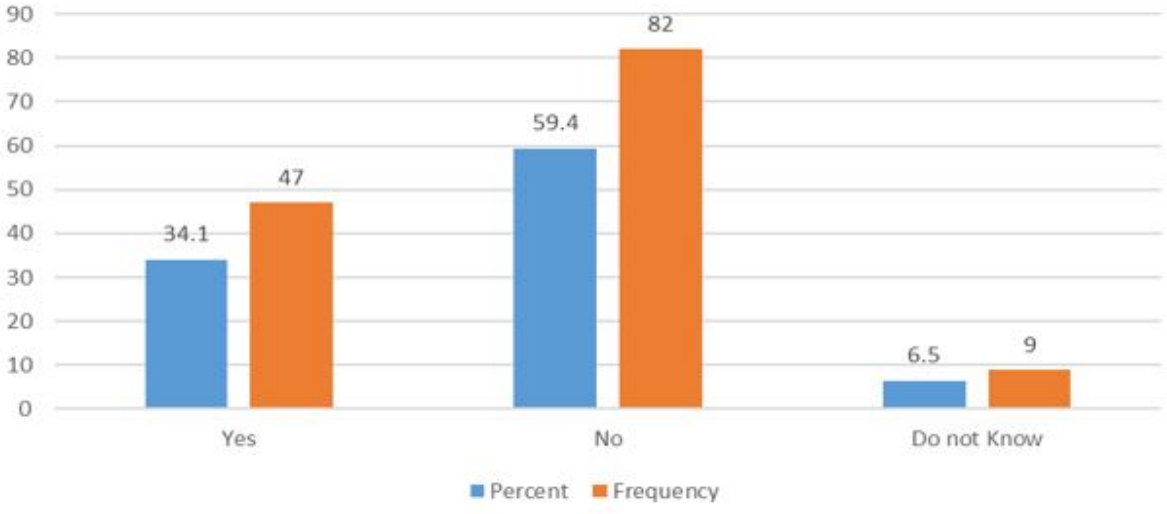

Figure 8 **Are doctors available at your local health facility**

Approximately 59% (actual = 59.4%, *n* = 82) of the household respondents reported that doctors were not available in most of the local health facilities in the four survey sites. About 7% (actual = 6.5%, *n* = 9) of the respondents did not know whether doctors were available. In many instances, the respondents who responded 'yes' to the question: 'are doctors available at your local health facility?' could not 'estimate' or 'guess' the number of doctors in local health facilities.

Availability of nurses

The results on responses to the question, 'Are nurses available at your local health facility?' are shown in *Figure 9*.

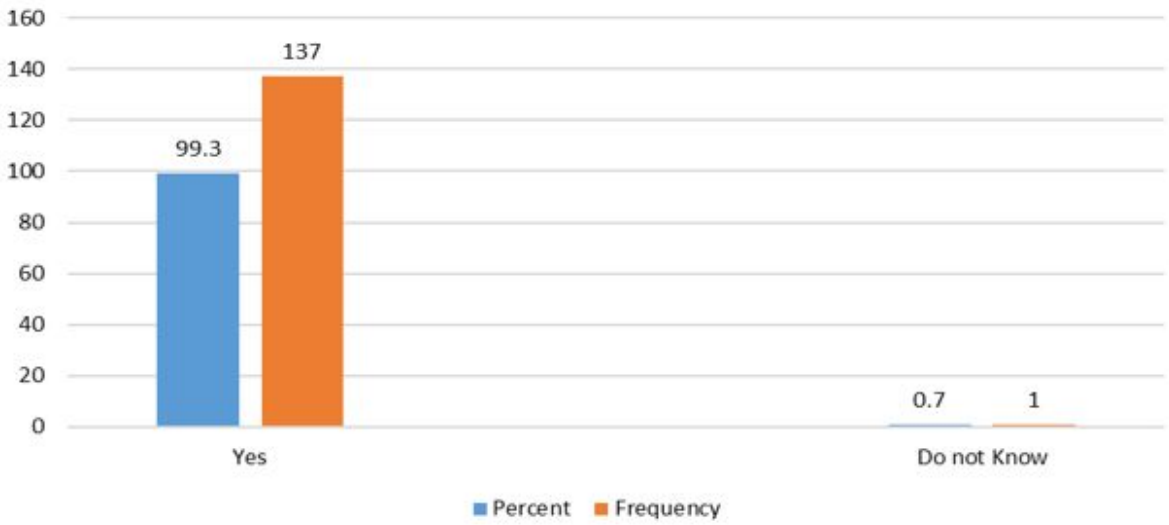

Figure 9 **Are nurses available at your local health facility?**

Household respondents were 'certain' about the availability of nurses in their local health facilities, with 99.3% (*n* = 137) responding 'yes' to the question.

As in the case with doctors, respondents could not give correct 'estimates' or 'guesses' on the number of nurses that were available at these local facilities.

Availability of pharmacists

The results on responses to the question: 'Are pharmacists available at your local health facility?' are shown in *Figure 10*.

Household respondents could give 'informed' estimates on numbers of pharmacists that were available at the local health facilities.

