HEALTH BEHAVIOR STUDY

Gauging feasible ways to enable pro-health behaviors

AMALIMA LOKO STUDY REPORT

July 15, 2022

This study report was made possible by the support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of CNFA and do not necessarily reflect the views of USAID or the United States Government.

This publication was produced by The Manoff Group, IMC, and CNFA under the USAID-funded Amalima Loko activity.

Amalima Loko Agreement No. 72DFFP20CA00008

Period of Study:

July– December 2021

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ACRONYMS AND ABBREVIATIONS

ARI	acute respiratory infection
ASRH	adolescent sexual and reproductive health
BHA	Bureau for Humanitarian Assistance
CAG	community action group
CNFA	Cultivating New Frontiers in Agriculture
COVID-19	Coronavirus disease 2019
CU5	children under 5
DEHO	District Environment Health Officer
DMO	District Medical Officer
EHT	Environmental Health Technician
FGD	focus group discussion
GMP	growth monitoring and promotion
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IGA	income generation activity
IMC	International Medical Corps
IPTp	intermittent presumptive treatment prophylaxis
KII	key informant interview
LLIN	long-lasting insecticide treated net
mCPR	Modern Contraceptive Prevalence Rate
MCH	maternal and child health
MICS	Multiple Cluster Indicator Study
MoHCC	Ministry of Health and Child Care
MRCZ	Medical Research Council of Zimbabwe
NGO	non-governmental organization
OCHA	Office for the Coordination of Humanitarian Affairs
ORAP	Organization of Rural Associations for Progress
PPE	personal protective equipment
PMTCT	prevention of mother-to-child transmission
SDG	Sustainable Development Goals
SIP	Selection of Improved Practices
SRH	sexual and reproductive health
STI	sexually transmitted infection
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
VHW	village health worker
VS&L	village savings and loan
WASH	water, sanitation and hygiene
WHO	World Health Organization
WRA	women of reproductive age
ZDHS	Zimbabwe Demographic Health Survey
ZIMPHIA	Zimbabwe Population based HIV Impact assessment
ZIMVAC	Zimbabwe Vulnerability Assessment Committee

EXECUTIVE SUMMARY

The Amalima Loko program is a five-year USAID/ Bureau for Humanitarian Assistance (BHA)-funded Resilience Food Security Activity (RFSA) designed to improve food and nutrition security in Zimbabwe through increased food access and sustainable watershed management. The program is implemented in Matabeleland North by a consortium led by CNFA and comprised of the Organisation of Rural Associations for Progress, Dabane Water Workshops, The Manoff Group, International Medical Corps, and Mercy Corps.

Introduction

Amalima Loko undertook a mixed methods Health Behavior Research study to refine the project's Theory of Change related to health, fill information gaps, and guide effective implementation. This study consisted of a health service mapping and a community enquiry component. The mapping sought to detail services available in the program area districts and to understand health issues from the perspective of health workers and other key informants. The community enquiry explored household dynamics and practices around curative and preventive service care-seeking, and home care practices, including hygiene, among women, men, and adolescent girls. It specifically aimed to identify what heath behaviors people are willing to do in their current context and the factors that prevent and support change at the structural, social, and internal levels.

STUDY OBJECTIVES

1	To describe the concerns and experiences of the communities in Matabeleland North regarding their critical health problems (particularly those of women of reproductive age, adolescents, and young children).
2	To develop a landscape of concerns and experiences related to care-seeking for illness, maternity and newborn services, and preventive health services among households across Matabeleland North.
3	To identify community and family home health care practices, particularly traditional cultural, religious, and social influences on community and family health practices, both on their uptake and their manner of practice to build upon these foundations.
4	To identify feasible ways to improve appropriate health-seeking and home care for prevention and treatment of important public health issues: household hygiene including handwashing; safe drinking water; and control of human and animal feces.
5	To validate initial ideas about feasible behaviors and deepen the understanding about how to address critical barriers and use support motivators to influence health and hygiene behaviors.

Methodology

USAID BHA Zimbabwe and the Provincial Medical Director of the Ministry of Health and Child Care (MoHCC) for Matabeleland North endorsed the study. The Medical Research Council of Zimbabwe (MRCZ) approved the study. The two co-principal investigators, the Health and Nutrition Lead and the Social and Behavior Change (SBC) Lead, led data collection in July and October to December 2021 in Binga, Hwange, Lupane, and Nkayi districts. The tools were developed, pretested, and revised in local languages of Tonga, Nambyia, and Ndebele. For the health service mapping, the team interviewed 63 key informants and assessed 10 health facilities. They interviewed nurses, Environmental Health Technicians, and Village Health Workers reporting at the facilities. The team also interviewed district level key

representatives from the MoHCC: District Medical Officers, District Nursing Officers, District Nutritionists, and Community Sisters. For the community enquiry component, the team conducted 82 in-depth interviews (IDIs), 18 focus group discussions (FGDs), and 18 key informant interviews (KIIs) in the three districts. The sample for the IDIs was drawn purposively: caregivers of children under five years with and without husbands or partners living at home (45 interviews), fathers living at home (15 interviews), and adolescent girls (14 interviews). In other communities, to validate findings, the team facilitated FGDs and conducted KIIs with nurses, village health workers,F and community leaders. The data were transcribed and translated into English, cleaned, coded, and analyzed using Dedoose, a web-based qualitative data analysis software. Excel was used for analysis of the quantitative data.

Key Findings

Table 1 summarizes the key study findings by research question. Findings from adolescent girls are reported at the end of the table for research questions.

Table 1: Key findings by research question

Research question	Key findings
1. What are the critical health issues and which healthcare services, and programs are available in the research districts, especially related to maternal and child health (MCH) problems and support for WASH improvements?	**Children Under 5**: Malnutrition (including anemia), diarrhea, acute respiratory infections, HIV, and ringworm/skin diseases; malaria in Binga and Hwange. **Women of Reproductive Age**: Anemia, late maternity booking leading to late discovery of HIV and STI's, pelvic inflammatory disease and cervical cancer. In Binga and Hwange, and parts of Lupane, malaria was also mentioned. **Healthcare services and programs available:** Malaria testing by Village Health Workers (VHWs) (Binga, Hwange), dependent upon supply of kits; HIV and pregnancy testing; Antenatal care services (ANC) with iron folic acid supplements; delivery; postnatal care services; Growth monitoring and promotion (GMP); Vitamin A supplementation; Immunization, and COVID-testing and vaccination. Caregivers appreciate the available services, including those available at the community level through VHW, and describe a hierarchy of resort for care-seeking and home care, depending upon the type of illness.
2. What are the perceptions and concerns about changes that have happened as a result of COVID-19 in health service availability, care-seeking and self-care practices (men, caregivers of children, adolescents) and how do people see their situation post-COVID-19?	**Health services: changes due to COVID-19** • Facility-based service providers discouraged community members from seeking care as they feared COVID-19 (some advised on home remedies) • Reduced community services such as growth monitoring by VHW (lockdowns, fears of contracting COVID-19) but vaccinations continued; communities relied more on the VHWs for health services and medication for minor ailments with COVID-19 onset • Increased burden of work e.g., vaccination, (including EHTs) supervising funerals **Home care practices related to COVID-19:** Home remedies such as boiling tree leaves (e.g., lemons, guavas, tamarind, gumtree, '*umsuzwane*' *(lemon bush),* and drinking the water, steaming; holy water and holy tea (Zion Christian Church); indigenous food; handwashing regularly, especially after using the toilet.

Research question	Key findings
	Generally, caregivers and family members feel that health has not changed much due to COVID-19, except that the loss of livelihood options exacerbated challenges with food access.
3. How do structural, traditional, cultural, and individual perceptions influence different types of care-seeking, home, and self-care?	Families use a hierarchy of resort to care depending upon the health issue. Most seek health services as most people have positive experiences with health services and care-seeking is the expectation, although distance to services and the costs, especially for transportation or referrals, are barriers. A review of child health cards showed that care-seeking from health services is high and consistent for most children. For some health issues, families use prayer, while others are cared for at home with herbal remedies such as colds and stomachaches. An issue which does not get timely medical treatment due to cultural norms is sunken fontanelle (a sign of dehydration).
4. What are the household dynamics and intra-family decision making that influences different types of care-seeking and health practices: women, couples; and adolescents?	Health is seen as the woman's domain. Although many mothers say they consult with heads of households, whether it is the husband or other elders, and may request financial support, most decide themselves on health care-seeking and home practices. Mothers and fathers care deeply about the health of their children; there is less attention to women's own health. Some mothers note that family expectations for their heavy labor and household food allocation does not change during pregnancy and breastfeeding and want family care during the first 1,000 days . Some say that elder women make it difficult to adopt recommendations from health workers such as exclusive breastfeeding.
5. What care-seeking practices, home, or self-care practices (or shifts in practice) do individuals recommend or are willing to try? Why or why not?	Many mothers are willing to construct and use latrines if they were to get cement and use long lasting insecticide treated nets (LLIN) if they were to get nets at no cost. Most are also willing to try treating drinking water if they could get purification tablets. Some are willing to try handwashing again, which has relaxed after the pandemic, although they lack soap. Mothers do not see reheating food for children, reducing smoke in the cooking area, or separating children from animals as priorities because they already take some measures. Fathers are willing to dialogue more with their wives and adolescent children on topics such as future hopes and dreams for family peace and harmony.
6. What are the suggestions from households and key community members for how to address critical barriers to care-seeking for illness and preventive measures, improved hygiene, and critical household health behaviors?	To resolve distance barriers, participants suggest more community services through VHW including family planning where these were unavailable such as Binga. To reduce cost barriers to use of health promoting products, such as latrines and LLINs, participants asked for provision of materials or collective action schemes for women to work together to make or purchase materials. To foster more family help for women, mothers want community leaders to create a more equitable environment by selecting women leaders of committees and creating opportunities for women to speak up and have leaders listen. Some mothers also want leaders to influence men to increase care for pregnant and breastfeeding mothers.
7. Findings specific to adolescent girls 15-19 years of age	Q1: Health issues of girls include poor menstrual hygiene management, early pregnancy, HIV and sexually transmitted infections (STIs), exacerbated by poor knowledge and stigma around sexual and reproductive health (SRH) issues, and limited services.

Research question	Key findings
	Q2: Due to COVID-19, fewer girls are in school, with a corresponding increase in early pregnancy. Q3: Health workers say that pregnant adolescents delay maternity booking due to stigma and shame around early pregnancy in these communities. Girls say that they want to delay pregnancy and pursue education or work opportunities. Q4: Adolescents living with their parent(s) say they have good care from mothers for all types of illness. However, even these girls are expected to 'take care' of themselves in terms of pregnancy prevention. Q5: Girls are not willing to use contraceptives other than condoms before marriage due to deep fears. Q6**:** Girls ask for greater opportunities for education and income generating activities, more supportive environment to make decisions, and scaled up adolescent sexual and reproductive health services. Girls who have participated in support groups with mentors spoke highly of the mentors to resolve issues or access services.

Recommendations:

1. To **increase timely care-seeking**, Amalima Loko should strengthen health services at the community level, forge linkages with faith leaders, and reinforce home care practices, in recognition of the hierarchy of resort to care.

With a focus on strengthening the first line of care-seeking—the VHW—strengthen capacity, link with community structures, and advocate with the health system to address supply challenges. Adolescent girls, however, need this along with support groups and broader normative change to use services; additional education through groups and phones may be tried. In addition, build linkages with churches and others in the faith community to ensure important referrals. Finally, recognize the positive role of home care practices with families to prevent and treat common health issues.

2. To **improve hygiene behaviors**, Amalima Loko should explore how to make needed product options affordable for households.

Finance schemes to make basic preventive health products more affordable: cement for latrines, water filtration and purification tablets, handwashing stations and soap, and sanitary materials for women and girls should be developed with linkages to VS&L groups and social entrepreneurs. Then test affordable products with households through Selection of Improved Practices (SIPs) to explore how families would use and maintain use.

3. To support women and girls to take health actions, Amalima Loko should foster and support **intragenerational family dialogue** around health, goals, and aspirations.

Promote family dialogue to support multiple health outcomes. Use flexible models for family dialogue based on local social contexts as families in the district vary and often include elders and extended family members. Elder women need to be engaged separately through traditional leaders or other influencers in respect of their hierarchy in the family and experience.

4. To enhance community leadership for health, Amalima Loko should **extend community action and accountability activities to health.**

As Amalima Loko works with local leaders to reinvigorate Community Health Clubs, and form Care Groups and other platforms, several recommendations follow to make these responsive to families' requests. Ensure that community structures have solid footing with existing community resources and community members writ-large and have women's leadership. Emphasize and recognize women's collective action and mutual support throughout community activities as women offered multiple ideas about how to support each other day-to-day in health activities and during times of need. Ensure transparency and accountability in community leadership on health through scorecards, linked closely to the overall community scorecards Amalima Loko plans to develop.

1. Background and Introduction

The Amalima Loko program is a five-year USAID/ Bureau for Humanitarian Assistance (BHA)-funded Resilience Food Security Activity (RFSA) designed to improve food and nutrition security in Zimbabwe through increased food access and sustainable watershed management. The program is implemented in Matabeleland North by a consortium led by CNFA and comprised of the Organisation of Rural Associations for Progress, Dabane Water Workshops, The Manoff Group, International Medical Corps, and Mercy Corps.

Introduction

Amalima Loko undertook a mixed methods Health Behavior Research study to refine the project's Theory of Change related to health, fill information gaps, and guide effective implementation. This study consisted of a health service mapping and a community enquiry component. The mapping sought to detail services available in the districts and to understand health issues from the perspective of health workers and other key informants. The community enquiry explored household dynamics and practices around curative and preventive service care-seeking, and home care practices, including hygiene, among women, men, and adolescent girls. It specifically aimed to identify what people are willing to do in their current context and the factors that prevent and support change at the structural, social, and internal levels.

Specific objectives of the health behaviors research:

1. To describe the concerns and experiences of the communities in Matabeleland North regarding their critical health problems (particularly those of women of reproductive age, adolescents, and young children).
2. To develop a landscape of concerns and experiences related to care-seeking for illness, maternity and newborn services, and preventive health services among households across Matabeleland North.
3. To identify community and family home health care practices, particularly traditional cultural, religious, and social influences on community and family health practices, both on their uptake and their manner of practice to build upon these foundations.
4. Through explorations with families, identify feasible ways to improve appropriate health-seeking and home care to prevent and treat important public health issues. This will include household /homestead hygiene, including handwashing; safe drinking water; and control of human and animal feces.
5. To validate initial ideas about feasible behaviors gained from individual interviews with additional community members and change agents to deepen the understanding of addressing critical barriers and using support motivators to influence health and hygiene behaviors.

