Access and Barriers to Health Care Services in rural Malawi

Inaugural-Dissertation

zur Erlangung des Doktorgrades

der Hohen Medizinischen Fakultät

der Rheinischen Friedrich-Wilhelms-Universität

Bonn

Regina Ritter

aus Karaganda (Kasachstan)

2021

Angefertigt mit der Genehmigung

der Medizinischen Fakultät der Universität Bonn

1. Gutachter: Prof. Dr. Thomas Kistemann
2. Gutachterin: Prof. Dr. Mariacarla Gadebusch Bondio

Tag der Mündlichen Prüfung: 01.02.2021

Aus dem Institut für Hygiene und Öffentliche Gesundheit

Direktor: Prof. Dr. med. Nico T. Mutters MPH

Dedication

Dedicated to my beloved father, who has always been my source of inspiration.
Thank you for your encouragement,
for your support,
and for believing in me.
You will always be in my heart.

Table of Content

List of Abbreviations

AFCAP	African Community Access Programme
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral Therapy
CHAI	Clinton Health Access Initiative
CHAM	Christian Health Association of Malawi
CLGF	Commonwealth Local Government Forum
DFID	Department for International Development (UK)
DHO	District Health Office
EHP	Essential Health Package
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GNI	Gross National Income
ICF	International Classification of Functioning, Disability and Health
IOM	Institute of Medicine
HFMH	Holy Family Mission Hospital
HIV	Human immunodeficiency virus
HSA	Health Surveillance Assistant
MHC	Mobile Health Clinic
MK	Malawian Kwacha
MOH	Ministry of Health
MSPA	Malawi Service Provision Assessment
NGO	Non-Governmental Organization
SDGs	Sustainable Development Goals

SDNP	Sustainable Development Network Programme of Malawi
SLA	Service Level Agreements
STI	Sexual Transmitted Infection
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USD	US Dollar
WHO	World Health Organization

1. Introduction

Envisaging a world free of poverty, hunger, and disease, the United Nations (UN) formulated the 2030 Agenda for Sustainable Development. Pointed out as Goal 3, the UN aims to “ensure healthy lives and promote well-being for all at all ages” (UN, 2015: 16). As the burden of disease in a country is directly impacted by the level of access to health care, ensuring equitable and universal access to quality services and essential medicines is an integral target of the Agenda (Black et al., 2004; UN, 2015).

Big disparities with respect to health care services and people´s health status exist between the poor and developed countries as well as between the better-off and poor within a country (Obrist et al., 2007). Low-income countries are often facing a high burden of disease, while their governments are struggling to provide adequate access to health care services to their population. Malawi is one of these low-income countries and it has a Human Development Index that positions it at 173 out of 188 countries (UNDP, 2015). In its Vision 2020, the Malawi Sustainable Development Network Programme (SDNP) acknowledges that lacking access to quality health services is one of the most serious problems of Malawi´s health sector (Malawi SDNP, 2003). Furthermore, the Malawi SDNP formulates goals to provide its citizens a high quality of life by social, cultural, and political governance. Overcoming poverty, achieving food security, and strengthening social services such as eduaction and health care in rural and urban areas are some of the objectives.

In order to achieve better health, SDNP aims to provide comprehensive access to health care services at each level of the delivery system (Malawi SDNP, 2003). A high burden of disease, especially of HIV/AIDS and malaria (MoH Malawi and ICF International, 2014), and the chronic poverty among a large share of the population magnify the necessity for health care. However, the provision of adequate health care is limited by low financial capacity.

Although the total number of health care facilities has grown over the past years (MoH Malawi and ICF International, 2014), the density of workforce and health infrastructure in Malawi is still way lower than the global and the African average (WHO, 2015). Furthermore, the predominantly rural residence is another limiting factor for comprehensive access to health care in Malawi (Geoffroy et al., 2014). Eighty-four percent

of the population lives in rural areas, while only 46 % live within a five kilometres range of a health facility that is either public or private (WHO, 2015; WHO - Regional Office for Africa, 2009). Especially vulnerable groups, such as elder or disabled people, are very often cut-off from health care services since their abilities to travel are limited (Geoffroy et al., 2014).

One step to improve access can be the identification of barriers and facilitators that influence sick people´s decision-making processes for seeking health care services. On this basis, it also tackles the health status of a population.
Barriers for accessing health care in low-income countries have been addressed by several studies (Abiiro et al., 2014; Alberti et al., 2007; Arcury et al., 2005; Brems et al., 2006; Eide et al., 2015; Ensor and Cooper, 2004; Fisher et al., 2017; Geoffroy et al., 2014; Goudge et al., 2009; Noor at al., 2009). In Sub-Saharan African countries, barriers have been found to include high expenditures for services, lack of transport means, and high costs of transportation to get to the facilities. Lacking availability of quality services, understaffed health facilities, inadequate equipment, and insufficient drugs are further known barriers for accessing health care services (Eide et al., 2015; WHO, 2015).

To what extent these barriers have an impact on sick people´s decision-making process in rural Malawi and whether they can be verified, disproved or extended, is an objective of this case study.

1.1 Theoretical background

The following concepts provide the theoretical foundation of this thesis within the context of current research. It gives a short overview about different approaches that are used to analyse access and barriers to the utilisation of health care services.
The framework that is applied on this presented study will conclude this theoretical concept and will be presented in chapter 2.3.