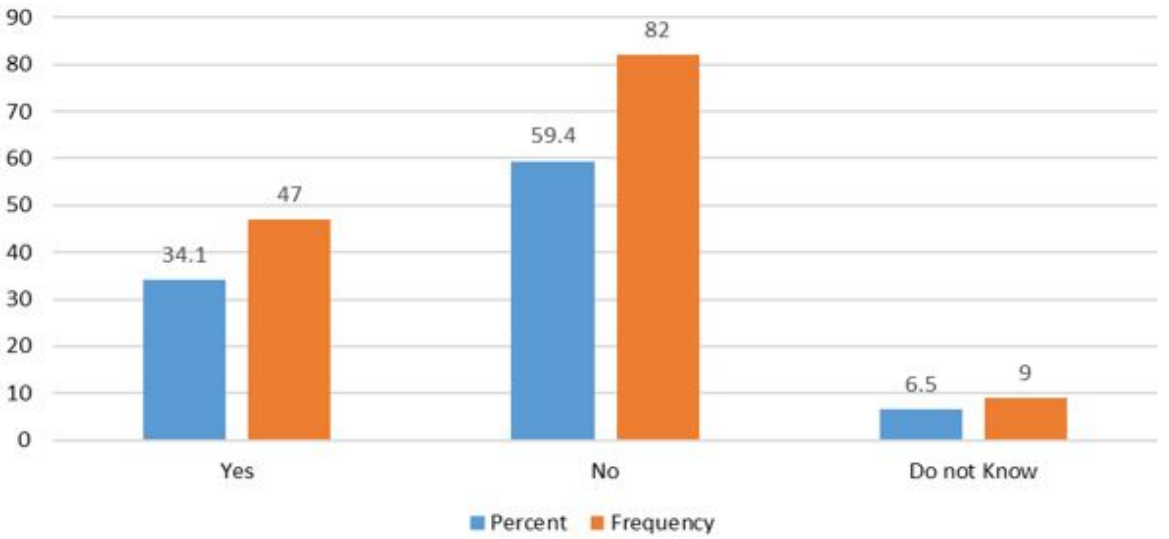

Table 10 **Are pharmacists available at your local health facility**

Availability of laboratory scientists

The results on responses to the question, 'Are laboratory scientists available at your local health facility?' are shown in *Figure 11*.

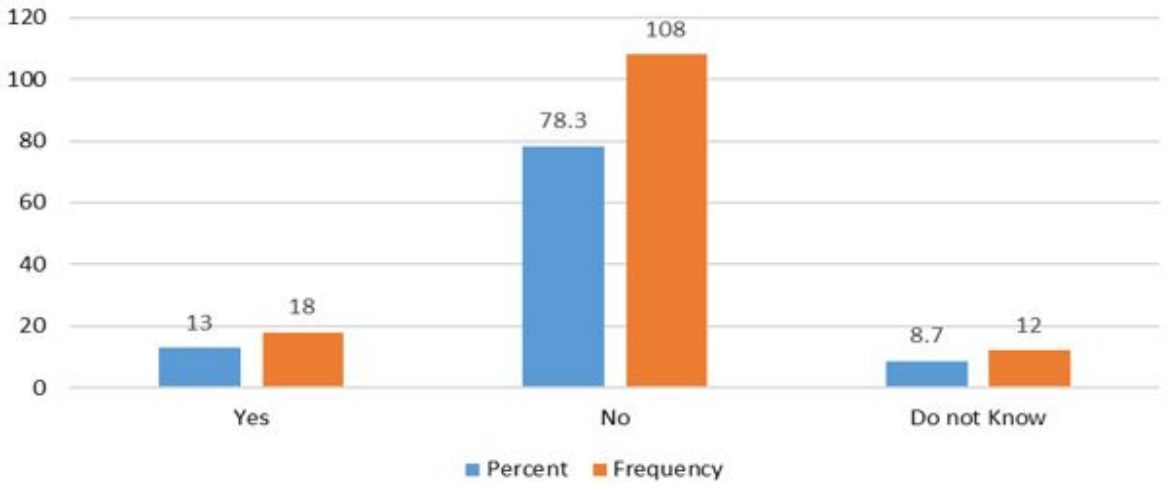

Table 10 **Are laboratory scientists available at your local health facility?**

Similar to the case with pharmacists, respondents could not provide estimates on numbers of laboratory scientists that were available in their local health facilities. Some of the household respondents reportedly did not know the work of laboratory scientists, as well as their roles and responsibilities in delivery of healthcare.

Patient Healthcare in Local Communities

The results on patient healthcare in the four residential areas of Mutare Urban District are presented in this section.

Household health seeking behavior

The results on responses to the question: 'Do you or any member of your household seek treatment when you are not feeling well?' are shown in *Table 11*.

Response	Frequency	Percent
Yes	136	98.6
No	2	1.4
Total	**138**	**100.0**

Table 11 **Do you or any member of your household seek treatment when you are not feeling well?**

The results suggest household members visited a health facility when they were not feeling well. Usually, treatment was sort at the nearest healthcare facility (76.8%, *n* = 106). However, some respondents reported visiting other facilities for treatment because they were referred to another facility for further healthcare management or the local health facility was reportedly very expensive (97.1%, *n* = 137).

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Reasons for visiting health facility

Respondents reported visiting local health facilities for various reasons shown in *Table 12*. Most respondents visited their local facility for 'headaches or flues' (27.5%, *n* = 38); collect chronic medication (25.4%, *n* = 35) and seek relief on chest pains (12.3%, *n* = 17).