1.1 Health System in Zimbabwe

In Zimbabwe, the health situation has progressively deteriorated because of the protracted economic crisis, which decreased the value of funding allocated to the health system. The World Health Organization (WHO) recommends a minimum of 23 doctors per 10,000 people and a minimum of 83 nurses per 10,000 people. In Zimbabwe, the last survey in 2015 revealed 1.6 doctors per 10,000 people

and 7.2 nurses per 10,000 people.[1] There are 214 hospitals for a population of about 15 million. Of these, 120 are government hospitals run by the Ministry of Health and Child Care (MoHCC), 66 are mission hospitals, and the remaining 32 are privately operated. The government hospital system includes six central hospitals, eight provincial hospitals, and 63 district-level hospitals, and 43 rural hospitals.

According to the 2019 Multiple Indicator Cluster Survey (MICS), the maternal mortality ratio was 462 deaths per 100,000 live births (the target is 174).[2] The under-five child mortality rate is 73 deaths per 1000 live births (the target is 43). The neonatal mortality rate in 2019 was 32 deaths per 1000 live births, an increase from 29 deaths per 1000 live births in 2014.[3] In 2022, the infant mortality rate was 35 deaths per 1000 live births, a 2.6 percent decline from 2021. Non-communicable diseases caused 33 percent of deaths in 2016 while communicable diseases, maternal, perinatal, and nutritional conditions caused 55 percent.

Health workers cite overload because of staff shortages and the lack of consistency in the supply of both the quantity and type of necessary pharmaceuticals. Patient delays in reaching health facilities contribute to health problems including the tuberculosis burden and maternal deaths. In 2019, 71.4 percent of pregnant women received at least four ANC visits but only 29 percent of women made early pregnancy bookings (<16 weeks). Delays may come from long distances to health facilities and unaffordable transport. These issues and the lack of access to medical drugs may lead patients to seek assistance from traditional healers.[4]

Related to reproductive health, experience shows the importance of engaging partners and family members. In rural areas, women rarely decide to use contraception without consulting their husbands, and sometimes resort to covert contraceptive use if they do not agree. Religious beliefs and the extended family, specifically the mother-in-law, is also an important influence on reproductive health care-seeking. Adolescents face additional barriers due to sociocultural norms and discrimination by health care providers .[5]

1.2 Context and Health Situation in Matabeleland North

Matabeleland North is a province in western Zimbabwe. The province has two national boundaries--Zambia and Botswana to the north and west respectively. This proximity affects health due to the extremely high levels of migration among men and women. Only 29 percent of women had *never* migrated away from their community as of 2019.[6] Matabeleland North is one of the poorest provinces in Zimbabwe. Most districts in the province have a poverty prevalence of more than 60 percent, but project districts are in a worse situation.[7] In Nkayi, for example, 96 percent of households live in poverty. In the province, poverty is associated with limited and irregular rainfall as well as decreased soil quality, which in turn impedes agricultural production. In some districts, such as Binga, poor infrastructure fails to link rural areas to the larger urban spaces.

Matabeleland North has 12 hospitals run by the government, missions, and a few private entities.[8] There is a paucity of data in the utilization of these facilities. Only 39 percent of the population has access to a

[1] Kuguoyo 2017
[2] Ibid
[3] Zimstat and UNICEF 2019
[4] Mangundu et al. 2020
[5] UNFPA 2019
[6] Zimstat and UNICEF 2019
[7] UNICEF, World Bank, and Zimstat 2015
[8] ZIMVAC 2021a

health facility within a 5-kilometre radius overall, with 50 percent in Nkayi, 43 percent in Hwange, 40 percent in Lupane, and 33 percent in Binga.[9] The major causes of morbidity mirror those in the country as a whole: HIV, tuberculosis, and malaria, lower respiratory infections, diarrheal diseases, and malnutrition (Table 2).

Table 2 Health Data, Matabeleland North and National

Health Issue	Matabeleland North data	National data
HIV	• 16.2% of women and 10.7% of men (ZIMPHA 2020)	• 15.3% of women and 10.2% of men • Mother to child transmission: 8.17%. • Of people living with HIV, 86.8% are aware of their status, 97% of these are on antiretroviral therapy, and 90.3% of these are virally suppressed. (ZIMPHA 2020)
MALARIA	• Fever in CU5 in past 2 weeks: 28% • Long-lasting insecticide treated nets (LLIN) use in the past night: 20.3% • Intermittent presumptive treatment prophylaxis (IPTp) among pregnant women: 34% (ZIMSTAT and UNICEF 2019)	• Fever in children under 5 (CU5) in past 2 weeks: 35% • LLIN use in the past night: 12.3% • IPTp among pregnant women: 44.3% (ZIMSTAT and UNICEF 2019)
TUBERCULOSIS (TB)	• TB incidence: 199 per 100,000 population in 2019 (down by 18% in 2015)	• TB incidence: 199 per 100,000 population (down by 18% in 2015)
ACUTE RESPIRATORY INFECTION (ARI)	• Vaccinated by 12 months: 93.3% • ARI symptom in CU5 past 2 weeks: 0.5% (ZIMSTAT and UNICEF 2019; ZNSA and ICF 2016)	• Vaccinated by 12 months: 80% • ARI symptom in CU5 past 2 weeks: 4% (ZIMSTAT and UNICEF 2019; ZNSA and ICF 2016).
DIARRHEAL DISEASES	• Diarrhea in CU5 5 in past 2 weeks: 18% **Drinking water:** • Unimproved water/ surface water: 19.7 / 7.8% (Binga district 43% use unimproved sources) **Sanitation and hygiene:** • Open defecation: 60% (Binga district 78.6%) • Proper disposal of child feces: 26.1% • Handwashing facility: 98% • Soap available: 61.4% (ZIMSTAT and UNICEF 2019; ZIMVAC 2021)	• Diarrhea in CU5 5 in past 2 weeks: 35% **Drinking water:** • Unimproved water/ surface water: 16.2 / 6.7% **Sanitation and hygiene:** • Open defecation: 21.7%. • Proper disposal of child feces: 64.4% • Handwashing facility: 96.3% • Soap available: 71.1% (ZIMSTAT and UNICEF 2019)

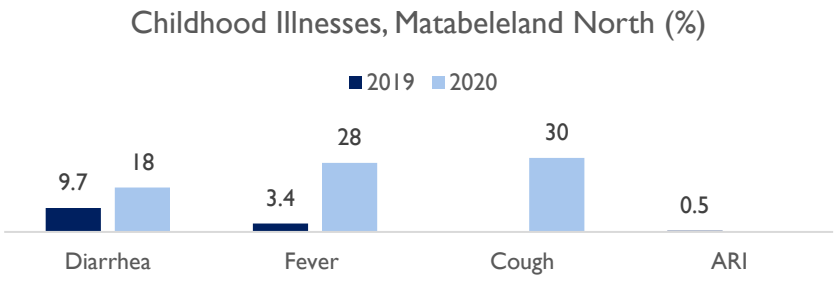
[9] ZIMVAC 2021b

Health Issue	Matabeleland North data	National data
MALNUTRITION	**Maternal:** • Underweight: 11% • Minimum dietary diversity: 28% • IFA: 83%; IFA for 90 days: 40% • Low birthweight: 12.7% **Children**: • Early initiation of breastfeeding: 76% • Exclusive breastfeeding: 63.1% (median 3.4 mo.). • Minimum Acceptable Diet: 4.5% • Minimum Dietary Diversity: 8.6% • Minimum Meal Frequency: 51% (Food and Nutrition Council 2018; ZNSA and ICF 2016; ZIMSTAT and UNICEF 2019)	**Maternal:** • Underweight: 6% • Minimum dietary diversity: 44% • IFA: 83.6%; IFA for 90 days: 39.7% • Low birthweight: 8.7% **Children**: • Early initiation of breastfeeding: 59% • Exclusive breastfeeding: 41.9% (median 2.1 mo.). • Minimum Acceptable Diet: 10.7% • Minimum Dietary Diversity: 16.7% • Minimum Meal Frequency: 68.2% (Food and Nutrition Council 2018; ZNSA, ICF 2016; ZIMSTAT, UNICEF 2019)

A concern in Matabeleland North is early childbearing. Data suggest that about one in three girls have a child before the age of 18 years. Among adolescent girls 15-19 years, 26 percent had begun childbearing and 30 percent of women 20-24 had a live birth before the age 18.[10] Early childbearing is related to early marriage: in 2019 in Matabeleland, 17 percent of girls 15-19 years were married and, of these, 14 percent were in a polygamous union.[11] The modern Contraceptive Prevalence Rate (mCPR) is 66 percent in Matabeleland North and nationally.[12]

Recent data form ZimVAC 2020 suggest that the health situation for women and children in Matabeleland North has deteriorated due to concurrent shocks of the COVID-19 pandemic and the economic crisis.[13] The shocks have disrupted food access and healthcare provision, supply chains, and movement of people to access healthcare. Outpatient consultations declined by 39 percent and maternal health service use declined by 45 percent between April and July 2020, compared to the same period in 2019.[14] This survey also found a10-fold increase in illnesses in 2020 compared to the MICS 2019 survey. Even with a potential seasonal variation between the studies, these data suggest a significant change in the context that needs to be understood to refine program plans.

Figure 1 Childhood Illnesses, Matabeleland North



[10] ZNSA and ICF 2016
[11] Zimstat and UNICEF 2019
[12] UNFPA 2021
[13] ZimVAC 2020
[14] Ibid

2. Methodology

The research protocol was approved by USAID BHA Zimbabwe and Medical Research Council of Zimbabwe (MRCZ) (see Annex 2). Amalima Loko also received endorsement from the Provincial Medical Director at MoHCC for Matabeleland North to conduct the research. Two co-principal investigators, the Health and Nutrition Lead and the Social and Behavior Change (SBC) Lead, managed the study. The study consisted of two components: 1) Health Services Mapping to understand the current state of service provision and outreach, and perceptions of health care workers regarding the local health situation, and 2) a Community Enquiry component to understand current health seeking behaviour, home health and hygiene care, and the factors that influence these practices. The components were implemented sequentially. Health Services Mapping was done in July, and the Community Enquiry component from October to December 2021.

2.1 Sampling

Health Service Mapping

The research team purposively sampled and assessed 10 health facilities out of 31 in four districts: Nkayi, Lupane, Binga, and Hwange, to include facilities near and far from the district center. The team also conducted a total of 63 KIIs. From the selected facilities, 21 key informants were selected using purposive sampling: the team invited MoHCC personnel who were present and available for an interview at the health facility; these include nurses and Environmental Health Technicians (EHTs). The team then randomly sampled 32 VHWs attached to the health facilities. The team also sampled 10 district level key informants including representatives from the MoHCC: District Medical Officers, District Nursing Officers, District Nutritionists, and Community Sister based at the district level.

Community Enquiry

The team conducted the Community Enquiry in three project districts: Binga, Lupane, and Hwange. Given the homogeneity between some districts, not all five project districts were included. The research team sampled from five wards across the three districts: two wards each in Binga and Hwange, to ensure representation of economic and ethnic differences across the districts and include Nambya and Ndebele villages or communities, and one ward from Lupane where communities are predominantly Ndebele and most are subsistence farmers.

From one health center in each selected ward, the team purposively selected three communities: at least one near the health center and one distant. From each health center, the research team conducted interviews with the nurse in-charge, EHTs, VHWs, and community leaders. In each community, the research team interviewed purposively selected caregivers of children under 5 years, including caregivers with a husband or partner living at home and those whose husband was absent due to migration or another reason.

The team sampled more caregivers in Binga because less is known about that district, but the analysis took this into account to reflect a balanced picture. Where husbands or partners are living at home, the research team also interviewed the husband. The team also purposively sampled and interviewed adolescent girls ages 15-19 residing in the community. To validate interview data, the team conducted FGDs with purposively selected groups of 6-8 women, men, and adolescent girls in different communities. Table 3 details the actual and planned samples by type. The team conducted a lower number of IDIs than expected due to challenges from COVID-19 and other logistics, especially in Binga and Hwange.

Table 3 Community Enquiry Sampling

District	KIIs conducted (planned)	IDIs conducted (planned)			FGDs conducted (planned)
		Caregivers	Husband/ Partner	Adolescent girls	
Binga (2 wards)	**7** (4-6)	**20** (24)	**5** (8)	**6** (6)	**7** (6)
Hwange (2 wards)	**7** (4-6)	**14** (24)	**5** (8)	**5** (6)	**6** (5)
Lupane (1 ward)	**4** (4-6)	**11** (12)	**4** (4)	**4** (4)	**5** (4)
Sub-totals	**18** (12-18)	**45** (60)	**14** (20)	**15** (16)	**18** (15)

2.2 Development of data collection tools

The research team, led by the co-principal investigators, developed the interview and FGD guides with technical inputs from the wider research team. All tools were submitted with the protocol for IRB approval from the Medical Research Council of Zimbabwe (Approval number: MRCZ/A/2784).

Research questions

Derived from the research objectives, six research themes guided the development of the research questions for the two study components.

1. What are the critical health issues and which healthcare services and programs are available in the research districts, especially related to Maternal and Child Health problems and support for WASH improvements?
2. What are the perceptions and concerns about changes that have happened as a result of COVID-19 in health service availability, care-seeking and self-care practices (men, caregivers of children, adolescents) and how do people see their situation post-COVID-19?
3. What are the household dynamics and intra-family decision making that influences different types of care-seeking and health practices: women, couples; and adolescents?
4. How do structural, traditional, cultural, and individual perceptions influence different types of care-seeking, home, and self-care?
5. What care-seeking practices, home, or self-care practices (or shifts in practice) do individuals recommend or are willing to try? Why or why not?
6. What are the suggestions from households and key community members for how to address critical barriers to care-seeking for illness and preventive measures, improved hygiene, and critical household health behaviors?

2.3 Data collection and analysis

The Health and Nutrition Lead, SBC Lead, and the Monitoring, Evaluation, and Learning (MEAL) Coordinator trained the research team 12-13 July 2021 in Bulawayo to conduct the mapping in October 2021 to conduct the community enquiry. A team of 12 researchers consisting of Amalima Loko staff and contracted research assistants conducted the service mapping in July 2021. For the community enquiry,

a team of 12 researchers collected data from October to December 2021. Interviews were done in Binga, Hwange, Lupane, and Nkayi districts to ensure representation of economic and ethnic differences across the districts.
The tools were developed, pretested, and revised to streamline and standardize in local languages of Tonga, Nambiya, and Ndebele. The research team collected data in accordance with the research protocol and outlines ethics, confidentiality, and strict adherence to the COVID-19 regulations. To guard against data loss and transcribe the data, the research team recorded interviews and FGD with consent. The transcription and translation for mapping findings were carried out in August-September 2021 and of the community enquiry from November-December 2021 by the Amalima Loko technical staff and the research assistants.

The research team entered and analysed quantitative data from the mapping in Excel. For qualitative data from the Health Service Mapping and the Community Enquiry, the research assistant developed code books, and coded and analyzed data using Dedoose, a web-based software. The research assistant trained the research team in coding and ensured intercoder reliability. This facilitated the systematic and thematic analysis of the data.

2.4 Study limitations

A limitation for the research was that the study used purposive, non-probability sampling techniques which limits the generalizability of the findings. Specific to the mapping, the exclusion of some health facilities from the study might result in missing of valuable information that could be relevant to the study. However, the research purposively selected health facilities close to the district center, and those far from the district center.