1.1.1 Access to health care services

As access to health care services impacts the detection and treatment of health conditions as well as the prevention of disease and disability, it affects people´s quality of life and

their life expectancy (HealthyPeople.gov, 2016). According to Daniels (1985), accessing health care can be described as an essential precondition to realising people´s ability to participate fully in society. Therefore, ensuring access becomes a social obligation in order to protect justice and equality of opportunity (Daniels, 1985). Furthermore, health care was found to be described as a merit good – a service that individuals and society should be able to make use of according to their needs, rather than to their ability or willingness to pay (Johnson, 2005; MacKinney, 2014). Therefore, equitable access to health care can be described as a social good and belongs to the human rights (MacKinney, 2014; Gulliford et al., 2002).

Despite its widely accepted importance, the definition of access to health care is inconsistent and often not equally defined (Aday and Andersen, 1974; MacKinney, 2014; Penchansky and Thomas, 1981). While some authors equate access with the entry or utilisation of the health care system (Donabedian, 1972; Penchansky and Thomas, 1981; Institute of Medicine, 1993), others associate access with attributes of the potential user or of the health care delivery system (Gulliford et al., 2002; Khan and Bhardwaj, 1994). Aday and Andersen (1974) evaluate access through the actual utilisation of the services and the consumer´s satisfaction with them. Although there are many definitions of access to health care services, most researchers recognise that access is related to the availability and the timely use of services according to people´s needs (Peters et al., 2008).

The two frameworks of Aday and Andersen (1974) and Penchansky and Thomas (1981) have been a helpful basis for this research. In addition to this, Obrist et al. (2007) built a framework that combines research of public health and social sciences with methods of poverty reduction. These frameworks have been developed over the years and are presented in the following sections.

1.1.2 The Framework for the Study of Access by Aday and Andersen (1974) and its developments

Aday and Andersen (1974) recognise that “accessibility is something besides the mere existence or availability of resources at any given time” (Aday and Andersen, 1974: 210). They suggest two main categories of indicators to validate access to health care: process and outcome indicators. In this context, process indicators on side of the health delivery system could be physician to population ratios per areal unit, the mean travel time to reach a health care facility, resources, or working hours. Potential process indicators on side of the population at risk are knowledge and sources of health care information, insurance coverage, mobility, or symptoms of illness. Outcome indicators could be measures of the utilisation of health services or consumer satisfaction (Aday and Andersen, 1974; Ueberschaer, 2015).

As presented by Donabedian (1972), these indicators correspond to the structure, process, and outcome measures for evaluating the quality of medical care (Donabedian, 1972; Khan and Bhardwaj, 1994).

However, according to Ueberschaer (2015), Aday and Andersen fail in giving a clear definition of access to the health care system in their framework, although suggested indicators could be helpful to evaluate a health care system.

In order to include an intermediate dimension between process and outcome indicators, Khan and Bhardwaj (1994) extended Aday´s and Andersen´s framework by including facilitators and barriers to comprehend the concept of access. When facilitators overwhelm barriers, access occurs (Khan and Bhardwaj, 1994; MacKinney, 2014). Figure 1 shows the Schematic Model of Access to Health Care introduced by Khan and Bhardwaj (1994).