Malaria is an emerging public health emergency in the District, especially during the rainy seasons. At least 4.3% (*n* = 6) of the respondents reported receiving treatment for the disease.

Reason	Frequency	Percent
Chest pains	17	12.3
Hot body/ vomiting	3	2.2
Routine check-up	1	0.7
Headache/ flue	38	27.5
To collect medication	35	25.4
Replace spectacles	1	0.7
Malaria	6	4.3
Miscarriage	11	8.0
Dental clinic	1	0.7
Other	25	18.1
Total	**138**	**100.0**

Table 12 **Why did you or member visit the health facility?**

Among female respondents, 8% (*n* = 11) reportedly visited the local health facility after experiencing a miscarriage.

Respondents were reportedly seen by nurses (81.9%, *n* = 113) whenever they visited a local health facility; while 13.8% (*n* = 19) were seen by doctors. The results point to an apparent shortage of medical doctors in most of the healthcare facilities in the District.

The results on 'waiting time to see a doctor or nurse' suggest most respondents experienced a waiting time of between 0 – 30 minutes (36.2%, *n* = 50); while 15.9% (*n* = 22) had a waiting tie of between 31 – 60 minutes.

Cash payment at local health facility

The results on responses to the question: 'Did you or member pay cash for treatment?' are shown in *Figure 13*.

Response	Frequency	Percent
Yes	87	63.0
No	40	29.0
Do not know	11	8.0
Total	**138**	**100.0**

Table 13 **Did you or member pay cash for treatment?**

The majority of household respondents (68%, *n* = 87) reportedly paid cash for treatment at local health facilities; 29% (*n* = 40) did not pay and 8% (*n* = 11) did not know whether payment was ever made or not. Perhaps cash for the treatment of some of the respondents were paid by household members, either through medical aid or other arrangements with healthcare service providers.

Among those that were treated, at least 24.6% (*n* = 34) reported that some of the local the healthcare facilities accepted medical aid. Medical aid was not accepted among 13% (*n* = 18) of the household respondents.

Medication received at local health facility

Approximately 57% (actual = 57.2%, *n* = 79) of household respondents reportedly received medication during their last visit.

Response	Frequency	Percent
Yes	79	57.2
No	49	35.6
Do not know	10	7.2
Total	**138**	**100.0**

Table 14 **Did you or member receive medication at the local facility?**

Most of the medication reportedly received was ART (13.8%, *n* = 19) and paracetamol (pain killers) (25.4%, *n* = 35). However, respondents reported receiving a whole range of drugs which were based on required prophylaxis from consultations with doctors or nurses. Some of the drugs prescribed included 'first line' antibiotics such as amoxylin (3.6%, *n* = 5); nefedpin (3.6%, *n* = 5); BCG for under – 5 vaccination (2.9%, *n* = 4) and others. Approximately 30% (actual = 29.7%, *n* = 41) of respondents did not remember medication that was prescribed when they last visited a healthcare facility.

Repeat visits or referrals are part of patient continuum of care and respondents reported visiting health facilities when not feeling well (8.7%, *n* = 12); once a year (15.2%, *n* = 21); rarely (43.5%, *n* = 60) or once a month (16%, *n* = 22). The frequency of visits ranged from once a month to a year; with some reporting rarely visiting health facility.

Reasons for not getting treatment at the local health facility

Not all healthcare facilities dispensed medicines. There were many reasons proffered by respondents. Some of the health facilities did not have pharmacies. Patients bought own medication on prescription. In some instances, doctors allowed to prescribe medication

by law were reportedly not available at time of the visit.

Household respondents also reported been referred to other facilities for treatment (29%, *n* = 40). Respondents reported being referred to some of the local healthcare facilities, including private facilities (6.5%, *n* = 9). Some of the referral facilities included Sakubva District Hospital and St. Joseph's Hospital (9.4%, *n* = 13); Army Barracks (14.4%, *n* = 20) and Premier Service medical facilities (16.7%, *n* = 23). Zimunya Clinic was reportedly a 'referral center' (15.9%, *n* = 22).

Non-communicable and chronic diseases reported in the District

Non-communicable and chronic diseases that were reported by household respondents in the District are shown in *Table 15*.

Response	Frequency	Percent
BP	39	28.3
Diabetes	1	0.7
HIV	14	10.1
Asthma	9	6.5
Arthritis	2	1.4
Mental illness	3	2.2
Heart disease	7	5.1
Skin disease	6	4.3
Other	11	8.0
Not applicable	46	33.3
Total	**138**	**100.0**

Table 15 **Do you or any member of your household suffer from any one of the following disease(s)?**

The most reported chronic conditions by household respondents were BP 28.3% (*n* = 39) and HIV 10.1% (*n* = 14). A whole range of diseases which included asthma (6.5%, *n* = 9); arthritis (1.4%, *n* =2); mental illness (2.2%, *n* = 3); heart disease (5.1%, *n* = 7) and skin disease (4.3%, *n* = 6) were also reported. Some respondents did not disclose their health conditions (8%, n = 11); while 33.3% (n = 46) perhaps did not know their health status.