An overall key challenge for the research was the lockdown restrictions due to the third wave of the COVID-19 pandemic during the data collection period. This led to postponement of some interviews and a shift to some telephone interviews, delaying the completion of data collection.

3. Findings

The study findings are organized by a summary of the participants and then by the research questions on which the study was based. Findings described under research questions 1 and 2 were derived primarily from the Mapping and Community Enquiry components. Information for research questions 3 through 6 were derived primarily from the Community Enquiry component.

Study demographics

Caregivers: Eighty-seven mothers of children under five years old participated in FGDs and 45 participated in IDIs. As all caregivers who participated in FGDs and interviews are mothers, this term will be used for the remainder of the report.

The characteristics of the mothers interviewed in in-depth interviews follow. A few mothers (three) care for more than one child under 5 but many care for older children and grandchildren. Some of their older children are over 20 years. Nearly all (39) are over 20 and most are married (31). Most mothers live in extended family homes that include their own parents or in-laws. Usually, these mothers are those who are not married because they are separated, never married, or widowed, and those whose

husbands work away from home. The mothers with a husband living at home did not stay with extended family. Nearly all mothers are Christian, including 13 who are Apostolic and two who identify as Pentecostal. Many mothers live in homes where the head of household is the elder woman (mother, mother-in-law, or aunt.) This is the case even if she is married but her husband is out of the home for long periods.

About half of mothers live in homes that earn a living from causal labor such as selling vegetables that they grow, making bricks, and doing part-time jobs. Many mothers say that all adults in the home contribute food or income. Some have a relative with formal employment: three have husbands with jobs locally (teacher, pastor), and some have other relatives who have jobs in town or in South Africa. Most of these mothers continue to earn income through farming and selling goods. More than half of the mothers are part of a community group; one-third belong to a village savings and loan (VS&L) group or are in an income generating group. Six mothers are part of church groups and four are members of a Community Action Group (CAG). Several mothers mentioned other groups such as mat weaving and hairdressing groups.

Fathers: Forty-nine fathers staying at home at the time of the interview joined FGDs and 15 fathers participated in IDIs. Characteristics of the fathers interviewed are as follows. All are over 20 years of age and do a variety of work, primarily farm work during the rainy season and casual labor at other times, such as making bricks or thatching huts near home, in towns or in South Africa. Nearly all identify as Christian. Group participation varies by district; in Hwange all fathers belong to one or two CAGs, including VS&L groups. In other districts, no fathers are in CAGs.

Adolescent girls: Twenty-one adolescent girls, some still in school, joined FGDs (thirteen are between 15 to 17 years and eight are 18 to 19 years) and 14 participated in IDIs. The 14 adolescents interviewed are 17 to 19 years of age, and all adolescents, with the exception of one in Binga, are out of school. They left school because they do not have funds or completed but did not pass. They stay with parents, aunts or grandmothers or siblings. One 17-year-old is newly married and living with her husband. Most earn money through casual labor, and/or selling vegetables through gardening; five work as housemaids, but not all are paid.

Four of the 14 adolescent girls interviewed belong to a group; three are part of a VS&L and one belongs to a church group. Several discussed Sister-to-Sister groups, supported by the National AIDS Council in selected wards in Matabeleland North, which were ending soon or no longer running.

3.1 What are the critical health issues and which healthcare services, and programs are available in the research districts, especially related to Maternal and Child Health problems and support for WASH improvements?

The health service assessment of ten health facilities and findings from key informant interviews describe the range of available services in these communities and health conditions. Mothers provide a wider view of the health issues for women and children, and how they are handled, along with perspectives from fathers. Observations of households show that hygiene is a continuing concern in households.

Health Facility Assessment Findings

Among the 10 health facilities assessed, in the prior month the facilities received a mean of 251 clients as outpatients and admitted a mean of 1.5 clients. Facility personnel providing services are predominantly nurses and nurse aides, with midwives serving only in Nkayi and Lupane. Nurses are primary health service providers and dispensers or pharmacists.

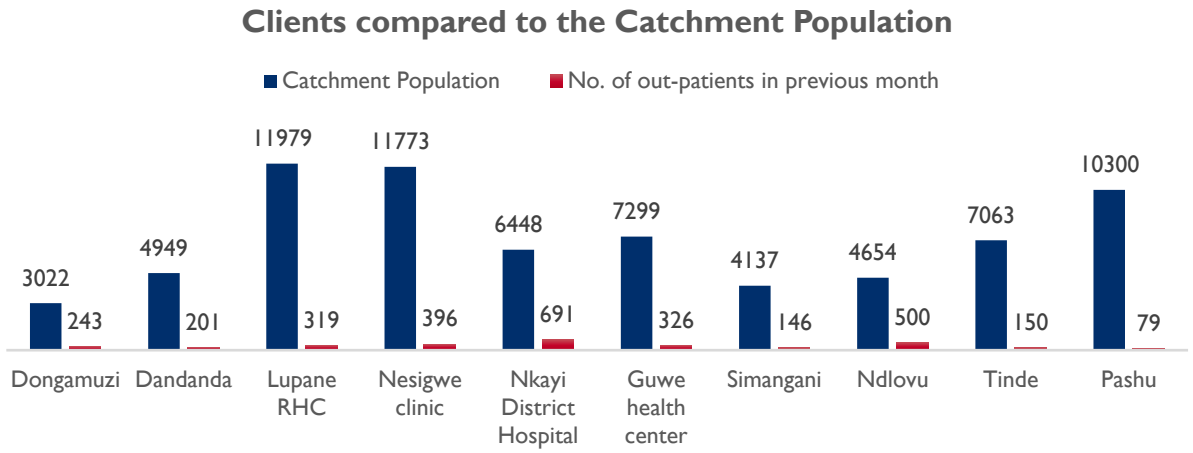


Figure 2 Clients seen as outpatients in the month prior to the assessment

The average population size per facility is 6,433. In the month prior to the assessment, facilities served an average of 305 outpatients.

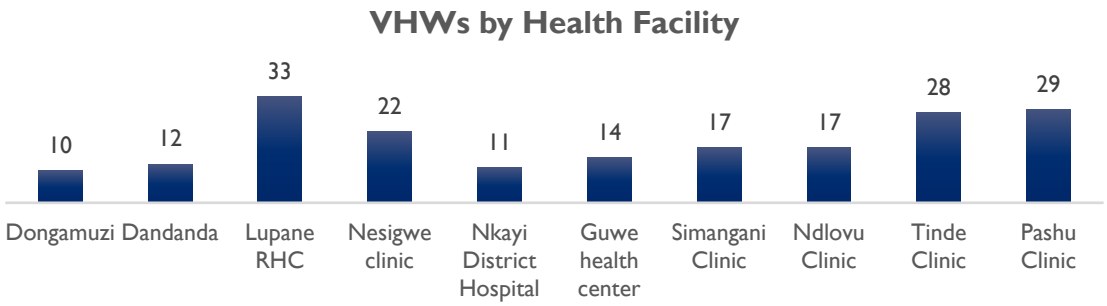


Figure 3 Number of VHWs supervised by health facilities

Nurses also supervise VHWs that champion health activities at village level. A total of 193 VHWs were recorded for the 10 health facilities assessed. The mean number of VHWs per facility is 19, while the VHW-population ratio was 1 VHW per 314 people. None of the facilities have Health Management Information System (HMIS) personnel or Records Assistants, hence the burden of data capture, collation, and reporting to feed into the national HMIS falls to the nurses as well. All facilities have one EHT who serves as a champion in the prevention and occurrence of diseases in facility catchment areas, while working to curb and control the spread of communicable diseases identified in the community through primary investigation of cases and dissemination of health information.

All 10 health facilities provide ANC services, with an average of 56 people receiving services. Nkayi District Hospital recorded a total of 148 visits which was the highest of the health facilities assessed.

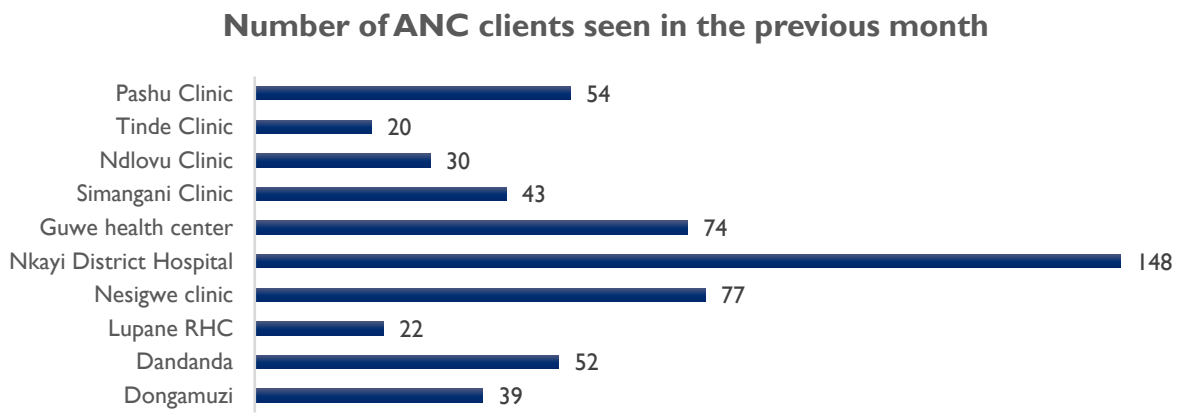


Figure 4 ANC clients seen in the previous month

All health facilities assessed used water from either a borehole or piped water. Nesigwe and Guwe health centers had no flush toilets at the facility while Nkayi district hospital recorded a total of 23 flush toilets.

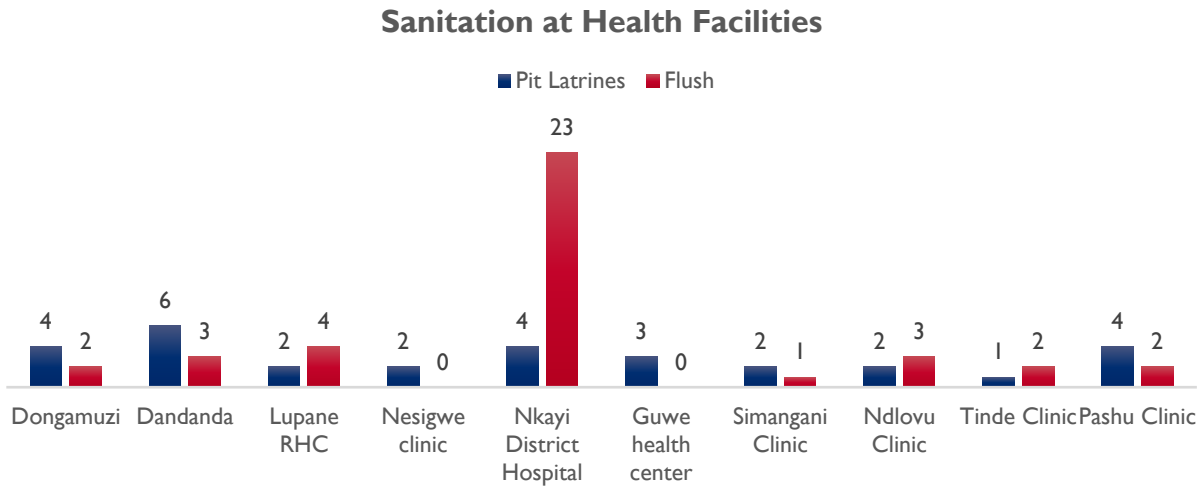


Figure 5 Number and type of latrines by health facility

The facilities have the required basic infrastructure and equipment. However, there are sporadic stock outs of medical consumables, test kits, and drugs. Space is not ideal; the mean number of in-patient beds is 1.5 beds, and a mean of 1.1 delivery beds and 1.1 maternity beds.

Table 4 Health services available

Treatment Services	Testing and Screening	Preventive Services
• Management of malaria • Integrated Management of Childhood Illness	• HIV antibody testing and counselling • Cervical cancer screening • COVID-19 testing	• HIV counselling • Family planning and contraception • Immunization and vaccination

Treatment Services	Testing and Screening	Preventive Services
• Treatment and care of opportunistic infections for people living with HIV • Management of TB/ HIV co-infection • STI diagnosis and treatment • Malnutrition screening and treatment • Injury care • Diagnosis and treatment of other types of illnesses *Note: More complex health issues identified are referred to district hospitals.*	• Malaria testing *Note: More complex tests required are done from district hospitals and results sent back to clinics within a few days.*	• Prevention of Mother to Child Transmission • Pre- and post-natal care • Education related to disease prevention or treatment • Health promotion • Health maintenance counselling • VHW activities • Adolescent sexual and reproductive health

Most nurses indicate a lack of medicines such as HIV medication or equipment such as salter scales and blood pressure machines. Some have equipment that is old or outdated. Nurses say facilities are understaffed. District health staff and nurses add a lack of resources such as vehicles and fuel which reduce health outreaches, and a shortage of ambulances for referrals across all the districts. VHWs, nurses, and EHTs note poor road network in Binga and Lupane. During the rainy season some health facilities are not accessible due to flooded roads.

Almost all key informants identify distance to health facilities as the primary barrier to care-seeking.

> *"When it comes to patients, they walk long distances to access health services since some villages are far from the facility e.g., some walk 17-24km to get to the facility."* EHT, Binga.

> *"Mothers often travel up to 20km to get to a health facility, and as they cannot afford the bus fare, some do not even have a scotch cart and they have to walk to the clinic."* VHW, Binga.

Key informants note that some communities in Lupane and Nkayi do not accept mass drug administration or child immunization due to religious beliefs.

> *"White garment sects do not allow their religious members to access mass drug. The white garment sects don't accept any health services, and it's the children that end up suffering as their health is affected, it is a sad situation."* EHT, Lupane

VHWs highlight not enough health facilities overall which leads to home deliveries, and a lack of family planning or mental health services. District health staff confirm this. VHWs and EHTs say that while there is positive response to the community health club approach, there are few Community Health Clubs due to a lack of resources.

Views on Maternal Health

Key Informants' Perspectives

District health staff, nurses, VHWs, and EHTs indicate that cervical cancer, pelvic inflammatory diseases, anemia, malaria, and STIs are the key health issues affecting women of reproductive age (WRA). Specific observations include:

Malaria: To address the malaria problem, VHWs test for malaria at the community level, but at times lack test kits or treatment. EHTs in Binga and Hwange highlight a lack of mosquito nets.

> *"The clinic reports around 20 malaria cases, some of the cases came from other wards. The western side of the district along Kana and Shangani River are the most affected. Swampy areas along the St Luke's hospital areas are also badly affected by Malaria."* District Environment Health Officer, Lupane

Anemia: Some nurses indicate that anemia is common due to poor nutrition. VHWs indicated that poverty was rife in communities and most homes lacked a diverse diet.

Incomplete HIV care from late maternity booking: Nurses highlight that late maternity booking is common with pregnant women which results in late diagnosis of HIV and STIs. Key informants raise concerns about stress due to a lack of emotional support and economic concerns that limit resources to prepare for childbirth.