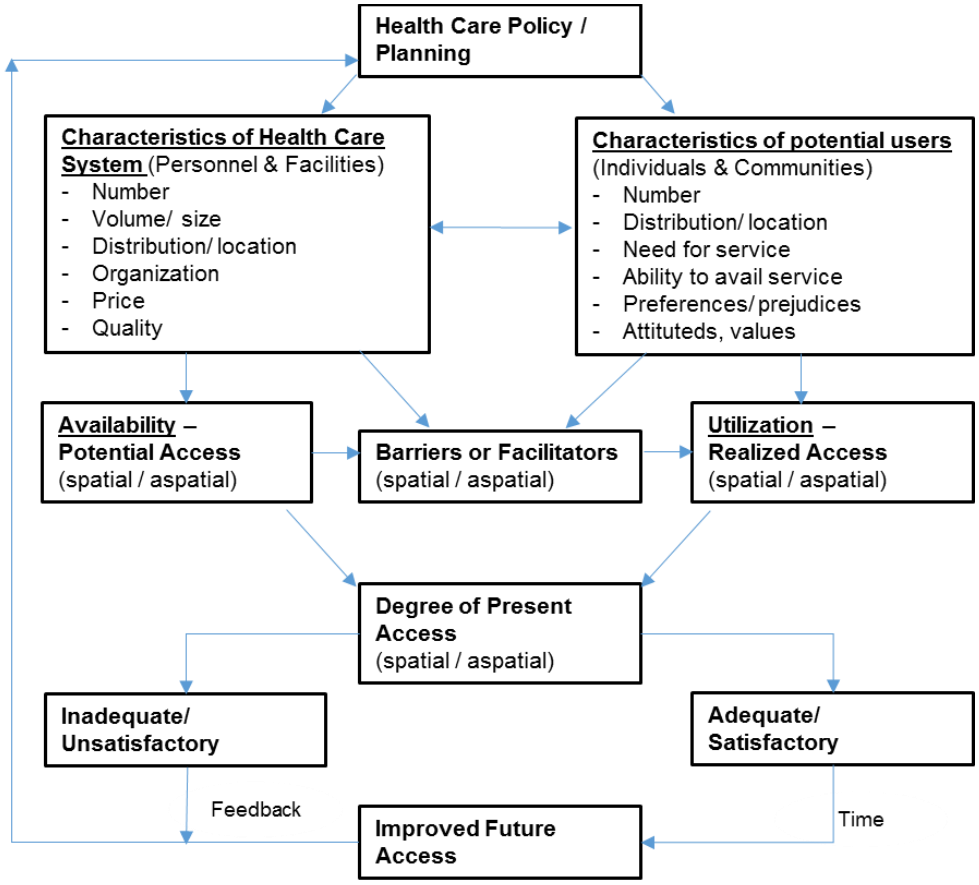

Figure 1: Schematic Model of Access to Health Care. Khan and Bhardwaj (1994) describe access as an outcome that is determined by an interplay between the characteristics of the health system and the population at risk. Potential access relates to the availability of health care resources according to people´s needs. Realised access refers to the actual utilisation of services, depending on barriers and facilitators that reflect dimensions of service providers and potential users. Public policy and planning efforts moderate these processes. The authors distinguish between spatial (=geographic) and aspatial (=social, economic, and cultural) access. As present access is rarely adequate in all respects, feedback to policy and planning is needed to address issues (own design after Khan and Bhardwaj, 1994).

1.1.3 The concept of access by Penchansky and Thomas (1981) and its developments

Penchansky and Thomas (1981) have defined access as a concept that describes the fit between the patient´s needs and the health care system with five dimensions: availability, accessibility, accommodation, affordability, and acceptability. All of them influence the utilisation of health care facilities and contribute to the patients´ satisfaction:

“**Availability**, the relationship of the volume and type of existing services (and resources) to the clients' volume and types of needs. It refers to the adequacy of the supply of physicians, dentists and other providers; of facilities such as clinics and hospitals; and of specialized programs and services such as mental health and emergency care.

Accessibility, the relationship between the location of supply and the location of clients, taking account of client transportation resources and travel time, distance and cost.

Accommodation, the relationship between the manner in which the supply resources are organized to accept clients (including appointment systems, hours of operation, walk-in facilities, telephone services) and the clients' ability to accommodate to these factors and the clients' perception of their appropriateness.

Affordability, the relationship of prices of services and providers' insurance or deposit requirements to the clients' income, ability to pay, and existing health insurance. Client perception of worth relative to total cost is a concern here, as is clients' knowledge of prices, total cost and possible credit arrangements.

Acceptability, the relationship of clients' attitudes about personal and practice characteristics of providers to the actual characteristics of existing providers, as well as to provider attitudes about acceptable personal characteristics of clients. In the literature, the term appears to be used most often to refer to specific consumer reaction to such provider attributes as age, sex, ethnicity, type of facility, neighborhood of facility, or religious affiliation of facility or provider. In turn, providers have attitudes about the preferred attributes of clients or their financing mechanisms. Providers either may be unwilling to serve certain types of clients (e.g., welfare patients) or, through accommodation, make themselves more or less available.” (Penchansky and Thomas, 1981: 128f.).

Although the authors admit that these five dimensions cannot easily be distinguished, they do not clarify the level of interactions between them. This structure allows researchers to

evaluate the access to health care services from different perspectives but the authors ignore the relationship of access with the users´ ability to receive services and the barriers that influence their utilisation (Khan and Bhardwaj, 1994; Ueberschaer, 2015).

Butsch (2011) points out that access to health care services contains more than potential access or actual utilisation. He includes the evaluation of quality and defines access to health care as the opportunity of utilisation versus the actual utilisation. His approach emphasises the opportunity to utilise curative health care in order to improve health conditions as well as appropriate preventive and custodial health care services for maintaining a good health status (Butsch, 2011; Ueberschaer, 2015). Furthermore, his framework contains barriers and facilitators (Butsch, 2011).

Butsch (2011) based his framework on the approach of Penchansky and Thomas (1981) even though he criticises that the actual utilisation process is not included in their definition of access (Butsch, 2011; Ueberschaer, 2015). Moreover, Butsch (2011) describes six dimensions that influence utilisation. He introduces the dimension awareness in addition to the five dimensions of Penchansky and Thomas (1981). This dimension describes awareness of need for health care and knowledge about available suppliers (Butsch, 2011). Table 1 summarizes this concept access and its developments.

Table 1: The concept of access and its developments. Penchansky and Thomas (1981) have defined access as a concept that describes the fit between the patient´s needs and the health care system with five dimensions: availability, accessibility, accommodation, affordability, and acceptability. Butsch (2011) introduces the dimension awareness as a sixth dimension to accessing health care services. All of them influence the utilisation of health care facilities and contribute to patients´ satisfaction (own design; Data Penchansky and Thomas, 1981; Butsch, 2011).

Dimension	Content
Availability	Availability of health care resources refers to sufficient services and resources to meet the volume and needs of the communities served.
Accessibility	An accessible service is located within reasonable geographical proximity to the client regarding distance and travel time.
Accommodation	Accommodation refers to the relationship between the organisation of services to accept clients and the client´s ability to use services. This includes hours of operation, appointment systems, and facility structures.
Affordability	Affordability relates to the direct and indirect costs of receiving care and the consumers´ ability to pay.
Acceptability	Acceptable services respond to providers´ and consumers´ attitudes regarding characteristics of the services, social, religious, and cultural concerns.
Awareness	Awareness of services includes information regarding when, how, and where to use health care services.