Fees payment at a local health facility

Respondents reported that under-5 children and those older than 65 years were exempt from paying consultation fees at government health facilities in the District. These two age groups were expected to pay a 'nominal card-fee' which was less than USD1. However, other age categories between 6 and 64 years were expected to pay the fees.

Approximately 80% (actual = 79.7%, *n* = 110) and 82.6% (*n* = 114) of household respondents reported paying fees at government and council health facilities respectively. Medication was readily available in government facilities (37%, *n* = 51) compared to council (32.6%, *n* = 45 32.6%). Patients were reportedly less likely to get medication from council health facilities.

Fees respondents were willing to pay

Evidence from the survey suggest respondents were able to pay consultation fees between USD1 – USD5 (31.9%, *n* = 44). The willingness to pay fees declined as costs, denominated in the United States Dollars, increased. However, 60.9% (*n* = 84) of respondents did not have the capacity or ability to pay the fees and would not even contemplate seeking treatment under the current macro-economic conditions in the Zimbabwe.

Medical Aid membership

Medical aid coverage among residents of Mutare Urban District appeared to be 'low', with 76.8% (*n* = 106) of household respondents not on medical aid. Some of the household respondents were reported to be on medical aid with the country's leading medical insurance brands such as Premier Medical Aid (3.6%, *n* = 5); Rail Med (1.4%, *n* = 2); PSMAS (7.2%, *n* = 7.2); CIMAS (2.1%, *n* = 3) and Ecosure (2.9%, *n* = 4), among others shown in *Table 16*.

Response	Frequency	Percent
Old Mutual	1	0.7
CIMAS	3	2.1
Excel Medical Aid	1	0.7
Rail Med	2	1.4
PSMAS	15	10.8
Village Medical Aid*	1	0.7
FLIMAS	1	0.7
Ecosure Health	4	2.9
None, not on medical aid	106	76.8
Total	**138**	**100.0**

Table 16 **Which Medical Aid are you or member on?**
Notes: Medical aid scheme reported in Dangamvura Township, Ward 7

One interesting 'innovation' was the 'village medical aid' (VMA), reported by respondents in Dangamvura Township, Ward 7. Households reportedly contributed premiums of ZWL$20 (equivalent of USD0.20) per month. Utilization of benefits were limited to Zimunya Rural District Clinic (ZRDC), where the VMA was accepted. Chief Zimunya was reportedly the 'chief executive officer' of the medical aid scheme.

Perceived advantages of medical aid

Despite the 'low' medical aid coverage, 73.9 % (*n* = 102) of household respondents, reportedly considered having medical aid cover as an 'advantage'. While some facilities agreed to treat 'clients' on medical aid including dispensing drugs, not all medical service providers 'accepted' medical aid. Delays in remitting money to doctors (and other service providers) by some of the medical aid societies meant their members could not be treated.

At least 61% (actual = 60.8%, *n* = 84) of the respondents considered medical aid 'convenient' and was based on a perception of better services that could be received at healthcare facilities (when on medical aid). Among medical aid societies in 'good standing' with healthcare service providers (doctors in particular) in the District, it was the only opportunity of doing business in a country experiencing serious cash shortages.

Some respondents reportedly paid their medical aid premiums in USD, which enticed healthcare service providers to 'accept' treating such patients. About 9% (actual = 8.7%, *n* = 12) reportedly contributed monthly premiums of USD10. Only 0.7% (*n* = 1) of respondents reportedly contributed monthly subscriptions of between USD 11 – 20.

Income as distal driver of access to healthcare in Mutare Urban District

The Ubuntu Clinic primary healthcare model is premised on the assumption that potential future clients in the selected residential areas will be able to pay for healthcare services. For this reason, household income should be considered a key distal driver of access to healthcare in Mutare Urban District (as illustrated in *Figure 1*).

Cross tabulations were performed between household 'source of main income' and responses to question (D10): 'Did you or member pay cash for treatment?' to assess any relationships. The odds ratio (OR) and confidence interval (CI) testing at 95% were used to test for significance. The association between household main source of income and being able to pay cash for healthcare is shown in *Table 17*.

Source of Main Income	Responses – Paid Cash for Treatment			Total	Statistical Output (OR and 95% CI)
	Yes	No	Do not Know		
Formal Employment	11	11	3	25	1.00 (0 .36 – 2.78)
Informal Employment	68	23	8	99	0.34 (0.19 – 0.59)
Both Formal and Informal Employment	1	0	0	1	1.00 (0.01 – 92.43)
Remittances	6	5	0	11	0.83 (0.19 – 3.56)
Total	**86**	**24**	**11**	**138**	

Table 17 **Relationship between income and ability to pay cash for treatment**
Notes: OR – Odds Ratio; **CI** – Confidence Interval

Formal employment did not affect the ability of households to pay cash for their treatment at a healthcare facility (Odds Ratio, OR = 1.0; Confidence Interval, CI (0.36 – 2.78). Although this observation was not statistically significant a lack of household income is more likely to reduce access to healthcare by a household or its members. The OR of informal employment as main source of income were 0.34 times compared to formal employment and 0.83 for households relying on remittances. These results suggest household in these income categories were less likely to have paid cash for their treatment.

Availability of income at household level through either formal employment, as well as those in both formal and informal employment has the potential of improving access to

those in both formal and informal employment has the potential of improving access to healthcare. Income formality is a more 'sustainable' alternative that guarantees access to healthcare by households.