Unintended pregnancies: District health staff, Nurses, VHWs and EHTs concur that access to family planning is a major challenge in all districts, especially when women live far from facilities and in Binga district around the Kariangwe hospital catchment areas the mission hospital does not offer family planning services. VHWs say that some women cannot use family planning methods due to the lack of permission from their husbands.

Cervical cancer: Some nurses and EHTs see increasing cases of cervical cancer and say that some women blame the *Jadelle* contraceptive.

Gender-based violence (GBV): In all the districts, VHWs see physical violence escalating due to the COVID-19-related stresses, but say it is not reported.

Women's Perspectives: Current health status and care-seeking

The mothers say that women, like men, have multiple health concerns such as HIV, high blood pressure, and diabetes, bile reflux, and toothaches in the winter. Women recognize that women are more likely to use health services than men. One group explained,

> *"There is no difference in diseases, but women seek health services more than men. HIV kills more men than women because men are reluctant to visit the health centre. Men hardly go to the clinic for whatever disease, but women find it easy to visit the health centre."* Caregivers FGD

Some mothers say that there are also women's health concerns such as period pains, breast cancer, and cervical cancer. Most women say that they need more care and support, including food, especially during pregnancy and the postnatal period. Many women expect more from their husbands and elders for this type of support and during these times of vulnerability for the woman.

> *"We eat the same food like all members in the home but wish to get better and nutritious food when pregnant or lactating."* Mothers FGD, Hwange

> *"Fathers can help secure food for pregnant and lactating mothers. When we go to the hospital, we are told of things like 4-star diet, and fathers should play that role of providing that for us. Some of them are trying to do that whilst some are yet to learn the importance of this."* Mother, Binga

> *"I would appreciate for fathers to learn that pregnant women do not have to do hard jobs. They should assist as lactating mothers do not sleep while breastfeeding the baby. This affects women because they end up losing weight a lot. Fathers should also give their wives some money to get their food of variety as it builds their body and have the required nutrients for the breastfeeding baby. If we do not have the right foods, the babies are born with low weight."* Mother, Binga

Most mothers explain that they decide which type of service to use depending upon the illness or concern. Most say that they seek health care from VHWs, health centers, and hospitals for most issues including delivery care, family planning, yeast infections, malaria, HIV, COVID-19, and others. Some mothers seek care from traditional healers or prophets for some issues such as cancer, snake bites, and bile reflux. Mothers in one FGD say that traditional healers help resolve period pains. One mother says she starts with her church to decide how to treat a health issue.

> *"Sometimes we go where we deem necessary depending on the type of a disease. For chronic diseases like cancer we usually visit the traditional healer or church. Such diseases need spiritual care."* Caregivers FGD

> *"I go straight to church because I believe in the Almighty. When sick I go to the prophets so that he prophesies the problem. After diagnosing the problem, I go to church for treatment. At church I would be diagnosing whether it's a spiritual ailment or just a mere illness."* Caregivers FGD, Binga

Many mothers share self-care and home remedies to prevent and treat certain health issues, such as stomach aches, headaches, colds/flu, backaches, and cancer.

> *"We are eating elephant roots or 'intolwane' in vernacular, or sit in water with amarula barks, we normally do this to treat back aches. We put the elephant root inside the porridge, mahewu or make a solution and drink. We drink wild garlic because even if you visit the clinic suffering from the back ache you don't get the treatment which you need, the nurses will tell you to go and seek help from the elders. We also can treat flue and coughs on our own by drinking a solution of boiled lemon leaves and we also do steam to treat flue."* Caregivers FGD

When asked about violence, some mothers say that they know about violence in the community, due to alcohol and the pressures that come from a lack of income and food. Some women have heard about GBV over a woman's use of family planning.

> *"Poverty is leading to violence in our community because families end up fighting and quarrelling with husbands when there is no food at home. Poverty is the cause in most cases, because if it wasn't for that, I don't think people would be fighting."* Caregivers FGD

> *"Family planning also cause yeast infections. This cause conflicts when women take family planning without getting the consent from her husband. For example, I once saw a man beating a lady at Dandanda centre and the police never assisted the abused."* Caregivers FGD

Views on Children's Health

Key Informants' Perspectives

The commonly mentioned health issues by district health staff; nurses, EHTs, and VHWs were diarrhea and pneumonia, HIV and AIDS, ringworms, coughs, skin diseases, acute respiratory infections, and malnutrition.

Malnutrition and anemia: Malnutrition was attributed to the fact that mothers did not have enough food resulting in poor diet diversity and that there were very few nutrition gardens in the communities. Some of the nurses stated that anemia was common amongst CU5 due to the poor diet diversity. In Lupane and Binga, VHWs highlighted that a lot of CU5 live with their grandparents and that this contributed to malnutrition as children living with grandparents were often malnourished. VHWs attribute this to the higher levels of poverty amongst such families, as the parents of the children did not always send remittances back home.

> *"The young children do not get the food they need; dietary diversity is not there. In some homes the children only have one meal which does not provide the required nutrients."* EHT, Hwange

VHWs highlight that the shortage of weighing scales affected community-based growth monitoring and children were not weighed monthly at community level.

Lower immunization rates: In addition, VHWs say there are children with incomplete immunisation due to the long distances to health facilities, compounded by the restrictions due to COVID-19. A nurse in Lupane stated: "*People are no longer coming to hospitals in large numbers as they fear to contract COVID-19*." In Binga, key informants say children are taken to the hospital only when the illness is serious.

Diarrhea and ARI: Nurses, VHWs, and EHTs identify diarrhea as a key health problem which leads to dehydration in children. In Lupane, a practice called '*ukuthunqisela*' is used to treat sunken fontanelle (a symptom of dehydration in children) where herbs are burned, a risk for ARI. VHWs add that young children do not have warm clothes and so are susceptible to pneumonia and ARI.

Mother's classification of their child's health status and review of last health services

On the day of the interview, three-quarters of mothers reported that their child was healthy and feeling well, because they saw the child playing and eating. Many also said that the child is growing well so they know the child is healthy.

> *"My child is healthy for now as you can see that she is playing and not crying throughout this time since we met."* Mother, Lupane

One-quarter of mothers said that their young child was sick on the day of the interview. Several children had a cold or flu. Two boys had a serious condition (hernia and swollen testes) and needed surgery. One child had low weight.

> *"The child is not okay. He has hernia (testis turgidity). Testis become turgid and its painful and he cries. I did not take him for the treatment to the hospital because I do not have money…But I am willing to take my child to the hospital for the treatment."* Mother, Binga

Almost all mothers interviewed had their child's health card available (the three mothers without a card identify as Apostolic). Based on the health cards, all but one child had received health services in the past quarter and three-quarters of the children had received a health service within the past month. The

last service indicated on the card was for preventive care: GMP, immunization, or vitamin A supplementation from VHWs in the community, through mobile clinics, or health centers.

> *"I last went to the health facility in August for growth monitoring and immunization, and my child was due for vitamin A supplementation. I went to the clinic. I was happy with the experience because I was served. All the services I had gone to seek were available. I got what I needed."* Mother, Hwange

Ninety percent of the children receive regular, monthly GMP, usually by the VHW in the home of the VHW or in the community.

> *"Village Health Workers teach us about child development. They monitor the growth of our children at community level. They also bring us tablets from the health centres. They weigh and immunise children."* Lupane FGD

Mother's Perspectives: General illnesses and modes of care

Most mothers define common illness among children as diarrhea, malaria, and colds/flu. Some also mentioned eye problems. About a quarter of mothers also mention sunken fontanelle and some add stomachaches and headaches. Mothers use a variety of home care and care-seeking practices to prevent and treat illnesses, according to their understanding of the illness and the availability of services.

Diarrhea: Mothers know that diarrhea is caused by unclean water, dirty hands, or dirty food, and overeating certain foods such as wild fruit. Some believe it starts when children are teething. All mothers say that they give oral rehydration salts or sugar-salt solutions for treatment of diarrhea, along with home remedies of herbal drinks. If there is no improvement from these remedies, then they travel to a facility.

> *"[Diarrhea] occurs when children drink contaminated water from the well. It happens all year round. We usually get the salt and sugar solution from the clinic. Yes, there are other home remedies like giving them lemon juice it helps a lot. Yes, it can be prevented by making sure that children do not just pick anything on the ground and eat it.*" Mother, Hwange

Malaria: Two-third of mothers do not have their children sleep under long-lasting insecticide treated nets (LLINs) to prevent malaria because they say they lack funds to purchase LLINs. Most mothers seek treatment at a health facility quickly when the child has a high fever.

> *"When a child is not active and has a high body temperature, I usually go straight to the health facility for help. I do not take much time before I decide to go seek help, when my child gets symptoms of high body temperature in the evening, I usually take them to the clinic the following morning. I do not like waiting till a child gets severely ill before I take her to the health facility for help."* Mother, Lupane

Colds/Flu: Most mothers believe that flu is caused by cold weather or unhygienic food. Their first resort for care is home remedies such as steaming and herbal drinks. They subsequently seek care from religious leaders or health workers if there is no improvement for some time.

> *"It is caused by cold weather. It affects children mostly during cold and windy months i.e., May to July. The signs of flue infection are continuous sneezing, feeling cold. At home children drink boiled lemon leaves. This disease is prevented through clothing the child with warm clothes."* Mother, Binga

Sunken fontanelle: Some mothers express concern about sunken fontanelle in young children and do not believe it is related to medical causes or a sign of dehydration. Mothers believe that only traditional healers or elders with this expertise can treat this, in part because some have been turned away from health facilities for seeking care for this.

> *"Yes, it is treatable by those that know traditional medicine e.g., they crush matchsticks and mix with salt and put it where the child was cut by a traditional healer in the mouth. Others use holy water mixed with salt to treat a sunken fontanelle. A mother can see that their child's fontanelle is not in good condition by observing the color of their stool. One symptom is green watery stool or stool with mucus like particles."* Mother, Lupane

Stomachaches: Some mothers treat stomachaches at home by boiling guava leaves and ginger, herbs, or tree bark from the mopane tree or long tail cassia.

Headaches: The few mothers who mention headaches as common for young children believe headaches are caused by excessive heat and/or other illnesses such as flu or reflux. They treat headaches at home and with painkillers and remedies such as wild garlic and drinks made from certain roots. Some mothers also take children for prayer.

> *"[Headaches are] caused by flue or too much exposure to the sun. Common during the hot season October to November or during the winter season June to August. We cure headaches by purchasing painkillers from the shops. If the headache persists, we take the children to the clinic or if the child has no appetite at church they can pray for the child. Traditionally, we give them Isihaqa/Wild garlic since some headaches are caused by inyongo/bile reflux. We can also treat headaches by giving the children roots of Mangwe/Terminelia Sericae to drink."* Mother, Binga

Fathers' perspectives on maternal and child health as they support or offer additional insights

More than half of the fathers express concerns about the health of their families, especially for women and children.

> *"When I think of the health of children under 6 months, I see malnutrition. I say so because we do not have enough and nutritious food for the children. Children have stunted growth. They look like our grannies yet they are children. I think this is caused by lack of balanced diet."* Father FGD, Hwange

All fathers identify VHWs as the first point of preventive services, information, and answers to questions about prevention and treatment. Most appreciate the quality of services. They say that for serious issues people go to clinics and hospitals and acknowledge the same challenges to accessing health services as women describe. In Binga and Lupane, fathers also identify food and water access or safe drinking water as health risks.

> *"Women usually get referred to hospitals, yet we do not have money for transport to go to the hospitals and later on meet hospital bills. We do not have the preparation kit for pregnant mothers when giving birth. Women need food and clothes when they are pregnant, but we do not have money to buy those needs."* Fathers FGD, Lupane

Hygiene

Key Informants' Perspectives

The key WASH issue highlighted by all the EHTs is unsafe drinking water from open sources such as dams, rivers, and other unprotected sources. Also, women travel long distances to access water, sometimes over 10km.

> *"The biggest health issues in the community are diarrhea due to drinking water from unclean sources such as open dam which is available in the community to Dongamuzi."* Nurse, Lupane

EHTs say open defecation is prevalent as few homes have toilets due to a lack of funds to procure cement. In Nkayi, some of the EHTs believe that the soil type does not allow for toilet construction.

> *"Only 20 out of 130 households have toilets in my village. Community leaders do not have toilets so they don't encourage others (community members) to construct toilets."* VHW, Lupane

Home Observations

Researchers observed the home environment, including hygiene and sanitation facilities at the time of the interview.

- Two-thirds of the homes have pens, stalls or kraals for animals, although chickens often run freely in the daytime.
- One-third of the homes observed have latrines and designated handwashing stations with soap and water (fewest in Hwange).
- One-third of the homes observed have a smoke-free cooking area.
- Few households treat drinking water.

The presence of hygiene and sanitation facilities and reported hygiene behaviors vary between districts, but the relative proportions of mothers practicing the behaviors across districts are similar, with Lupane being slightly better than other areas.

3.2 What are the perceptions and concerns about changes that have happened as a result of COVID-19 in health service availability, care-seeking and self-care practices (men, caregivers of children, adolescents) and how do people see their situation post-COVID-19?

Overall, health conditions and services mirror the pre-pandemic situation with some deterioration during the COVID-19 pandemic. Generally, key informants recall that COVID-19 restrictions have affected food and income. Additional consequences they identified include the following:

- Reduced gatherings including football and netball and interfamily visits.
- Halting of community services such as GMP, home visits, and community meetings.
- Lack of public transport to health facilities.
- Late maternity booking in fear of COVID-19.
- Limited supplies of medicines and equipment.
- Increased GBV, alcohol abuse, and adolescent pregnancies, STIs, and marriages.
- Reduced number of days for funerals.
- Increased gold panning especially among young males.
- Improved hygiene especially handwashing.
- Greater work burden for health facility staff with vaccinations and contact tracing.

- VHWs recognize that adolescent girls have left school early as a result of COVID-19-related challenges, leaving them searching for financial support.

Most key informants recall a lack of personal protective equipment (PPE) such as sanitizers and masks.

The district health staff, nurses, EHTs, and VHWs highlighted that misconceptions on COVID-19 were rife. Nurses say that fewer people came for services including chronically ill people. EHTs and VHWs undertook work such as COVID-19 vaccination and contact tracing of positive cases.

> *"Many programs and schedules which were planned from the beginning of the year have been on hold. More work needs to be done (in communities) and it's difficult to keep up with COVID-19 restrictions. There is increased work pressure due to COVID-19 as more focus is put towards tracing and the vaccination program."* Nurse, Lupane

Many mothers recall that care-seeking during the COVID-19 pandemic changed because of longer than usual waiting times and some did not want to be tested for COVID.

> *"In terms of COVID-19, nothing has changed especially in our community movements were as normal. We were able to go to the clinic regardless of lockdowns. But sometimes nurses would delay attending to us due to the shortage of nurses since they would alternate duties to stop congestion and spread of COVID. Some women would not go fearing COVID-19 testing they say is painful."* Mother, Binga

Fathers' perspectives as they support or offer additional insights

Most fathers do not see a change in health except that some mention a lack of medications for some conditions due to COVID-19. Fathers relate the lack of financial resources and describe stress and pressure because they cannot buy food, soap, or sanitary materials due to changes from COVID-19.