1.1.4 Access to Health Care in Contexts of Livelihood Insecurity by Obrist et al. (2007)

Despite the fact that Obrist et al. (2007) do not explicitly mention the concept of access by Penchansky and Thomas (1981), the authors apply their five dimensions in their framework. However, Obrist et al. (2007) replace the dimension “accommodation” by “adequacy”, although the authors refer to the same content (Obrist et al., 2007; Ueberschaer, 2015).

Their framework combines research of public health and social science with methods of poverty reduction, in order to analyse and improve “access to health care services in

resource-poor countries" (Obrist et al., 2007:1584). They use three approaches for investigating access to health care:

One approach covers health-seeking studies that are supposed to provide deeper understanding of when, why, and how people seek access to health care. These studies concentrate on individuals, social groups, and communities in order to investigate interactions between populations at risk and professionals (Obrist et al., 2007).

Health service studies are subjects of the second approach and emphasise access to health care, while the focus is on the supply side and interventions to reduce supply barriers. This approach is considered as utilisation rates and defines access as a general concept, which summarises the five dimensions by Penchansky and Thomas (1981). The approach is less oriented towards health-seeking processes, but searches for policy interventions in order to reduce supply barriers and improve service delivery as well as quality of care. Cultural norms, laws, and regulations influence the provision and access to health care services (Obrist et al., 2007).

The Sustainable Livelihood Approach is the third approach for investigating health care access. It emphasises assets, resources, and activities that people can mobilise in vulnerability contexts and that are needed to bear a living under economic hardships. Whether people actually recognise an illness and seek treatment depends highly on their access and mobilisation of assets (Obrist et al., 2007).

"These livelihood assets comprise human capital (local knowledge, education, skills), social capital (social networks and affiliations), natural capital (land, water, and livestock), physical capital (infrastructure, equipment, and means of transport) and financial capital (cash and credit)" (Obrist et al., 2007: 1585).

The approach puts the human being and his actions in the centre of analysis (DFID Section 1 and 2, 1999). The Sustainable Livelihood Approach aims to understand the complex and dynamic factors that lie behind people´s actions and their choice of livelihood strategy. According to the framework, people operate in a context of vulnerability that is influenced by trends, such as political, economic or technological movements, by shocks like conflicts or natural disasters, and by seasonality, such as food availability, employment or prices. This vulnerability context lies furthest outside people´s control and influences their livelihood strategies, their access to poverty reducing factors as well as

their way of using assets (DFID Section 1 and 2, 1999).

By reinforcing the positive aspects and decreasing negative influences or constraints of people´s access to livelihood assets, people are provided with opportunities for self-determination, the expansion of choice, and the flexibility to adapt over time. The higher people´s choice and flexibility in their livelihood strategies, the greater is their ability to resist or adjust to shocks and stresses of the vulnerability context. Therefore, livelihood becomes sustainable and its outcomes become more suitable to people´s needs (DFID Section 1 and 2, 1999).

Figure 2 shows the Health Access Livelihood Framework by Obrist et al. (2007).