Reasons for household not seeking treatment

Households in formal employment were 24 times more likely not to seek for treatment at a healthcare facility because it was expensive compared to facility being too far (OR = 24.0; CI =3.01 – 191.30). Similarly, members of households in informal employment were also more likely not to seek for treatment for the same reason, albeit reduced risk (OR = 0.01; CI = 0.0003 – 0.0864).

Source of Income	Reasons for not seeking treatment			Total	Statistical Output (OR and 95% CI)
	Facility Expensive	Facility Too Far	Other Reason		
Formal Employment	24	1	0	25	24.0 (3.01 – 191.30) **
Informal Employment	96	0	1	97	0.01 (0.0003 – 0.0864) *
Both Formal and Informal Employment	1	0	0	1	Undefined
Remittances	11	0	0	11	Undefined
	132	**1**	**1**	**134**	

Table 18 **Reasons for not seeking treatment**
Notes: Z = 3.001; P = 0003 ** Z = 3.693; P = 0.0002*

These results were statistically significant, with p = 0.0003 and 0.0002 respectively. Financial accessibility, defined by patient incomes and willingness to pay for services directly influences access to primary healthcare among households that were interviewed during the survey.

Householder member seen by a doctor

Households with members who were formally employed were 4 times more likely to be seen by a doctor at a healthcare facility (OR = 4.0; 1.3 – 12.3). Result appears to contract findings on why the same households would not seek treatment at healthcare facilities. The result was statistically significant, with p = 0.02.

Source of Income	Member seen by a doctor			Total	Statistical Output (OR and 95% CI)
	Yes	No	Do not Know		
Formal Employment	5	20	0	25	4.0 (1.3 – 12.3) *
Informal Employment	11	82	3	96	7.6 (3.74 – 14.86)
Both formal and Informal Employment	0	1	0	1	3.0 (0.006 – 151.20)
Remittances	2	9	0	11	4.5 (0.76 – 25.78)
	18	**112**	**3**	**136**	

Table 19 **Member seen by a doctor**
Notes: Z = 2.4; P = 0.02*

Households with members in informal employment were 7.6 times less to be seen by a doctor (OR = 7.6; CI = 3.74 – 14.86). The result was similar to those relying on remittances (OR = 4.6; CI = 0.76 – 25.78), as a source of income.

Household member seen by a nurse

Although the risk or odds were lower, members from households in informal employment were 0.1 times more likely to be seen by a nurse (OR = 0.1; CI 0.00521 – 0.2311). This result was statistically significant, with p = 0.0001.

Source of Income	Member seen by a nurse			Total	Statistical Output (OR and 95% CI)
	Yes	No	Do not Know		
Formal Employment	17	7	1	25	2.4 (0.86 – 6.8)
Informal Employment	82	9	4	95	0.1 (0.00521 – 0.2311) **
Both formal and informal employment	1	0	0	1	0.3 (0.0066 – 16.8001)
Remittances	11	0	0	11	0.04 (0.0023 – 0.8283)
	111	**16**	**5**	**136**	

Table 20 **Member seen by a nurse**
Notes: Z = 5.815; P = 0.0001**

Sources of income explain the differentials in 'health seeking behavior' between households with members in formal and informal employment. seen by a doctor at a healthcare facility (OR = 4.0; 1.3 – 12.3). Result appears to contract findings on why the same households would not seek treatment at healthcare facilities. The result was statistically significant, with p = 0.02.

Chapter Four

Conclusions

Based on the findings from this baseline study, the following conclusions were made:

Medical diagnostic equipment

Evidence from this survey suggest X-Ray or ultra sound scan (USS) machines where only available at Sakubva District and Mutare Provincial Hospitals, which are the referral institutions. Some of the private healthcare facilities reportedly had these medical diagnostic machines. In public health facilities, additional fees levied to access these services have reduced their utilization, potentially worsening patient health outcomes in the District.

Availability of healthcare workers

The huge doctor-patient and nurse-patient ratios point to 'shortages' of both nurses and doctors in some facilities which manifests itself in what key informants referred to as 'poor service' in public health facilities often associated with 'long waiting times'. While there was a general 'shortage' of healthcare workers in the country, the situation appears 'worse' in public health facilities.

Distance to nearest healthcare facility

Distances to the nearest healthcare facility differ with residential area; with households in Dangamvura Township walking 'longer distances' compared to those in Sakubva and Chikanga Townships. Geographic accessibility to primary healthcare is influenced by clients' location relative to the location of the nearest healthcare facility.

Medical infrastructure at healthcare facilities

Key medical infrastructure like pharmacies and laboratories were reported by respondents to be available at MD and MP Hospitals. Some of these facilities are privately owned. While most of the facilities have pharmacies, a significant number do not always have drugs that are periodically required by both in-patients and out-patients. This has seen the 'mushrooming' of pharmacies in the four residential areas, with some reportedly not registered either with the local authority or the government regulatory body.