> *"I do not believe these hopes and dreams will be realized because we have lost our jobs due to COVID-19. We no longer have money for food and school fees."* Hwange FGD

3.3 What are the household dynamics and intra-family decision making that influences different types of care-seeking and health practices: women, couples; and adolescents?

Mothers' roles and expectations

Mothers describe their role in the home is to cook, and most also state to clean and care for children and husbands. About half of the mothers add that they should care for children's education and health, especially taking children for preventive care and treatment.

> *"A mother's role is ensuring good hygiene at home, cooking for my children, wash clothes for everyone at home, farming to get food for us all as a family, encourage children to go to school and taking children to a health center when not feeling well."* Mother, Binga

> *"A mother is an all-rounder. She takes care of everything in the household. She takes care of all the family members, from the children right up to the husband and neighbors who need help. I play an advisory role to my husband. I have an insight to things that he does not pay attention to, and those are*

the things I advise him on. I also play the role of a helper in whatever he does I make sure that I help him." Mother, Hwange

Some say mothers whose husbands are away are responsible for providing food and earning money. Mothers expect husbands and fathers to be the main financial provider for the home.

> *"Men play the financial role mostly. They are the providers. They provide for all the needs of the child and the mother. They are the ones who buy food, clothes and provide shelter for the child."* Mother, Hwange

In reality, nearly all mothers earn all or some of the income to support their families, even when husbands are at home. All but six mothers say they work by raising and selling crops and vegetables, weaving mats, making bricks, hairdressing, and other piece work. Those with relatives who work in towns and other countries, whether husbands, brothers, or mothers, also receive some support through remittances.

All mothers see being a good mother as being caring and nurturing. Many add being attentive and loving to children, listening to children, and providing useful mentoring guidance and advice. Many note it is important to treat girls and boys equally. Nearly half of the mothers recall learning about being a mother from their own mothers while some learned from their grandmothers, friends, and elders.

> *"I first learnt about motherhood in our childhood games, that is where we were practicing and copying what our mothers did. I also learnt from my biological mother, I could see the way she treated her husband and us the children had a loving and caring heart. She never harassed anyone, she liked playing with her children and was always a happy mother. I saw through her that being a mother is very good and brings happiness, she treated everyone with love and care. She never differentiated us from the boys we were all treated the same, she gave me counsel on motherhood reminding me that someday I will also be a mother. My mother really inspired me, and today I am a mother although it didn't go well in marriage but I am a happy mother with my children."* Mother, Hwange

A few mothers said that no one taught them; they decided for themselves the type of mother they wanted to be.

> *"I did not learn this from anywhere. I decided on my own the kind of life that I wanted to live. Everyone makes a choice of the kind of life they would want to live and that is what informed the way I give care to my children."* Mother, Hwange

Most mothers describe positive feelings about being a mother and say it *'brings happiness*'. Some mothers (less than one-quarter) had mixed feelings about being a mother; they 'had to accept' marriage and motherhood.

> *"I did not learn to become a mother, I had to accept that I am now a mother since I got married and responsibilities changed when I got married. Some of the things I learnt from some workshops that I attended and some lessons come through seeing other mothers."* Mother, Binga

Dialogue and decision making about health

Mothers say that they talk with family members about health and care-seeking and make decisions for themselves or jointly about care-seeking. Most mothers say that they consult with family members or inform family members about care-seeking; they do not ask for permission.

Although most mothers do not ask for permission to seek care, they inform husbands and/or family members as a courtesy or to ensure money for transport or fees. Several mothers say that paying fees in clinics or when they are transferred to a district hospital is a challenge. Therefore, mothers inform the head of the household, whether the husband or relatives such as grandmother or aunt for needed support.

> *"I need a health card and money for transport when I or my children need to go for care. I do not consult or ask for permission from anyone. If I consult my husband, the discussion goes well because we do not quarrel. The consultation is usually initiated by me because I am the one who usually goes to seek for these services. It is communicated with respect. Family members do not get involved."* Mother, Hwange

> *"I need a scotch cart when my children or I want to go for care. Sometimes I talk with another mother who would also be planning to go to the clinic so that we can walk together or combine donkeys to tie on the scotch cart. I also inform my mother in-law when I want to go to the clinic. I also seek permission from my husband first before I go to the clinic."* Mother, Lupane

Specifically, on the role of husbands, mothers are divided on the influence of fathers on health care-seeking. Half of the mothers say their husband motivates, or at least does not stop her from, seeking health care. These mothers see husbands as a source of advice and help with accompanying children to the health center. Some say their husbands lessen their burden by collecting firewood and drawing their baths if they need to travel and pay for transport.

> *"The presence of my husband at home has some influence. He encourages me to take family planning pills so that we do child spacing. He as well accompanies our children when one is not well or when there is need to take one for wellness services. He lessens the burden for me."* Mother, Binga

Some mothers said having husbands at home makes no difference.

Most mothers feel that the communication with their husbands is respectful and positive. Those with husbands who are away from home try to call when possible.

> *"The consultation is usually initiated by me because my husband is always away at work and I am the one on the ground. I just need to inform him of what is happening back at home. The discussion is spoken verbally. Other family members are also involved because I live with my in-laws here and they are hands-on when it comes to the health of the family."* Mother, Hwange

> *"There is usually no problem in doing discussions with my husband as he is always present and sees what is going on. The discussion is done both speaking aloud and just communicating without words depending on the ailment. Other family members are in Bulawayo; we talk to them from time to time because network is also a challenge here at home. They are not involved in the day to day running of our affairs."* Mother, Lupane

However, one mother said that her husband is not involved because he has a problem with alcohol.

> *"My husband knows nothing, all he does is concentrate on his alcohol. Sometimes it is better not to consult him at all."* Mother, Binga

Fathers' perspectives as they support or offer additional insights

Fathers also see their role as providing a healthy environment for the family, such as food, shelter, and school fees. Half add they are expected to maintain peace in the home and share tasks such as fetching water and firewood.

> *"As a father I should make sure the family does not go hungry by providing food. Also, a father should make sure everyone in the household sleeps in well maintained houses by making sure that all houses are properly thatched… I do not cook, I do not bath the child unless she [the mother] is sick. The father should help his wife in some household chores such as fetching firewood, watering the gardens, and water, also buying clothes, soap, and food."* Father, Binga

The most common concern of fathers for their family's future is their ability to make a living to educate their children. Many fathers say that they want their children to be respected people in the future, finish education or get jobs, and be healthy. Some fathers noted concerns about livelihoods, teaching children to love their families and work hard. Fathers expect that children show them respect as a father. As children grow to adolescence, this gains importance. Fathers perceive good fathers to be respected in the community, especially those who provide food and necessities for their families, who use their earnings for their family, who keep peace in the home, and treat sons and daughters equally.

> *"I am more concerned about my children, I want them to have respect, good interaction and love with the neighbors and other community members. I also want them to gain knowledge in everything I am doing e.g., the projects, they should also do the same so that they can have a better living even if they don't make it at school. I believe that these concerns are within my control because I am doing everything in my power to make them learn menial work and I am also leading by example."* Father, Hwange

> *"My greatest concern about the future of my family is the source of water. I need a reliable source of water so that I can generate income for my family through farming. The other concern is the lack of money to start a family business like selling fish. ...These concerns they can be solved if donors can help*." Father, Binga

Fathers are open to talking with adolescent children, including girls, about growing up, family harmony and life skills. Many say that fathers should not talk with adolescent daughters about reproductive health topics, although some said that their daughter shares everything with them.

> *"At adolescence, girls start showing respect to fathers. Boys are more open and stay open. When teenagers become distant, this is when fathers should be closer to their children and show them love."* Father, Hwange

Some fathers mention supporting their wives and children to seek health care through, accompanying them to care and/or providing funds. Some fathers do this for everyone in their home including their parents, siblings and, sometimes, nieces, nephews, and grandchildren.

Most fathers feel that decisions, especially about health for the family, are jointly made with their wives. For certain health issues that require traditional treatment, such as sunken fontanelle, fathers say that they consult with elders in their family. Two fathers believe that as men they make final decisions.

> *"We sit down and discuss with my wife. Decision-making is open to both of us."* Father, Hwange

3.4 How do structural, traditional, cultural, and individual perceptions influence different types of care-seeking, home, and self-care?

Structural influences on health and hygiene behaviors

Physical access to services: One-third of mothers say that distance makes care-seeking a challenge, especially for emergency care, because of resources needed such as a scotch cart and funds.

> *"Some women do not go to the clinic except for family planning purposes. There are no hindrances because the community leaders encourage that everyone should follow the growth monitoring recommendations from the clinic. This word is also spread by Village Health Workers. If there is a challenge it may be attributed to transport challenges, especially for emergency care."* Mothers, Lupane

> *"Having a scotch cart makes it easy for me to go to the clinic. Walking with other mothers to the clinic also makes it easy for me to seek health services. What makes it difficult for me is that sometimes when the scotch cart is not available, I am unable to go the health Centre because of the long distance."* Mother, Lupane

Access to nutritious food and hygiene: Mothers universally say that a lack of financial resources constrains access to nutritious foods and inability to afford hygiene inputs such as cement for latrines. Some also say they lack resources to purchase soap. Many mothers also note that water access is a challenge. This challenge with water access is echoed more loudly by fathers and key informants.

Quality of Services: Mothers generally perceive health services as high quality and appreciate health workers and VHWs for care. Nearly half of mothers say they are motivated to seek health services by the good quality of care. They describe it as a respectful atmosphere, good equipment and services and effective treatment.

> *"The treatment for illness makes us go to the clinic. The way they welcome us makes us love to go to the clinic, the nurses care and have respect for their patients. There is nothing that makes it difficult for me to go to the health center."* Mother, Hwange

> *"The services I get from the hospital are effective because every time I go or take my child for treatment we always recover."* Mother, Binga

However, for some issues such as sunken fontanelle or colds, mothers do not seek health services because health workers turn them away.

> *"Most of the time nurses turn us back when we go to the clinic to get treatment for conditions such as flue, sunken fontanelle, they encourage us to treat these at home. For instance, flue we are encouraged to help children drink boiled lemon leaves. In case of a sunken fontanelle, they tell us that there is no treatment for such condition. Therefore, when women think twice when it comes to taking their children for treatment for conditions such as flue because they already know that nurses will turn them back."* Mother, Binga

Some mothers expressed other, specific issues with quality. Two mothers says that sometimes health workers change the days or times when they receive clients, and this makes it challenging to plan. Another mother says that childcare can be a challenge when she seeks health care. Several mothers add that at times some health workers do not speak with clients respectfully, especially during childbirth.

"I would recommend the health workers to be more kind in the way they treat us when we come to the clinic. They are sometimes very rude and blunt. That is so disturbing to us as patients." Mother, Hwange

Traditional/cultural and religious influences on health and hygiene behaviors

Religious beliefs: No mother says that her religion restricts any type of care-seeking. Religion provides added support for difficulties, including illness. More than half of mothers say they seek prayer from religious leaders when a child is sick. Prayer is sought in addition to medical treatment, or for issues that they believe cannot be treated at the health center such as sunken fontanelle or spiritual attacks.

"I entirely believe in God and do not believe in the traditional ways of healing. I go to my pastor for prayers and go to the clinic for medical help." Mother, Binga

Cultural practices: Many mothers share self-care and home remedies to prevent and treat certain health issues, such as stomachaches, headaches, colds/flu, backaches and cancer. Some mothers (one-quarter) say that their child has experienced sunken fontanelle and they sought treatment from traditional healers or elder women specialized in this.

"There is a grandmother from Ntuthuko village who treats sunken fontanelle. She rubs the inside top part of the mouth with salt." Mother, Lupane

"We use the services of traditional healers especially when the child has sunken fontanelle. We do this because at the hospital they do not have any remedy for sunken fontanelle. My husband is the one who knows the traditional healers he is the one who advised me to take the child there." Mother, Hwange

A few mothers only seek medical treatment; they do not use traditional or religious treatments.

Internal influences on health and hygiene behaviors

Knowledge: About half of mothers know when a child is sick because the child is not playing, has no energy, loses appetite, vomits, or has a high temperature. Several also say continuous crying and irritability are signs of sickness and that poor growth is a sign of general poor health.

"When we go for well child services and they are weighed and notice weight loss, it means something is wrong. I also notice by what the child generally does that they are not healthy. It is easier to notice due to the fact that as a parent, my eye is always on my child and thus it is easy to tell when they are healthy." Mother, Lupane

Mothers know that handwashing helps to prevent diarrhea and say that they had heightened interest in hygiene due to COVID-19, and that handwashing was common during COVID-19, but have now become 'relaxed' and do not continue this behavior.

Attitudes: Many mothers feel that boiled water is tasteless and that the process of boiling water wastes time. Others, who get water from a borehole believe they do not need to treat it.

"We don't treat the water we drink because we don't have the chemicals for treatment, more so we believe that the water is already safe. As for boiling, I once tried that but the water becomes tasteless, so I no longer want to practice that again." Mother, Hwange

One mother notes that it is common for mothers in the area to be older and that they find it difficult to change what they did with children previously.

> *"Yes, the issue of exclusive breastfeeding. Some of us are old mothers. We have had children before, and we cannot take up this new instruction that children need to be breastfed for 6 months without giving them food or water. It is difficult for me to do that because I have a way, I have raised my children in the past."* Mother, Hwange

All mothers aspire for a better life for their children either through education or a good job. These hopes are often with the aim of children caring for their mothers in the future. Most mothers say that their dreams for their sons and daughters are similar, although some mothers add that it is important for their daughters to marry into a well-off family.

> *"I started a business of selling sadza and through the profits opened a flea market. It is my hope that I start my own shop that is bigger than the small stall I have. I want my children to inherit everything I would have accumulated." Mother, Binga*

> *"My children's lives will be better than mine, that is my hope. There is no difference in my hopes for them, whether boy or girl; they are all my children I will love and hope the same for them."* Mother, Hwange

Fathers' perspectives as they support or offer additional insights

More than half of the fathers in interviews express concerns about the health of their families.

> *"When I think of the health of children under 6 months, I see malnutrition. I say so because we do not have enough and nutritious food for the children. Children have stunted growth. They look like our grannies, yet they are children. I think this is caused by lack of balanced diet."* Father FGD, Hwange

Fathers generally appreciate the quality of health services and say that VHWs are now the first point of contact for preventive services and information.

3.5 What care-seeking practices, home, or self-care practices (or shifts in practice) do individuals recommend or are willing to try? Why or why not?

At each home key home health infrastructure and practices were observed and the status recorded (see 3.1.) Based on the observations and the interviews, mothers and partners were asked about improvements that they might be willing to try on a regular basis.

Clean compounds: While large animals generally were penned, there are many chickens running through yards and not all yards were clean. When asked about their willingness to pen chickens or keep them out of the yards most mothers did not consider this a priority and therefore were unwilling to commit to change. A few mothers did agree to try.