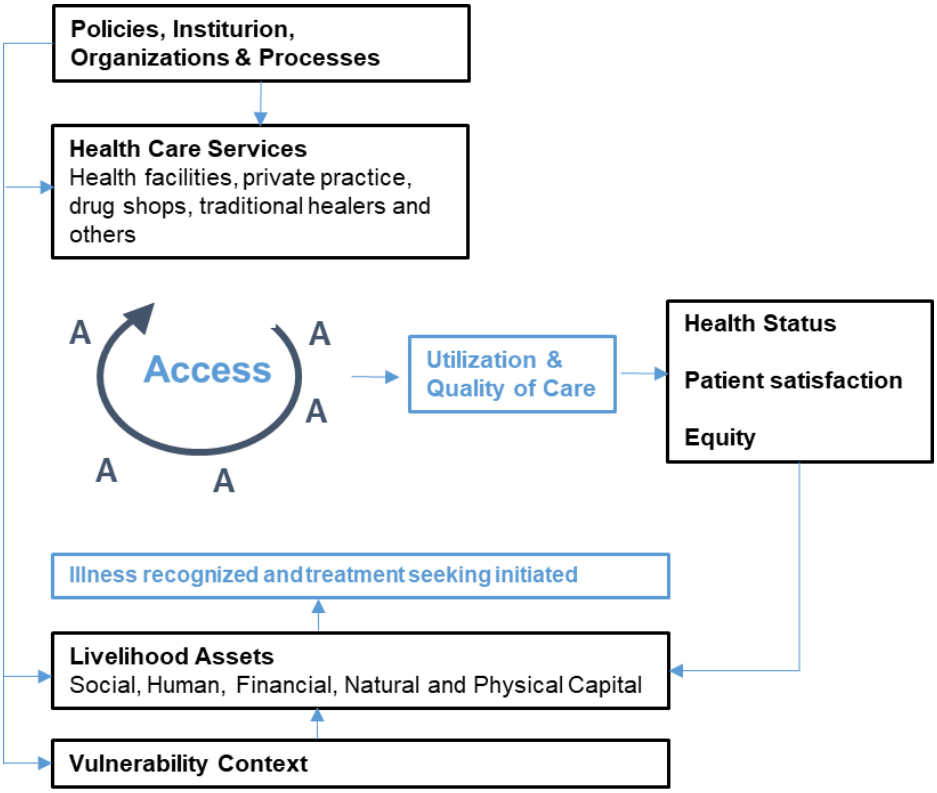

Figure 2: The Health Access Livelihood Framework (Obrist et al, 2007). The framework combines research of public health and social science with methods of poverty reduction to analyse access in resource-poor countries. The first approach covers health-seeking studies to provide deeper understanding of when, why, and how people seek health care. Health service studies focus on the supply side and interventions to reduce supply barriers. The approach is considered as utilisation rates, summarising the five dimensions of access by Penchansky and Thomas (1981). The Sustainable Livelihood Approach emphasises assets, resources, and activities that people can mobilise in vulnerability contexts to bear a living under economic hardships. Cultural norms, laws, and regulations influence the provision and access to health care (own design after Obrist et al., 2007).

The degree of access can be reached along the five dimensions availability, accessibility, affordability, adequacy, and acceptability, which focus on the supply side. In addition to that, access is affected by the interplay between health care services, which are influenced by further institutions and processes.
Whether people actually recognise an illness and seek treatment, depends highly on their ability to mobilise livelihood assets in vulnerability contexts. In order to improve access and achieve a high utilisation rate, health care services have to be brought into line with clients´ needs and resources. Outcomes can be measured in terms of patient satisfaction, health status, and equity (Obrist et al., 2007).

1.2 Barriers and Facilitators

Barriers and facilitators can be found for each of the dimensions of access and are influenced by the different livelihood assets. Lewis (1977) and Kiwanuka et al. (2008) assign barriers and facilitators to the consumer´s and the provider´s side. Ayeni et al. (1987) cluster them into institutional and geographical barriers:
”*Institutional barriers may refer to inability to pay, discriminatory practices, legal restrictions, social barriers, or perception of the quality of service. If the reason is 'long distances to service', then the problem is one of geographical accessibility. If it is to be overcome, the distances must be made shorter by locating or changing the locations of the service. If other circumstances prevent the population from using the service at the given distance, they should be changed so that people will be willing to 'go the extra mile'*”
(Ayeni et al., 1987:1083; Ueberschaer, 2015).

According to Lewis (1977), financial or economic barriers are the most important ones on the side of the consumer. Although the introduction of health insurances can reduce the direct costs and improve utilisation (Dhillon et al., 2012; Sekabaraga et al., 2011; Ueberschaer, 2015), informal and indirect costs hit especially the poor (Abel-Smith and Rawal, 1992; Mamdani and Bangser, 2004). Hidden or indirect costs can include the need for food at the hospital or an inadequate supply of pharmaceuticals, resulting in the need of more drugs than usually necessary. Furthermore, the need for regular visits by the family in order to take care of an inpatient family member can result in the loss of income or higher costs for transportation (Ueberschaer, 2015). Additionally, informal costs can

arise for the payment of bribes, which still seems to be common practice in African countries (Abel-Smith and Rawal, 1992; Mamdani and Bangser, 2004).

Possible barriers and facilitators for utilisation of health care services that were found within literature are summarised in Table 2. They are grouped according to the five dimensions of access by Penchansky and Thomas (1981) and the additional dimension awareness, which was introduced by Butsch (2011). However, some barriers and facilitators appear for different dimensions and have close interdependencies to other factors (Ueberschaer, 2015).

Table 2: Dimensions of access, affiliated barriers, and facilitators. Barriers and facilitators can be found for each dimension of access and are influenced by livelihood assets. Barriers and facilitators can be assigned to the consumer´s and the provider´s side. Some appear for different dimensions and have close interdependencies to other factors (own design; Data: Abel-Smith and Rawal, 1992; Aday and Andersen, 1974; Butsch, 2011; Goudge et al., 2009; Kiwanuka et al., 2008; Mamdani and Bangser, 2004; Obrist et al, 2007; Penchansky and Thomas, 1981; Peters et al., 2008).

	Barrier	**Facilitator**
Awareness	**lack of (health) knowledge** (Butsch, 2011; Kiwanuka et al., 2008)	**awareness of need for health care; knowledge about available suppliers; health monitoring of the health status of the population and for assessing the demand for health care** (Aday and Andersen, 1974; Butsch, 2011) **proximity to people with secondary or higher education** (Gage, 2007)
Accessibility	**costs for public transport; long distance, travel time** (Butsch, 2011; Penchansky and Thomas, 1981) **long distance, lack of public/ private means of transport** (Obrist et al., 2007)	**short distance to services** (Kiwanuka et al., 2008) **good roads** (Peters et al., 2008) **transportation resources** (Penchansky and Thomas, 1981)
Affordability	**costs for health services** (Butsch, 2011; Kiwanuka et al., 2008; Mamdani and Bangser, 2004) **informal and indirect costs** (Abel-Smith and Rawal, 1992; Obrist et al., 2007; Peters et al., 2008)	**community health insurance; reducing/waiving fees for health services** (Butsch, 2011) **knowledge of prices, total cost and possible credit arrangements** (Penchansky and Thomas, 1981)