Household health seeking behavior

Household members visited a health facility when not feeling well. Most respondents reported visiting the local healthcare facility and would only visit another facility if referred for further treatment or for purposes of accessing medication. In instances where fees were expensive, respondents reported visiting other facilities not close to household dwellings

Patient Data Management

Due to lack of consistent health care facilities, long distances, patients often have to repeat multiple diagnostics from facility to facility. Paper based records if at all present increase the complexity of providing adequate healthcare services, a lack of shared infrastructure amongst healthcare providers exacerbates this challenge. Platforms like FlexID when trialed, reduced time to onboard patients down to less than 120 seconds.

The blockchain based solution also increased security and verifiability of patient data across multiple entities.

Reasons for visiting health facility

In the four residential areas, respondents reported visiting local health facilities for various reasons. The main reasons were for treatment of headaches and flues and to collect chronic medication. Some female respondents reportedly visited their local health facility after experiencing a miscarriage.

Non-communicable chronic diseases reported in the District

The most common non-communicable and chronic diseases that were reported by household respondents in the District were BP and HIV.

Fees payment at a local health facility

As elsewhere in the country, children aged under-5 and adults older than 65 years were exempt from paying consultation fees at government health facilities in the District. These two age groups were expected to pay a 'nominal card-fee' which was less than USD1. However, other age categories between 6 and 64 years were expected to pay the fees.

Fees respondents were willing to pay

Evidence from the survey suggest respondents were willing to pay consultation fees between USD1 – USD5. The willingness to pay fees declined as costs, usually denominated in the United States Dollars, increased.

Medical Aid membership

Medical aid coverage among residents in the four survey township appeared to be 'low', with most household respondents not on medical aid. Some of the household respondents were reported to be on medical aid with the country's leading medical insurance brands such as Premier Medical Aid; Rail Med; PSMAS; CIMAS and Ecosure.

Household income

Household income is a key distal driver of access to healthcare in Mutare Urban District. It influences how households access primary healthcare services.

Annexure A

List of Key Informants (their Institutions, Designation and Cell Numbers)

Name	Institution	Designation	Cell Numbers
Angrity Sikuzwiye	MPH	Nurse	0779 951 804
Margaret Nhamo	MDH	Ophthalmic Nurse	0772 383 981
Blessing Maringire	MPH	Senior Radiographer	0773 972 714
Patricia Nago	MPH	Chief Laboratory Scientist	0774 413 338
Wilson Bore	LG	DDC	0774 414 286
Ndlovu	MPH	Pharmacist	0783 137 875
Richard Mawoyo	MDH	DEHO	0774 031 847
Stephen Mwarira	MPH	Sister-in-Charge	0772 920 533
Martha Marie Frieden	MSF	Project Medical Referent	0773 001 587

Notes: MPH – Mutare Provincial Hospital; LG – Local Government; MDH – Mutare District Hospital; DDC – District Development Coordinator; DEHO – District Environmental Health Officer; MFS – Medicines Sans Frontiers (Mutare)

Annexure B

Number of Focus Group Discussions Conducted and their Compositions

Group Number	Size of Group	Composition	Where Held
1	4	women	Sakubva
2	5	men	Sakubva
3	6	women	Sakubva
4	2	women	MPH

Notes: MPH – Mutare Provincial Hospital

Annexure C

Baseline Household Questionnaire

Read Instructions to the Respondent

You are free to participate in this interview. The information you are going to share with me is confidential and will only be used for the purpose of this survey. You my stop the interview if you want or deem it necessary

Questionnaire Number	Sample (Number)
	Cumulative (Survey)
District	Mutare Urban District (MUD)
Suburb (Residential Area)	Dangamvura Township 1 Sakubva Township 2 Chikanga Township 3 Gimboki Township 4
Enumerator Initials	
Date (dd/mm/yy)	
Time of Interview	

Demography and Household Composition

Tell us a bit about your household			
Questions		Response Options	Code
1	What is your date of birth?	(Enter date of birth)	(dd/mm/yy)
2	How old were you on your last birthday?	(Enter age in completed years)	
3	Are you male or female?	Male Female	1 2
4	What is your racial group?	Black Colored Indian White Other	1 2 3 4 5
5	What is your religion	Protestant Christian Catholic Christian Jewish Muslim	1 2 3 4

		PHindu Ba'hai Traditional Other	4 5 6 7
6	What is your highest level of education that you have completed?	Did not go to school Attended some primary, but did not complete primary school Completed primary school Attended some secondary, but did not complete secondary school (Form 4) Completed secondary school (Form 4) Completed a diploma Completed a university or Technical College Degree Do not know	1 2 3 4 5 6 7 8
7	What is your source of income?	Formal employment Informal employment Both Remittances	1 2 3 4
8	If both in Question A7, describe what you do	(Describe nature of activity)	
9	How much do you earn from your employment?	(Enter amount in currency described by respondent)	
10	How many are you in your household?	(Specify number of household members, excluding visitors to household)	

Healthcare Facility

Tell us more about the health of your household and healthcare facilities in your community			
Questions		Response Options	Code
1	Is someone in your household HIV positive?	Yes No Don't know	1 2 8
2	Does someone in your household suffer from BP?	Yes No Don't know	1 2 8