Latrines: Most homes do not have a functioning latrine. Unanimously mothers without latrines want to construct one if they get help with purchasing cement.

Handwashing: Most homes had no designated handwashing station with soap or ash. Half of the mothers with no handwashing station are willing to set up a handwashing station and try to keep it filled with water and soap although they cite both a continual supply of soap and water as a big challenge.

Safe drinking water: Few homes treat drinking water, even for children. About half of the mothers would be willing to treat water if they were to get purification tablets from VHWs.

Indoor air pollution: Although most women cook in smokey kitchen areas, because mothers say their children are not exposed, no mother is willing to improve this.

Long-lasting insecticide treated net (LLIN): Most homes do not have LLINs. Many mothers say they would use a LLIN if they were to receive them at no cost.

Mothers offered ideas for improving collective action around health.

> *"We can help each other as a village or neighbours can help with bus fare when one of us is sick."* Caregiver FGD, Lupane

> *"As women we should contribute and have a purse to assist each other when necessary. We can also have a garden project where we produce and sell vegetables in order for us to be able to help each other when there is a need."* Caregiver FGD, Binga

> *"Clubs should be formed as I have seen when an organization called Mvuramanzi came many people constructed latrines and through these clubs people now wash their dishes and no longer cook in unwashed utensils. I enjoy the dramas from the clubs and people visit each other's homesteads and dig refuse pits for each other and clean their yards. These health clubs are quite useful as many people are constructing latrines in their homes."* Mother, Binga

Fathers' perspectives as they support or offer additional insights

Fathers identified which practices they would try if they had the resources. About half of the fathers said that they would treat drinking water if they received purification tablets, and six said they would construct a latrine if they had help with cement.

Most fathers were willing to talk more with their children about hopes for the future, and with their wives about health and future plans.

> *"I am willing to talk to my wife about being healthy as well as sharing my hopes with her. I am willing to try and talk with my wife about being healthy and also sharing my hopes for our children's future as I know it's very much important."* Father, Lupane

> *"I am willing to talk with daughters about staying healthy and safe and to also share my hopes that I have for them."* Father, Hwange

3.6 What are the suggestions from households (mothers, fathers) and key community members (nurses, VHW, community leaders) for how to address critical barriers to care-seeking for illness and preventive measures, improved hygiene, and critical household health behaviors?

While specifics may vary, overall, mothers ask to be listened to and that their requests be treated in a respectful, serious manner by family members, especially husbands and elders, and community leaders.

To address **access** constraints, mothers suggest:

- Inputs for cement to construct latrines.
- Water purification tablets.
- LLINs.
- Community based distribution of contraceptives.

Mothers request greater **family support** from their child's father and elder women. From husbands, mothers request more support during pregnancy and breastfeeding for food and transportation.

> *"I advise husbands of pregnant women to help in transportation, help with chores."* Mother, Lupane

> *"We would also like the fathers to hear us when we speak, it is hard to live in a community where women are not heard when they speak. We also would like fathers to help us in everyday chores, especially when a mother is nursing a baby or when she is pregnant."* Mother, Binga

From aunties and grandmothers/mothers-in-law, mothers express desire for more support during pregnancy and breastfeeding in general, and approval to follow health worker recommendations, which include:

- Help during pregnancy and lactation with chores and child feeding.
- Help in general. Some mothers have aunties who don't support because the aunties/mothers-law believe that women must fend for themselves.
- Consistency in advice with guidance offered to the mother from health providers.

> *"Influential family members like grandmothers can help nursing mothers by availing themselves to assist us especially in times when we are pregnant and lactating."* Mother, Hwange

> *"The need is there; some young mothers stay with grandparents who lack knowledge on health services. Such people should be assisted."* Caregiver FGD, Binga

> *"Please help in educating the influential figures like grandmothers about new ways and trends in childcare and feeding. We want to practice exclusive breastfeeding but some of them insist on giving our children water to drink before they reach the age of 6 months and this becomes a challenge in the way we care for our children."* Mother, Binga

Mothers identify a need for **making the environment more inclusive of women** in their homes and community. From community leaders, women's requests include:

- Attention and action to create a supportive community for women, especially pregnant women, and to support a shift of men's attitudes and norms about gender.
- Make room for and support more women leaders.
- Support nutrition gardens and health clubs that can help women in creating a better health environment in the community for they and their families.

> *"Community leaders should encourage other community members to be supportive towards pregnant and lactating mothers and nursing mothers and their children. If health issues are embraced by all the community, it becomes easier for the mothers to care for their children."* Mother, Binga

> *"For us to improve our children's health there is need of clubs and nutrition gardens. It's not everyone who is part of the available nutrition gardens because of the small space which cannot accommodate a bigger number. These gardens are of much help to us because our children are now able to eat different vegetables."* Mother, Hwange

Suggestions from fathers and key informants as they support or offer additional insight

Generate demand and relationships with certain church groups: Although mothers interviewed for this study did not limit health practices due to religion, key informants share certain churches that prevent congregants from using services. These key informants suggest pinpointing these areas and churches for generating demand.

> *"Select churches do not support members to use services. For example, people from Umgodi Church don't attend EPI services and hardly come to clinic."* EHT, Lupane

> *"Apostolic sect groups that do not come for health services and they are from Sempofu Village."* Nurse, Lupane

Maintain Community Health Clubs: In Lupane, a leader expects that the clinic is planning to absorb and resume CHCs. In Hwange, an EHT advises support to training and resources to maintain the clubs once formed by EHTs.

> *"The clinic itself is planning on absorbing all the current community health clubs. They have set up a mobile clinic that will start working in 2022. Although the clinic is planning to do this, other groups failed to be resuscitated because of communication challenges."* Community Leader, Lupane

> *"There are health clubs, usually the EHT helps in their formation. The biggest challenge is resources, once these clubs are formed they need training so that they properly function. There is need for transport to various communities and refreshments".* EHT

> *"There is lack of participation among community members and sometimes people won't be having any knowledge about that."* VHW, Hwange

Explore if there is a need to generate demand for seeking preventive services for children after the age of one year as one nurse alludes.

> *"Mothers tend to come for EPI services religiously from birth, right up to when the child reaches a year. When they now need to be coming after every 6 months for vitamin A supplementation, a lot of mothers do not come, and this causes a lot of problems in terms of coverage for vitamin A*

supplementation. Their reasons for not coming for vitamin A supplementation are numerous, some say the children are grown so it is hard to carry them to the facility, some don't see the need because to them, the most important vaccines are those the child gets when they are under the age of one." Nurse, Hwange

Pay attention to stigma: Key informants share mixed experiences with stigma in communities. Nurses see stigma toward several types of issues such as mothers of malnourished children, people who had COVID-19, and living with HIV, among others. In communities, in contrast, leaders and VHWs notice that stigma has diminished over time toward people living with HIV.

"Yes, there is stigma. I have noticed it amongst mothers whose children are malnourished. A lot of them opt to hide with their children because they fear what they have seen others with similar cases go through. Mothers have a tendency of trolling each other when one has a malnourished child." Nurse, Hwange

Increase supportive communication with VHWs: Health workers asked for regular communication through a variety of channels. However, VHWs state that they do not have airtime to pass on any information to community members.

"I would recommend getting information on phone calls, written information, WhatsApp, and email. The frequency can be determined by the urgency for example with COVID-19 we can do the two weeks reporting if it's not urgent. If it is urgent, we can do the daily reporting. We can disseminate information by documenting and by conducting meetings, phone calls and on WhatsApp messages. Email can do as a reminder." Nurse, Hwange

Involve chiefs: Leaders advise that they are most influenced by their chiefs and request community meetings of leaders.

"Chiefs should gather community leaders once or twice a year and remind us of our roles and responsibilities. It will be good if he groups us according to our positions." Community leader, Hwange

Hold male-only discussion groups: Fathers say that they listen best to their wives, nurses, VHWs, and village heads. If in groups, they prefer men-only groups or discussions.

"We can call our VHW and inform her. She will then organize a meeting- that is when and how we can manage to talk to them. We can ask the Village heads to call a meeting of men only, that is how you can get men to learn more about health. We will invite nurses to come and educate us. On that case fathers can listen. We need lessons on how to make sanitary pads for women." Fathers, FGD

3.7 Adolescent Girls

Health concerns, care-seeking, and aspirations

Key Informants' Perspectives

Key informants express concern about early marriage and pregnancy, poor menstrual hygiene, and HIV and other STIs. In some areas in Nkayi where gold panning is common, EHTs say that adolescent girls are impregnated by gold panners who often have STIs. VHWs recognize that adolescent girls have left school early as a result of COVID-19-related challenges, leaving them searching for financial support.

"Younger girls are deceived by money from older infected men, they do not use condoms and end up getting infected." VHW, Hwange

"Adolescent girls face problems including poverty which leads to lack of basics such as sanitary ware, which leaves these adolescent girls vulnerable to manipulation." VHW, Lupane

Key informants note the need for more adolescent sexual and reproductive health (ASRH) services, but also cite challenges for girls to use these services because of distance and the potential for stigma, as the girls fear being labelled with 'loose morals'.

"Adolescent friendly approaches are lacking, they are needed in this community – from life skills training to sexual reproductive health services like HIV/AIDS testing." Nurse, Binga

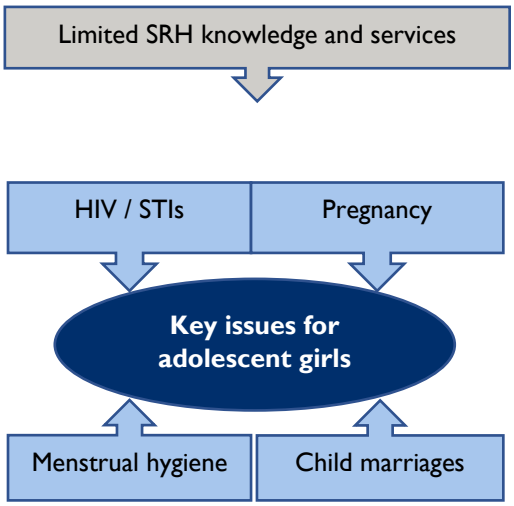


Figure 6 Perspective of key informants on key health issues affecting adolescent girls

Other issues for girls that VHWs identified include: some seek abortions when their partner does not take responsibility for the child, some girls are pressured to marry from parents and guardians in 'forced marriages', and some girls are sexually abused but cannot report this because perpetrators are relatives who negotiate and solve the matter within the family. Some VHWs and nurses also identify psychological abuse or stress from parents or guardians but see that girls have no voice, do not know their rights, and lack agency to make changes.

One VHW says girls do not make it easy to provide services or guidance.

"Adolescent girls are rude. Most of them don't finish school, and they develop an attitude, they are generally rude and do not listen to parental guidance." VHW, Lupane

Adolescent Girls' Perspectives

Girls reflected on their everyday lives, including good things they see. Key among those positive things were family cohesion and support. Several girls appreciated the protection they get from their mothers specifically because the girls are staying at home.

"The only thing that I can say is good for me is that we stay in peace as a family. My aunt loves me and I am safe, not abused like being assigned to do heavy duties." Adolescent girl, Binga

> *"The good thing for me now is that I am not yet married, so I do not have many responsibilities, and this gives me time to complete my education.... Another good thing is that my mother can feed us as a family and lastly no one has been affected by this deadly virus COVID-19 in our family."* Adolescent girl, Lupane

Girls say that some fathers and brothers are not peaceful or supportive, and even perpetrate violence.

> *"The perpetrators of physical and emotional abuse are fathers and boys. Girls can get help from the VHW. Community members can also help by talking to the fathers to stop abusing girls."* Adolescent girls FGD, Hwange

All adolescent girls say that when they do not feel well, first they share with mothers, aunts, grandmothers, or sisters to get tablets for treatment, herbal remedies, a bath and/or food. The married adolescent says she tells her husband who supports her to travel to a facility.

> *"When I am sick, I first tell my mother because she is the one I am mostly close to and she is free and loving to me. She then makes sure I am taken care of; she gives me food and accompanies me to the clinic. She monitors me each and every time and makes sure that I am taking my medication and recovering."* Adolescent girl

> *"My aunt is my caregiver. When I am ill, I tell my aunt because she is the one I stay with. My aunt is the one who cares for me when I am sick, like preparing me water to bath, [and] giving me food. Sometimes she even prepares for gumtree leaves for me to drink for treatment when I have flue."* Adolescent girl

Unlike the help they get from families for illnesses, girls are generally expected to 'take care' of themselves to prevent pregnancy but are not permitted by families or some providers to use services. Some adolescents in FGD who are not staying with their parents say the family situation pushes them to marry early.

> *"Nurses say that the family planning services are for adults."* Adolescent girls FGD, Hwange

> *"Some grandmothers chase away their grandchildren to go and get married. …Some girls may be living with their stepmothers who will be abusing them, thus they resort to marriage at an early age."* Adolescent girls FGD, Lupane

Factors which influence health of adolescent girls and young women

Structural influences on health behaviors

Adolescent girls share challenges with transportation to reach health services.

> *"The clinic is too far- we travel about 5-6hours to the clinic. We leave our homesteads at 3am when we are going to the clinic."* Adolescent girls FGD, Lupane

Several noted that lack of accessible water creates challenges for their health, and high risk of illness.

All adolescent girls identify a lack of financial resources as a key challenge. To maintain good health, girls aspire to complete school and get a job. Those in school, who participated in FGDs, hope to pass their

exams to get jobs and support their parents. Those who are out of school would like to return to school but understand that they cannot due to the school fees. Some say that their age-mates have migrated to seek employment in towns or other countries.

> *"Most girls at my age are house maids in Bulawayo. Some are doing piece jobs (casual work) such as washing clothes and weeding for other well up families in the community. I wish I can find a better job in Bulawayo or outside the county."* Adolescent girl, Lupane

> *"We would like to start farming groups and saving clubs."* Adolescent girl, Lupane

> *"If we do not have money we ask from boyfriends. Boyfriends request for unprotected sex and that leads to the spread of STIs."* Adolescent girls FGD, Hwange

Several girls say that a lack of income limits their ability to manage menstrual hygiene.

> *"Most of the things are not good. Since my aunt does not work, she does not afford to provide me with everything I need like clothes, pads, soap for me to be clean. I fail to keep myself clean especially during menstruation due to unavailability of pads and soap."* Adolescent girl

Girls express strong trust in health services where they can get 'the best treatment' by 'good' clinic staff. Girls say nurses, VHW and EHTs are trusted and knowledgeable experts.

> *"I also went the clinic last year (2020). We were given an injection that prevents cervical cancer. They attended us very well. Contraceptives are available at the clinic to prevent pregnancy. Generally, nurses are good, they welcome us very well and give us treatment. Masks are also available for the prevention of COVID-19."* Adolescent girls FGD, Hwange

Girls say that they lack condoms. They know about safer sex and say that they need these supplies.