	Barrier	**Facilitator**
Availability	**(perceived) lack of drug stock** (Goudge et al., 2009; Peters et al., 2008) **limited opening hours** (Peters et al., 2008) **lack of ambulances** (Goudge et al., 2009)	**high number of facilities and offered services** (Butsch, 2011) **opening hours** (Peters et al., 2008) **adequate supply in relation to need** (Butsch, 2011; Obrist et al., 2007; Penchansky and Thomas, 1981) **availability of drugs** (Kiwanuka et al., 2008; Obrist et al., 2007)
Acceptability	**socio-cultural factors: social affiliation, relationship to supplier, recommendations, prejudices, high utilisation** (Butsch, 2011) **perceived low quality; gender inequities** (Peters et al., 2008) **social/personal characteristics of the provider and of the patients** (Penchansky and Thomas, 1981) **perceived bad attitude in health care providers against the patient**; l**ack of trust in the qualification of health workers** (Kiwanuka et al., 2008) **poor provider-patient interaction** (Goudge et al., 2009)	**socio-cultural factors: social affiliation/ resources, relationship to supplier, recommendations** (Butsch, 2011) **social/personal characteristics of the provider and of the patients** (Penchansky and Thomas, 1981)
Accommodation	**limited opening hours, long waiting time; limitations through health insurance** (Butsch, 2011) **insufficient clinical services** (Goudge et al., 2009)	**opening hours (24/7)** (Butsch, 2011; Penchansky and Thomas, 1981) **perceived appropriateness** (Penchansky and Thomas, 1981) **perceived quality of care** (Kiwanuka et al., 2008; Obrist et al., 2007)

1.3 Objectives and Hypothesis

Access, barriers to health care services, and health-seeking behaviour per se have been investigated in previous studies in different settings (Abiiro et al., 2014; Brems et al., 2006; Eide et al., 2015; Ensor and Cooper, 2004; Fisher et al., 2017; Geoffroy et al., 2014; Gilson, 2009; Goudge et al, 2009, Munthali et al, 2014, Noor at al., 2009; Roberts et al, 2015). So far, little research focussed on the level of access in Phalombe district or rural Malawi as such.

The researcher assumes that people in settings like Phalombe can face hardships regarding access to health care services, when falling ill and deciding to seek health care. This research shall create an understanding of the degree of access, patients´ perceptions, and their health-seeking behaviour in rural settings in Malawi by reporting perspectives of health personnel and community members, who are rarely given the chance to contribute towards health policy (Abiiro et al, 2014). Under the premise to reveal some of the barriers and facilitators regarding the six dimensions that have been introduced in chapter 1.2 (see Table 2), the objectives of this study are:

- to verify, disprove, or extend these dimensions of access and their impact on sick people´s decision-making process in rural Malawi,
- to determine the patients´ level of information with regard to health care service provision,
- to identify reasons and enabling factors for the visit of a health care facility,
- to reveal perceived barriers to health care services,
- and to define strategies to overcome these barriers in order to access health care facilities.

A mixed-methods approach and a theoretical concept are utilised to reconstruct and explain people´s perceptions and access. The research methods applied included quantitative data in form of a questionnaire-based survey among patients and accompanying people of the Holy Family Mission Hospital (HFMH). The study population consisted of 75 participants that were selected by random sampling. Furthermore, qualitative data was collected to gain a better understanding of the population´s health seeking behaviour. Focus group discussions (FGDs) were conducted among community members in three villages in Phalombe, while each discussion had six to eight participants. Two semi-structured interviews with health care workers enhanced insight from the health care professionals´ point of view. Preliminary results of the data collection were presented to the management of the HFMH in Phalombe in November 2016. Their feedback and the group discussion, which arose from it, are part of the empirical data.

The data was collected during a two-week long field research from October to November 2016 after completing a one-month long medical traineeship in the HFMH in Phalombe. This traineeship allowed to analyse the patients´ and the staff´s attitudes, for gaining their

trust, and for getting to know the challenges and the severity of the patients´ health status. Based on the information and impressions collected, a realistic picture of the facility and the situation on site was drawn before the start of the research.

The results of this study can contribute to reaching the Sustainable Development Goals (SDGs) of the United Nations and the Malawi SDNP (Malawi SDNP, 2003; UN, 2015). Based on the empirical results of the study and findings within literature, recommendations on interventions to reduce barriers and potentially increase access might be derived.

1.4 Structure of the thesis

The introduction is followed by three main chapters that complement the study: Material and Methods, Results and Discussion, including findings and evaluation, and Conclusions.

Chapter two provides background information on Malawi´s regional context and the district Phalombe. It describes geographic conditions, socioeconomic and demographic indicators, study-relevant characteristics of Malawi´s administrative structures, economy, education, and road network. Malawi´s health care system with its providers and levels of service delivery is presented. Furthermore, it describes the framework applied, the research design, the methods applied to collect data, and the process of data analysis.

Chapter three presents the results of the field research according to the categories and codes arising from the process of data analysis. The amount and diversity of the empirical findings and of the literature research are evaluated and discussed. Outcomes will be enhanced with further background and potential interventions. Additionally, limiting factors of the study design, the research process as such, and the outcomes will be presented.

2. Material and Methods

The following chapter will provide an overview of the research methods applied in this study. It focuses on the study site, the framework for the study, and the study design including sampling size and procedures, study population, data collection, and analysis of the data. The study shall include a wide range of information regarding the perceived barriers of health care services by applying a mixed-method approach. Quantitative data was collected in form of a questionnaire-based survey. Qualitative data was gathered within focus group discussions (FGD) and in-depth interviews in order to gain a better understanding of barriers and the health seeking behaviour of the population in Phalombe.