3	What amount of time do you need to walk or drive to your nearest health facility?	(Insert time in minutes, hours)	
4	How far is the nearest health facility from your house or dwelling?	(State distance in metres, kilometres)	
5	What type of health facility is nearest to your house or dwelling?	Clinic Polyclinic Hospital	1 2 3
6	Who is the owner of the health facility?	Government Municipality Private Do not know	1 2 3 4
7	Is there a laboratory at the facility	Yes No Do not know	1 2 3
8	Is there a pharmacy at the facility	Yes No Do not know	1 2 3
9	Is there an X-Ray machine at the facility Ultra Sound Scan Machine	Yes No Do not know	1 2 3

Health Cadres in Local Community

Tell us what you know about healthcare workers in your local facility			
	Questions	Response Options	Code
1	Are doctors available at your local facility?	Yes No Do not know	1 2 3
2	If Yes in Question C1 above, how many are they?	(State number)	
3	Are nurses available at your local health facility?	Yes No Do not know	1 2 3
4	If Yes in Question C3 above, how many are they?	(State number)	
5	Are pharmacists available at your local facility?	Yes No Do not know	1 2 3
6	If Yes in C5 above, how many are they?	(State number)	
7	Are laboratory scientists available at your local facility?	Yes No Do not know	1 2 3
8	If Yes in C7 above, how many are they?	(State number)	

Patient Healthcare in Local Community

Tell us more about patient healthcare in your community			
	Questions	Response Options	Code
1	Do you or any member of your household seek treatment when you are not feeling well?	Yes No	1 2
2	If Yes in Question D1 above where do you get treated?	Local health facility Other health facility	1 2
3	If No in D1 above what are the reasons	(State reason(s))	
4	Have you or any member of your household visited a health facility in your area (in the last 30 days)?	Yes No	1 2
5	If Yes, to Question D4 above, when was the last time member visited a health facility?	Specify Day/ Month	
6	Why did you or member visit the health facility? (Give reason for member visiting a health facility. Reason should exclude, 'visiting another member at a health facility')	(State reason)	
7	At the health facility, were you or member seen by a doctor?	Yes No	1 2
8	At the health facility, were you or member seen by a nurse?	Yes No	1 2
9	How long did you or member wait to be seen by a nurse or doctor?	(Specify time in minutes or hours)	
10	Did you or member pay cash for treatment?	Yes No Do not know	1 2 3
11	If No, in Question D10 above, did facility accept a medical aid card?	Yes No Do not know Not applicable	1 2 3 4
12	Did you or member receive medication at the local facility?	Yes No Do not know	1 2 3
13	What type of medication were you or member prescribed?	(Solicit for name of drug or medication or describe 'condition' for which medication was prescribed)	

14	How often do you or member visit the local healthcare facility?	(State number of visits)	
15	How often do you or member visit any other health facility?	(State number of visits)	
16	If you or member was not treated at the health facility, what was the reason?	(State reason)	
17	Were you or member referred to another facility?	Yes No	1 2
18	If No, in Question D17 above Skip Question 19 below		
19	Were where you or member referred, treated?	(Name of health facility)	
20	Which health facility do you or member prefer for treatment?	(Name of health facility)	
21	Why do you or member prefer the health facility?	(Give reasons)	
22	Do you or any member of your household suffer from any one of the following chronic disease(s)?	BP Diabetes HIV and AIDS Asthma Arthritis Mental illness Heart disease Skin disease Other (Specify)	1 2 3 4 5 6 7 8 9
23	How do you or member manage your chronic disease(s)?	(Describe management of chronic disease)	
24	If you go to a government healthcare facility do you or member pay	Yes No	1 2
25	Are you able to get your (usual) medication	Yes No	1 2
26	If you go to a council healthcare facility do you or member pay	Yes No	1 2
27	Are you able to get your (usual) medication	Yes No	1 2
28	If Yes, in Question D29 above, how much are able to pay?	(State amount in local currency or USD)	
29	What medical aid are you or member on?	(State medical aid society)	
30	If on medical aid, how much do you pay as a monthly subscription?	(State amount in local currency)	

31	Do you think it is an advantage to be on medical aid?	Yes No	1 2
32	Explain your response in D36 above		

This is the end of my interview. Thank You

Annexure D

Key Informant Question Guide

Key Informants and Questions

Key Informants

1. Ministry of Health and Child Care (MoHCC) – Directors
2. City of Mutare Health Department – Director
3. Doctors in Public Sector
4. Doctors in Private Sector
5. Nurses in Public Sector
6. Nurses in Private Sector
7. Other Health Cadres in Public Sector – Pharmacists; Laboratory Technologists, Clinical Social Workers; *etc.*
8. Other Health Cadres in Private Sector – Pharmacists; Laboratory Technologists, Clinical Social Workers; *etc.*
9. City of Mutare Health Committee Members
10. Mayor, City of Mutare
11. Minister of State (MOS)
12. Provincial Development Coordinator (PDC)
13. District Development Coordinator (DDC)
14. Residents of the City of Mutare:
    1. Men
    2. Women
    3. Boys
    4. Girls
    5. Youths
15. Non-Governmental Organizations in the Health Sector operating in the District
16. Other Healthcare Service Providers (Insurance Companies; Private Companies, *etc.*)

Key Informant Questions Key Informant_____

1. What are some of the challenges experienced by households and individuals in accessing primary healthcare in Dangamvura, Gimboki, Chikanga and Sakubva Townships?