> *"We also get help from VHWs, they have contraceptive pills and other medications. VHWs also visit households to do hygiene checks. VHWs always have condoms. The clinic only gives condoms to girls who are above 18 years."* Adolescent Girls FGD, Lupane

Traditional, cultural, and religious influences on health behaviors

Social norms: Health workers acknowledge that providing contraceptives to unmarried girls or young women is not supported by social and cultural norms, and this results in many challenges for health workers and girls.

> *"Adolescent girls are not using preventive care services in a timely way to an extent that is satisfactory to us as health workers. There is a gap in the way preventive care like contraception is administered. There are ethical issues around giving contraceptives to young girls, there is a dilemma between administering preventive care and the socio-ethical issues around it. This affects the way young girls use contraceptives and this has been an ongoing discussion for years."* Nurse, Hwange

Health workers highlight challenges with timely use of antenatal care by young pregnant women due to fear of social sanction, and with young mothers.

"To that we ascertain their HIV status early to avoid transmitting the virus to the unborn baby. Therefore, mothers who book late are at risk of transmitting infection to their unborn babies. This is also the case with teenage pregnancies, a lot of them book very late, and this puts them and their unborn babies at risk. A lot of teenagers hide their pregnancies until it is late." Nurse

"In terms of health promotion, girls do participate to an extent, there are still challenges around child feeding and childcare, for those young girls that have children. It is these young mothers whose children are always malnourished because their age group is not very keen to participate in health promotion activities like health education, IYCF support groups and community health clubs." Nurse

Lack of confidence in traditional healers: Many adolescent girls have confidence in modern medicine and identify traditional healers as untrustworthy. In Hwange, this trust was bolstered when girls saw people stop taking their HIV medication at the suggestion of traditional healers, and their health deteriorated.

"First of all, I prefer to visit the health center when sick. Some traditional healers may fool you and charge you a lot of money. Some traditional healers are after money not caring for clients." Adolescent Girl, Lupane

Home care practices: Adolescents share a variety of home practices related to reproductive health. Some help to reduce period pain and the length of menstruation, some are to prevent pregnancy, and others are to increase sexual desire.

"There is an indigenous tree that girls drink to reduce the number of days during menstruation period though I have forgotten the name of the tree. Some girls drink natural herbs that boost their sexual desire. (umvusankunzi) We drink elephant root to tighten our waists and backbones. We put it inside Maheu or put it in water or eat with porridge. We also drink wild garlic to treat diarrhoea. Young women." FGD, Lupane

"Culturally, grandparents give us medicine to protect us from getting pregnant. Mothers and grandparents cook porridge and put some traditional medicine in it so that we reduce the number of days to our monthly period." Adolescent Girls FGD, Hwange

Family support and social networks: Some adolescents in FGD say that they would like to learn about reproductive health and safer sex from their parents, but parents fear that sexuality education encourages sex.

"Parents say that if they educate us about safe sex, they will be encouraging us to indulge." Adolescent Girls Hwange FGD

Care for their friends is a strong value. Young women say that friends are also important and give each other advice about health and care-seeking. They demonstrated useful advice when asked about scenarios, and capacity to positively persuade and encourage friends to adopt health behaviors. However, some adolescent girls in FGDs say that peers pressure them to have boyfriends, and therefore sex, to keep up with others. A common fear that may limit care-seeking, especially for reproductive health, is gossip from health providers and community members about their health.

Norms around age of marriage and pregnancy: Most young women say that it is usual or normal for girls in their communities to have children before the age of 18. Several mentioned that marriages happen at the same time, or after having a child or children.

> *"At 12 to 15 years, girls get married and have their first child respectively. Others get married before finishing Grade 7. They will be old enough because girls in our village delay starting school because of long distances to the school. My relatives told me I should not get married early because I need to take care of my ailing mother."* Adolescent girl, Lupane

> *"Now days girls are having children and get married at 13 which is caused by unintentional pregnancies. They say she had taken care of herself when the girl gets married at the age of 18 and 20. Most girls like to get married and have a child at age of 22. The only way to delay girls from getting married early is take them to school so that they become busy with learning."* Adolescent girl, Binga

Some adolescent girls in Hwange and Lupane say that it is more usual for girls to marry after age 18.

> *"Some start [marriage] as early as 15 years, however, the majority is 18-19 years. They get married because they are already pregnant with their first child. When a girl is married by age 18 people say the girl is not yet mature. When she gets married by age 20 it is more acceptable in this community. Girls like me would want to have a baby by age 24."* Adolescent Girls, Hwange

Most adolescent girls believe that family and community members expect them to wait until the age of 20 or older to marry and have children, when they would have reached maturity. They said that girls who get married or have children earlier face gossip and ridicule, calling them terms like '*loose' and 'uncultured'*.

> *"People in the community are happy when the child gets married at 18 and 20, and have the child at the same age range, the girl is said to be able to take care of herself."* Adolescent Girl, Binga

> *"Some people start laughing at those who get married early."* Adolescent Girls FGD, Binga

Adolescent girls also say that girls who delay marriage are ridiculed and shamed.

> *"They say that you are bewitched if you delay marriage. Some say that you are disabled, or they can say that you are a granny. …They say she is barren, has bad luck, and she is ugly that is why she is delaying."* Adolescent Girls FGD, Hwange

Internal influences on health behaviors

Generally, girls' principal concerns are related to reproductive health with a few exceptions. Two adolescent girls fear illnesses, such as diarrhea and COVID-19, and spiritual risks at night.

> *"I don't feel safe when I drink water from dams because I know I will have diarrhea, and I also do not feel safe when I am not putting on a mask where there is a crowd because I might get COVID-19. I also don't feel safe when I leave my mother alone because I am afraid, she will stress herself."* Adolescent Girl, Hwange

> *"I do not feel safe at night because of wild animals such as elephants and witches and wizards. I do not feel safe because I cannot tell when these animals or witches and wizards are coming*." Adolescent Girl, Lupane

Adolescent girls know that early pregnancy and marriage is not good for their health or for their children, based on experiences of their friends.

> *"If we have love affairs at a tender age, we end up getting diseases like Syphilis and HIV. If married early you can also have a child and get infected with HIV. When you have a baby, you will not have knowledge on how to raise the child. The child will end up suffering from malnutrition. Babies can also die from other diseases like sunken fontanelle (Inkanda)."* Adolescent Girls FGD, Hwange

All adolescent girls know about contraceptives, even types and brands of options. Most believe contraception can help to delay or space pregnancy, but only after marriage. More than half spoke about potential challenges with future childbearing from using contraceptives before marriage.

> *"Before 20 I will use condoms since I am sexually active. Condoms are for the prevention of pregnancy and STIs transmissions."* Adolescent Girls FGD, Lupane

> *"It is said that contraception like pills, injections are not good for young people because it affects the womb system. Sometimes when you get married you have difficulties in having children."* Adolescent Girls FGD, Hwange

> *"I think contraception is not good for young people because it damages the body. Sometimes if you were using Jadele or Depo-Provera you may fail to have a child because of the complications caused by this."* Adolescent Girls FGD, Lupane

Adolescent girls in school express positive attitudes toward contraceptives if a girl is sexually active, even before marriage.

> *"Girls should use contraceptives like pills. These contraceptives can be collected from Ndlovu clinic. The services are available, sometimes the nurses are the ones who come to this community with the services…The VHW and other family members do give us advice on how to use contraceptives."* Adolescent girls FGD, Hwange

Suggestions from adolescents to improve preventive care and care-seeking for illness

Adolescent girls and young women's request from family members, especially mothers, more advice on health information. One girl in Hwange shares: "*She can advise me anytime of the day*."

Many also suggest opportunities for earning an income through farming groups, skills training, or other avenues.

From VHWs and other health workers, adolescent girls and young women's requests include:

- Free LLINs.
- Health information.
- Skills and material inputs to make sanitary pads.

Key informants' perspectives:

In Hwange and Lupane, nurses and VHW comment on the changes they saw from introduction of ASRH by other partners that emphasize confidentiality of services.

"After Adolescent Sexual Reproductive Health, the uptake increased, the response was good. The response was good because they came in numbers and with friends and families. They must know that the VHW works together with the clinic. They do seek health services in a timely way when privacy and confidentiality is guaranteed. These young people do not like being in an environment that will shame and vilify them, when they perceive that safe space in a health facility they come." Nurse, Hwange

"There is World Vision which is assisting girls who are at school with sanitary pads. Sanitary pads are a challenge in this community as they are sometimes not available in the shops." VHW, Lupane

4. Discussion and recommendations

Taken as a whole, this study offers a robust view of the current health care environment in the Amalima Loko districts of Matabeleland North. It combines health statistics, an assessment of health facilities, and perspectives of health care providers with community voices- importantly those of women in whose domain family health falls. This study highlights that WRA, adolescent girls, and CU5 face critical health issues in Matabeleland North. While the provision of basic public health services was strained prior to the pandemic, COVID-19 placed a further burden on these services and has led to a shift in more reliance on community health resources and home care. The results from this study provide insights into this new reality and are the basis for recommendations on actions to address critical factors affecting behaviors and the social environment to improve health. The discussion and recommendations are framed to provide a basis for an overarching Amalima Loko SBC strategy to improve health behaviors and inputs on health concepts for an SBC communication plan.

Health-seeking Behavior

Key health issues which present a major challenge to pregnant and lactating women and CU5—namely diarrhea, fever, and malnutrition—have increased during recent years. There is high regard and demand for health services by mothers and family members, and for most health issues care-seeking from the health system is the norm. At the community level, VHWs are the first line of care. People say that this trust and connection with VHWs has strengthened due to the movement restrictions related to the COVID-19 pandemic.

However, there are some health conditions where a combination of health service and religious consultation is sought. For many conditions, care-seeking is in this order. A few conditions are not often treated by health services such as sunken fontanelle. For these, the patient is taken directly to a traditional healer or person of faith for healing. A third resort for treatment is home care with remedies from local plants or processes like steaming. These might be combined with treatments received from the health services or they might be given, again for ailments such as a cold or flu that the mother feels will not be treated at the health service.

The Health Service Mapping found that most diagnosis/screening, treatment, and prevention services are available in health facilities and communities. Health workers and families identify distance to services and lack of transport as the major access challenges. Households located far from health facilities, and those separated from health facilities by seasonal flooding and road damage, have the greatest challenges in service use.

Although most common health issues are addressed through the health system, the findings show that there are several health issues that require targeted attention to increase timely use of health services. One common concern is sunken fontanelle, which may be caused by dehydration and is a sign of malnutrition, is currently treated by religious or traditional healers. Health workers also note a challenge with late booking for maternity services. For pregnant adolescent girls, late maternity booking is due to a combination of shame and stigma around early pregnancy in the family and health facility. It may also be related to the need for resources to seek these services, especially when the partner does not accept his role and provide resources.

Churches play a role in health care in these communities. In most cases (except sunken fontanelle), religious support offers comfort and faith to heal through the religious leaders themselves, holy water, and prayer. Although no mothers say that religion prohibits them from using health services, key informants know of certain churches that do.

The findings also show a reasonable rationale for the use of home care. Preventive measures like sugar salt solution for dehydration, and palliative care for cold and flu, are common and sound.

Household Environmental Health and Hygiene Behaviors

The cost of products and inputs limits access to families' pursuit of preventive health measures including: latrines, LLIN, water purification tablets, and sanitary materials for women and girls. Mothers and fathers say that they would construct and use latrines if they were to get cement, as they wish to have these facilities. The use of LLINs has fallen without the provision of free nets, but their use is widely acceptedif they are given out freely. Few, if any, homes treat drinking water regardless of the source. Caring for how the water is stored and handled, or boiling water takes time and is not the norm. Mothers are willing to try purification tablets if they can obtain them at no or very low cost. Mothers and fathers admit that they practiced handwashing, often with soap, during the pandemic, but have become more relaxed recently, and now many lack soap and dislike using ash to wash hands. They are open to adopting this practice again. A concern raised by adolescents and health workers is the need for menstrual hygiene sanitary materials. Girls would like the materials and skills to make their own, and family support to purchase.

Indoor air pollution from cooking fires can be a significant public health problem. About half of homes observed have smokey kitchens, areas where women spend substantial time. Although the women themselves did not see ventilation as a priority since they say their children are not exposed, it could be posing a risk to women. Finally, a discussion of environmental health and prevention practices is not complete without mention of the significant factor access to water represents. This is true at the health services level, community, and household levels. The shortage at health facilities is so dire that laboring women must bring their own water for the delivery of their babies.

Household dynamics and dialogue

Mothers in Matabeleland North, as in many places, are self-sacrificing, thinking primarily of other family members before themselves. While rarely focused on their own needs, some mothers request special care from family members during the first 1,000 days, in terms of less manual labor and extra food.

Extended family members need to support positive health practices. Household composition varies from nuclear families with the father staying mostly at home, to extended families with grandparents, aunts

and uncles, and cousins. When the mother is married, and the father is working away from home, the grandparents are paternal. When the mother is not married for any reason, the grandparents or aunts and uncles are maternal. Whether the mother lives with their husband or parents/parents-in-law, the mother is not the head of the household and depends upon these others for some resources and social capital. Engaging elder women is requested by some mothers who said that elders are influential in the home and may not support 'new' practices such as exclusive breastfeeding or care during pregnancy.

Repeatedly women, men, and adolescents appreciate family unity and mutual support. Both parents take responsibility for this harmony and articulate the desire to see it in respectful consideration by family members. Family dialogue has the potential to improve multiple outcomes. Fathers currently living at home, say they are willing to do more for the health and well-being of their families. Most fathers are willing to have more dialogue with their wives and children about their hopes and dreams for children as they grow up.

Gender

Gender emerged as a key factor that prevents and supports health seeking and home care behaviors. Consistent with the Amalima Loko Gender Analysis, this study found that women's lower status has many consequences, including limiting their participation and voice in community planning and decision-making. Within this broader context, specific to health, the findings show that health is the woman's domain and responsibility. Women are confident to assert their dominance in this domain. Families, even adolescent girls, look to mothers for health care. Women can and do decide about health in consultation with the heads of household.

Although mothers may be decision-makers, they often need material and non-material resources from heads of households, whether the husband/partner or other, to seek care and practice home care. These include financial support for transportation and medicines, and non-material consultation and encouragement.

Adolescent girls are expected to take care of themselves. While still relaying on elder women, most interviewed mentioned mothers and mentors they are expected to prevent early pregnancy on their own, and blamed if they do not. Although most want to delay marriage and pregnancy until older, many girls describe stigma if they seek services and so need family support and normative change for improving and maintaining good health.

Men interviewed through this study, like others, express high levels of pressure to fulfil gender expectations to provide for the family. In the context of the economic crisis, and COVID-19, this is especially challenging. Even though most mothers and other family members are contributing to the family survival, traditional gender roles put this pressure on men.