2.1 The study-site - Regional context

This thesis focuses on access and barriers to health care services in Phalombe, a district in South Malawi. In order to get an impression of the setting, this section will introduce Malawi, including geographic and climatic conditions, socioeconomic and demographic indicators, as well as characteristics of Malawi´s administrative structures, economy, education, and road network. Furthermore, Malawi´s health care system with its providers, levels of service delivery, and density of health infrastructure is presented. The district Phalombe will be presented in chapter 2.2 as the study site.

2.1.1 Geographic and climatic conditions

Malawi is a narrow, landlocked country in Sub-Saharan Africa, located about 1,500 kilometres south of the equator. It is bordered to the east, south and southwest by the People´s Republic of Mozambique; to the west and northwest by the Republic of Zambia; and to the north and northeast by the United Republic of Tanzania. Malawi is 901 kilometres long, 80 to 161 kilometres wide and has a total area of 118,484 square kilometres (WHO – Regional Office for Africa, 2017).

About 80 % of the total area is land, whereas the remainder is water. The country´s major water body is Lake Malawi with fertile plains and mountain ranges to its west and south (National Statistical Office Malawi and ICF Macro, 2011).

Figure 3 shows a map of Malawi with its bordering countries, its regions, and its district Phalombe.

Figure 3: Map of Malawi (developed in cooperation with Christoph Höser from the GeoHealth Centre, Institute for Hygiene and Public Health, University of Bonn. Data: MASDAP 2019, RCMRD GeoPortal 2019, Natural Earth 2019, BKG, 2019) ;

The country is divided into three administrative regions and into 28 districts: The Northern with six, the Central with nine and the Southern Region with 13 districts.

The Northern Region consists mainly of high plateaus and is the least densely populated area with a density of 63 people per square kilometre. The Central Region holds low as well as high plateaus and has a density of 155 people per square kilometre.
A mix of the highest mountains in the country, extremely hot areas, and cool fertile shire highlands are found in the Southern Region. It has the highest population density with 184 inhabitants per square kilometre (WHO – Regional Office for Africa, 2017).

Malawi has a subtropical climate that is comparatively dry, strongly seasonal, and that varies depending on terrain, altitude, and proximity to the lake. A cool, dry winter lasts from May to August with average temperatures between 17 and 27 degrees Celsius. From September to October, a hot and dry season with mean temperatures between 25 and 37 degrees Celsius is apparent (Malawi Ministry of Natural Resources, Energy and Environment, 2006).
Annual average precipitation varies from 725 mm to 2,500 mm whereas 95 % of the annual rainfall takes place during the warm-wet season from November to April. This climatic variability can cause extreme conditions such as floods due to intense and concentrated rainfalls and droughts that are caused by long and dry seasons (Malawi Ministry of Natural Resources, Energy and Environment, 2006).

2.1.2 Population, socioeconomic, and demographic indicators

Malawi is inhabited by about 17.2 million people and is one of the most densely populated countries in Africa. 145 people populate one square kilometre (World Bank, 2017). The country has a relatively young population with a share of 45.2 % that are under 15 years. Its fertility rate is 5.1 children per woman and the annual growth rate is 3.1 % per year (World Bank, 2017). Furthermore, the population shows a life expectancy of 58.3 years (WHO, 2016; National Statistical Office Malawi, 2015).
Table 3 summarizes the most important population, socioeconomic, and demographic indicators.

Table 3: Current population, socioeconomic, and demographic indicators of Malawi (own design; Data: National Statistical Office Malawi, 2012; National Statistical Office Malawi, 2015; World Bank, 2017; WHO, 2016)

Current population, socioeconomic, and demographic indicators	
Total population in 1,000 (2015) *- under 15 years* *- over 60 years*	**17,215** *45.2 %* *4.9 %*
Population in rural areas (2011) urban areas	84.7 % 15,3 %
People living in poverty (2011) *- in rural areas* *- in urban areas* People living in ultra-poverty (2011) *- in rural areas* *- in urban areas*	50.7 % *56.6 %* *17.3 %* 24.5 % *28.1 %* *4.3 %*
Life expectancy at birth (2015) *- male* *- female*	58.3 years *56.7 years* *59.9 years*
Fertility rate (2014)	5.1
Population growth rate (2015)	3.1 %
Neonatal mortality rate (per 1,000 live births) (2015)	21.8
Under-five mortality rate (per 1,000 live births) (2015)	64
Maternal mortality ratio (per 1,000 live births) (2015)	6.34
Literacy among adults > 15 years (2014) *- male* *- female*	71.8 % *80.5 %* *64.0 %*

Urban-rural as well as regional differences are apparent in the data. 84.7 % of Malawi´s population lives in rural areas. While 17.3 % of the people in urban areas live in poverty, rural areas show a share of 56.6 %. The highest occurrence of poverty can be found in rural areas of the Southern Region with a share of 63.3 % (National Statistical Office Malawi, 2012).

The national poverty line is based on population-weighted subgroup estimates from household surveys. It comprises food and non-food components, which are needed to

obtain the necessary energy requirements to have a healthy and active life. If a person does not attain that minimum level of standard, he will be considered poor (National Statistical Office Malawi, 2012; World Bank, 2016).