   _____

   _____

   _____

_____

_____

_____

2. How can some of the challenges be mitigated? _____

_____

_____

_____

_____

3. What are the differences in the delivery of healthcare between public and private healthcare facilities?

Table 1 **Differences in the Delivery of Healthcare between Public and Private Sector Facilities**

Theme	Public	Private

4. Why do these differences exist? _____

_____

_____

_____

5. What are some of the common diseases reported in health facilities in Dangamvura, Gimboki Chikanga and Sakubva Townships?_____

_____

_____

6. Which diseases or conditions are difficult to treat or manage in the 4 townships? _____

_____

7. Why are the diseases or conditions difficult to treat or manage?

_____

_____

8. What are some of the common diseases reported in the community?

_____

_____

_____

_____

9. Which are the common diseases that are passed from one person to another (communicable diseases) in this community?

_____

_____

_____

10. Which are some of the reported diseases that are in this community which are not passed from person to person? (non-communicable diseases)

_____

_____

11. In which places are communicable diseases common in the District?

_____

_____

_____

12. Why are the diseases common in these places?

_____

_____

_____

13. How many primary health care facilities are in this community?

_____

_____

_____

14. What has the local authority done to improve healthcare in the different residential areas?

_____

_____

15. What work has been done so far?_____

_____

_____

16. What is your comment on availability of piped water in the 4 residential areas?

_____

_____

17. (a) How many healthcare facilities are owned by Mutare Municipality in…?

    1. Dangamvura Township _____
    2. Gimboki Township _____
    3. Chikanga Township _____
    4. Sakubva Township _____

17. (b) What services do these facilities offer? _____

_____

_____

18. (a) How many healthcare facilities are privately owned in …?

    2. Dangamvura Township _____
    3. Gimboki Township _____
    4. Chikanga Township _____
    5. Sakubva Township _____

18. (b) What services do these facilities offer? _____

_____

_____

19. (a) How many healthcare facilities are run by non-governmental organizations (NGOs) in…?

    1. Dangamvura Township _____
    2. Gimboki Township _____
    3. Chikanga Township _____
    4. Sakubva Township _____

19. (b) What services do these facilities offer? _____

_____

_____

1. (a) How many healthcare facilities have computers in…?

    1. Dangamvura Township _____
    2. Gimboki Township _____
    3. Chikanga Township _____
    4. Sakubva Township _____

20.(b) What services do these facilities offer? _____

_____

_____

1. For healthcare facilities with computers, what do they use the computers for? _____

_____

_____

1. What is the medical aid penetration in the District? _____

_____

_____

This is the end of my interview. Thank You

Annexure E

Focus Group Discussion Question Guide

Groups and Questions

A. Groups

1. Doctors in Public Sector (If possible)
2. Doctors in Private Sector (If possible)
3. Nurses in Public Sector
4. Nurses in Private Sector
5. Other Health Cadres in Public and Private Sectors – Pharmacists; Laboratory Technologists, Clinical Social Workers; *etc.*
6. City of Mutare Health Committee
7. Residents of the City of Mutare:
   7.1 Girls;
   7.2 Women;
   7.3 Boys;
   7.4 Men;
   7.5 Youths
8. Other Healthcare Service Providers (Insurance Companies; Private Companies, *etc.*)

Focus Group Questions Group _____

1. What are some of the challenges experienced by local communities in accessing healthcare in the District? _____

   _____

   _____

   _____

2. Could you suggest possible solutions to overcome some of the challenges?

   _____

   _____

   _____

3. What are the differences in the delivery of primary healthcare between public and private healthcare facilities?

Table 1 **Differences in the Delivery of Healthcare between Public and Private Healthcare facilities**

Theme	Public	Private

4. Why do these differences exist? _____

_____

_____

_____

5. What type of services do you expect when you visit a healthcare facility in your residential area or suburb? _____

_____

_____

_____

6. How do you meet your unmet primary healthcare needs? _____

_____

_____

1. How have you been able to deal with medical aid non-payment? **(For doctors only)**

_____

_____

_____

_____

This is the end of my interview. Thank You

Annexure F

A typical low income family that resides in the community of Sakubva.

A child showing signs of ill health.

Anyway Katanha (enumerator), asking a community member a range of questions from the Ubuntu Clinic questionnaire.

Data capturing and user registration for digital identity health record on FlexID.

The feet of a typical boy in the community of Dangamvura. Disease like bilharzia are mostly contracted through bare feet.

Open puddles of water and exposed waste, that may lead to spread of diseases like diarrhea and malaria.

Samuel Marinda (enumerator), asking a community member a range of questions from the Ubuntu Clinic questionnaire.

An informal trader, selling fruits, veggies and kitchen utensils by the street corner.

Blandina Muzunze (enumerator), asking a community member a range of questions from the Ubuntu Clinic questionnaire.

Dr. Blessing Magocha (enumerator), asking a community member a range of questions from the Ubuntu Clinic questionnaire.

The community of Sakubva

A typical suburb in Sakubva

Munyaradzi Chakonda supervising data collection in Chikanga

Munyaradzi Chakonda and Dr. Micah Katuruza supervising data collection in Dora

Dr. Blessing Magocha (enumerator) asking questions from the Ubuntu Clinic questionnaire in a member of the Dora community.

A typical homestead in Dora


John 13 vs 34.
ZUPCO
ABZ 4891