Community Organization and Leadership for Health

Achieving improvements in health goes beyond homes and individual's personal responsibility. Many aspects of timely care-seeking, appropriate home care and sound environmental health and hygiene require robust community stewardship. This stewardship is a recurring theme in Matabeleland North and health is no exception. While tailored efforts focused on specific participant groups are needed, collective community support for health cannot be forgotten. The research points out many critical elements to consider to strengthen community health actions and accountability. Community Health

Clubs are seen as a relevant community structure. Many existing clubs have been inactive during the pandemic, but they are well recognized and receive support from the EHT. Reinvigorating these Clubs as an active hub and advocate for the health needs of the community would be supported.

Mothers want to be listened to and to receive responsive services. For this to happen, mothers recommend that women be part of the leadership of any club or committee. In summary, health is currently clearly in the woman's domain, and they should be supported to exercise their understanding of health needs and given the space to organize regular meetings, to ensure their voices are heard and hold themselves as leaders accountable to their requests.

Recommendations

The following recommendations for Amalima Loko consider the unique role the activity can play.

1. **To increase timely care-seeking, Amalima Loko should strengthen health services at the community level, forge linkages with faith leaders, and reinforce home care practices, in recognition of the hierarchy of resort to care.**

The findings delineated a hierarchy of resort to health care based on the illness. For most health issues, families seek care from health services although distance, often requiring costly transport to facility-based services is a key challenge. The first line of resort is often to the community VHW. For some illnesses that often go untreated at the health facilities or are with spiritual cause, people seek care at traditional healers or from the church or rely on home care. Amalima Loko can increase timely and appropriate use of health services through several approaches**.**

Strengthen the first line of care, the VHW, for early care-seeking:

- Advocate within the health system to help ensure VHWs are consistently equipped with the necessary supplies and equipment to offer in-demand services to communities, including malaria test kits and water purification tablets. In Binga, and other communities far from health facilities, needs include contraceptives. After assessing specific equipment and supply needs, partner with organizations providing access to these supplies and bolster tracking and accountability of supplies—in a coordinated effort with community and district authorities.
- Help VHWs to communicate requests for LLIN through health facilities and district health authorities, and promote their use by families with women and children especially during times of malaria transmission.

- Encourage health facility outreach. Given vehicle and fuel shortages, prioritize those communities with extremely difficult access or those which might have been cut off for a period due to a natural disaster such as flooding. Also support efforts to plan schedules and mobilize communities so that outreach happens, even if less frequently, to strength community-facility linkages. Health facility representation in the community would further strengthen VHW's community efforts if implemented in close coordination.

- Reinvigorate Community Health Clubs (CHCs) to support multiple in-demand health efforts and bolster the actions of VHWs, for example, transportation schemes for emergencies and routine health service visits. Schemes could be tested initially on a small-scale until sustainable options through partnerships and community savings can be ascertained.

- For adolescents, strengthen the capacity of health care providers and VHWs on adolescent- and youth-responsive service provision to facilitate better distribution of improved reproductive health services, integrate reproductive health education through the Care Group curriculum, and explore linkages and partnerships e.g., with Population Services Zimbabwe and World Vision in some areas. Form adolescent support groups with mentors, given girls' positive experience with group mentors in these districts, that have ended or are soon ending,

Forge linkages with churches and others in the faith community:

- Foster a relationship with the religious community to establish critical referral pathways from religious care to medical care when needed and vice-versa as appropriate.
- Reach out specifically to certain churches that limit care-seeking by members.

Reinforce positive home care practices with families:

- In health and nutrition program activities, support the positive palliative and preventive home actions used to mitigate illness and its consequences. This should be done in close coordination with trusted community agents such as the VHW, teachers, and in some cases religious healers.
- Link home health care actions with other actions families can take to improve their resilience to on-going changes in their environment and economic situation.

2. To improve hygiene behaviors, Amalima Loko should explore how to make needed product options affordable for households.

Cost emerged as the major factor that impedes household environmental health and hygiene behaviors.

Establish and promote finance schemes to make basic preventive health products more affordable: cement for latrines, water filtration and purification tablets, handwashing stations and soap, and sanitary materials for women and girls:

- Social entrepreneurship schemes to make and sell or trade products. These could emerge from VS&L groups.
- Product promotion to VS&L group members when they have received funds.
- Link with private sector suppliers to reduce costs through bulk purchase.
- For LLINs specifically, Amalima Loko could help address blockages to supplies by reviewing the government policy to distribute free nets and advocate with facilities and district authorities, coupled with renewed promotion of use of LLINs especially during peak malaria seasons.
- For latrines, Amalima Loko could try to provide or procure cement through VS&L groups together with collective community actions to construct and promote consistent use of latrines.
- Investment schemes for remittance funds that would allow families direct access to needed products for home improvements.

Test products with households through Selection of Improved Practices (SIPs) to explore how families would use and maintain use:

- Many mothers and fathers requested water purification tablets and felt that they would use these rather than boiling water. Links with projects working on water purification should be

made. Taste and actual use should be explored. In addition, those who drink surface water may also need water filtration options.

- Handwashing behavior was high during COVID-19 but has since relaxed. Introducing sturdier handwashing stations than Tippy Taps, and homemade liquid soap, may help to refresh interest.

  To inform these options, Amalima Loko staff in communities could observe the full water 'value chain' to better understand how much water is available for handwashing, for example, and how drinking water is stored and handled. This could be incorporated into regular community monitoring activities and factored into thinking about the water plans overall for Amalima Loko and the number of dams and boreholes increase.

- For some households, smokey kitchens may put mothers and children at risk of health problems. Feasible ways to ventilate, even in cold weather, could be explored with households.

3. To support women and girls to take health actions, Amalima Loko should foster and support intragenerational family dialogue around health, goals, and aspirations.

Promote family dialogue to support multiple health outcomes:

- Encourage family dialogue around health and health care-seeking, as well as household environmental health and hygiene to increase respect and help for mothers. The dialogue should recognize that health is women's domain but that they should be listened to and need family help with material and non-material resources and special care during the first 1,000 days.
- To help women have more family care during pregnancy and feel more respected, Amalima Loko should support women to make a birth plan with their families and to increase awareness broadly within the family and community concerning the needs of the mother. For adolescent girls, family dialogue around the family situation, roles, and care for adolescent girls, could help to reduce girls' need to seek financial support from men. Family dialogue to share the challenges would help to reduce conflict and frustration in the family.

Use flexible models for family dialogue based on local social contexts:

With different household and family composition in the communities, the activity could use a flexible model to promote family dialogue and joint decision-making. Where families live with or regularly contact elders and extended family members, family dialogue would need to engage these extended family members at varying intensity with different members of the nuclear family. Where families are polygamous, such as in Binga, this approach would need to change. Amalima Loko's gender analysis found that in polygamous households women have greater decision-making power about asset acquisition and management; this reality may require different dialogue dynamics.

- Engage elder women in extended families, as several mothers requested. Specifically, Amalima Loko should intentionally form discussions and dialogue with elders during Community Visioning and other community events. Traditional leaders would be useful advocates and champions to listen to elders. The concept of we all 'live and learn' could be tested with elder women to increase approval and reduce resistance to recommendations coming from health workers and mothers.
- Engage men and elders as helpers through Male Champions, gender dialogues and community leadership engagement, while also reflecting on harmful effects of gendered expectations on

everyone, including men. This reflection will help reduce the singular pressure on men and increase support to women. Ensure that men do not become instructors or arbiters, and in this way undermine women's roles or space.

- Tailored support for women and girls who experience gender-based violence. Amalima Loko should link with existing services in the districts such as the one-stop centers for GBV established by Pathways and encourage use through community leaders, VHWs, and Care Groups. The project could also capacitate community leaders and VHWs to identify and refer survivors. This can be done as other planned efforts through VS&L, Care Groups, and gender dialogues are implemented to increase women's economic empowerment and agency.

4. To enhance community leadership for health, Amalima Loko should extend community action and accountability activities to health.

As Amalima Loko works with local leaders to reinvigorate Community Health Clubs, and form Care Groups, several recommendations follow to make these responsive to families' requests.

Community structure has solid footing with existing community resources and community members writ-large:

- Any community health committee or club, Care Group and other related structures, should be allied closely with the VHWs who are already respected.
- Community Health Club leadership should be placed in women's hands, should reflect the community, and tackle issues that represent community needs and desires.
- As part of regular progress reviews, community leaders can recognize VHWs and health workers for their efforts and highlight community members who have been pivotal to accomplishments through certificates, an event on a holiday like mothers' day, or extra packages of water purification tablets, for example.

Emphasize women's collective action and mutual support throughout community activities:

- Mothers identified activities that could be formed or more open for women to collectively manage, such as gardens.
- Mothers noted multiple ways that they would be able to support each other day to day and in times of need. Intentionally foster and publicly recognize this type of support, contributing to the resilience goals, through VS&L and Care Groups that engage women, as well as other activities.

Ensure transparency and accountability:

- Provide social proof that the CHC (and other structures for community health) is serving the public good, which can be accomplished through a community scorecard that tracks activity goals and accomplishments. Scorecards heighten transparency, commitment, and accountability and often open frank dialogues about problems.
- Ensure there is space in the community governance discussions for health and representation from the CHC and Care Groups.

REFERENCES

Food and Nutrition Council of Zimbabwe. National Nutrition Survey 2018. Food and Nutrition Council, UNICEF, WFP. Harare. FNC National Nutrition Survey 2018_web.cdr (unicef.org)

Gerede R, Machekanyanga Z, Ndiaye S, Chindedza K, Chigodo C, Shibeshi ME, Goodson J, Daniel F, Kaiser R. How to Increase Vaccination Acceptance Among Apostolic Communities: Quantitative Results from an Assessment in Three Provinces in Zimbabwe. *J Relig Health*. 2017 Oct;56(5):1692-1700. doi:10.1007/s10943-017-0435-8

Gona PN, Gona CM, Chikwasha V, Haruzivishe C, Rao SR, Mapoma CC. Oral rehydration solution coverage in under 5 children with diarrhea: a tri-country, subnational, cross-sectional comparative analysis of two demographic health surveys cycles. *BMC Public Health.* 2020 Nov 16;20(1):1716. doi: 10.1186/s12889-020-09811-1

Kuguyo, O., Matimba, A., Tsikai, N., Magwali, T., Madziyire, M., Gidiri, M., Dandara, C., & Nhachi, C. 2017. "Cervical cancer in Zimbabwe: a situation analysis." *The Pan African medical journal.* 27: 215.

Mangundu, M., Roets, L., & Janse van Rensberg, E. 2020. "Accessibility of healthcare in rural Zimbabwe: The perspective of nurses and healthcare users." *African journal of primary health care & family medicine*, *12*(1), e1–e7. https://doi.org/10.4102/phcfm.v12i1.2245

Muchena G, Dube B, Chikodzore R, Pasipamire J, Murugasampillay S, Mberikunashe J. A review of progress towards sub-national malaria elimination in Matabeleland South Province, Zimbabwe (2011-2015): a qualitative study. *Malar J.* 2018 Apr 3;17(1):146. doi: 10.1186/s12936-018-2299-0

Mundagowa PT, Chimberengwa PT. Malaria outbreak investigation in a rural area south of Zimbabwe: a case-control study. Malar J. 2020 Jun 1;19(1):197. doi: 10.1186/s12936-020-03270-0.

UNDP 2021 Zimbabwe SDG Goals and Targets available at https://www.undp.org/zimbabwe/publications/zimbabwe-progress-review-report-sustainable-development-goals

UNFPA Government of Zimbabwe/UNFPA 7th Country Programme 2016 – 2020 Evaluation. Final Evaluation Report. Harare. Zimbabwe_-_CPE_-_UNFPA_Zimbabwe_7th_CPE_Final_Report_-_Updated_22_Feb_2021_With_Annexes_in_the_report.pdf

UNFPA Annual Report 2019. Harare, Zimbabwe. Annual Report 1.cdr (unfpa.org)

UNICEF, The World Bank and ZimSTAT. 2015. Zimbabwe Poverty Atlas. Small Area Poverty Estimation: Statistics for Poverty Eradication. Harare, Zimbabwe: UNICEF, The World Bank and Zimbabwe National Statistics Agency. Layout 1 (zimstat.co.zw)

WHO Perspectives on Maternal Mortality in Zimbabwe: A Reflection of the Year 2014 [Internet]. [cited 2021 Feb 17]. Available from: https://www.afro.who.int/news/who-perspectives-maternal-mortality-zimbabwe-reflection-year2014#:~:text=the%20Year%202014-,WHO%20Perspectives%20on%20Maternal%20Mortality%20in%20Zimbabwe,Reflection%20of%20the%20Year%202014&text=Maternal%20Mortality%20Ratio%20(MMR)%20for,ratio%20still%20remains%20unacceptably%20high.

Zimbabwe National Statistics Agency and ICF International. 2016. Zimbabwe Demographic and Health Survey 2015: Final Report. Rockville, Maryland, USA: Zimbabwe National Statistics Agency (ZIMSTAT) and ICF International.

Zimbabwe National Statistics Agency (ZIMSTAT) and UNICEF (2019). Zimbabwe Multiple Indicator Cluster Survey 2019, Survey Findings Report. Harare, Zimbabwe: ZIMSTAT and UNICEF. https://www.unicef.org/zimbabwe/reports/zimbabwe-2019-mics-survey-findings-report

Zimbabwe National Statistics Agency and UNFPA. Mortality Thematic Report, 2015, Zimbabwe National Statistics Agency, UNFPA. [Internet]. Available from: http://www.zimstat.co.zw/wp-content/uploads/publications/Population/population/mortality-thematic-report.pdf

ZIMPHIA 2020 Summary Sheet: Zimbabwe Population-Based HIV Impact Assessment. December 2020. https://phia.icap.columbia.edu/zimbabwe-2020-summary-sheet/

ZimVAC 2020a September 2020 Zimbabwe Rural Livelihoods Assessment report available at https://reliefweb.int/report/zimbabwe/zimbabwe-vulnerability-assessment-committee-zimvac-2020-rural-livelihoods-assessment

ANNEX A: Information Gaps

Information Gaps for Health Programming in Matabeleland North

Building on what was known about the health situation in Matabeleland North a Theory of Change was developed to set the stage for what Amalima Loko would strive to accomplish to make a significant improvement in health outcomes and in so doing contribute to other Amalima Loko outcomes. Under the facilitation and guidance of the Program Cycle Support team, the Amalima Loko team analysed the programs Theory of Change (ToC,) and identified the following knowledge gaps which are the basis for the design of the Health Behaviors research.

Information Gap #	Pathway/ Output #	Information Gap
69	Overarching	What are cross-sectoral barriers to improved health? What are drivers of adoption of health/nutrition practices (role of increased income, productivity, gender roles, etc.)?
85	3.2.2	What are the individual behaviours, cultural practices/social norms, and structural factors contributing to poor health outcomes in Matabeleland North? What are the perceptions and practices around self-care, preventive care and seeking of curative care?
86	3.2.2.1	What role do religious and cultural beliefs/practices play in enabling or limiting demand for health services in the target communities?
87	3.2.2.1	What are the supply side barriers (e.g., quality of care and supplies) to health service access and how can the project address them?
89	3.2.2 Output 45	What are the individual, community, and health system barriers (MoH) and facilitators to revitalizing Community Health Clubs (CHCs)?