The regional differences of people living in ultra-poverty are similar. 4.3 % of the urban population live in ultra-poverty, while rural areas have a share of 28.1 % that live under ultra-poor circumstances. Again, the rural Southern Region has the highest rate of people living in ultra-poverty (34.2 %) (National Statistical Office Malawi, 2012).
The ultra-poor households are identified as a group of people, whose consumption per capita on food and non-food items is lower than the minimum food consumption. So, they cannot afford to meet the minimum standard for daily-recommended food requirements (National Statistical Office Malawi, 2012).

Figure 4 and 5 show the distribution of poverty and ultra-poverty within Malawi´s three Regions, districts, and the country´s biggest cities Lilongwe, Blantyre, Mzuzu, and Zomba.

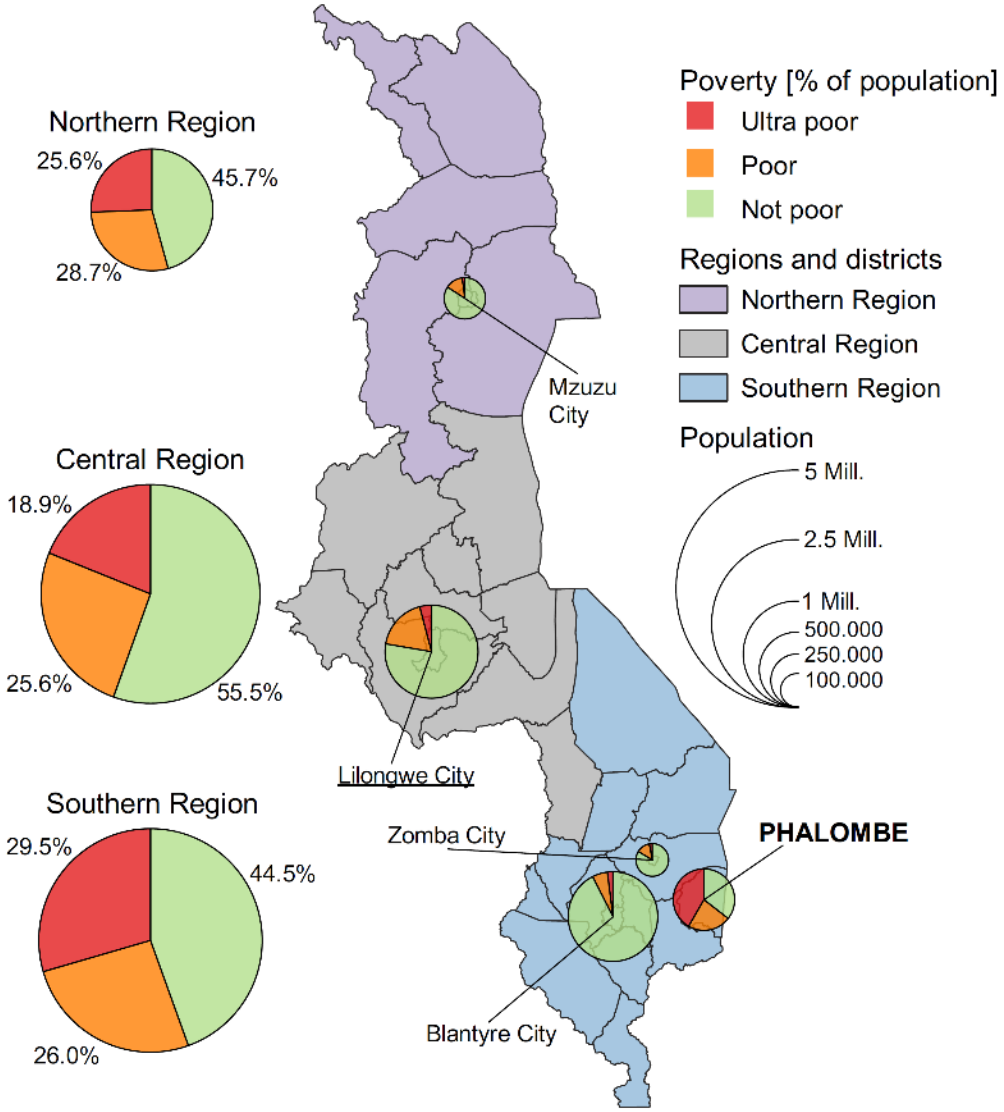

Figure 4: Poverty and ultra-poverty rates in the regions and major cities of Malawi. 84.7 % of Malawi´s population lives in rural settings, 15.3 % in urban settings, whereas Lilongwe, Blantyre, Zomba, and Mzuzu City are the major cities in the country. The sizes of the circles in the figure symbolise the sizes of the populations in the different regions and cities. Regional and rural-urban differences regarding poverty in Malawi are apparent. The highest rates of poverty (26 %) and ultra-poverty (29.5 %) are found in the Southern Region. The national poverty line is based on population-weighted subgroup estimates from household surveys, comprising food and non-food components that are needed to obtain the necessary energy requirements for a healthy life. Ultra-poor households cannot afford the minimum standard for daily-recommended food requirements (World Bank, 2016) (developed in cooperation with Christoph Höser from the GeoHealth Centre, Institute for Hygiene and Public Health, University of Bonn; Data: National Statistical Office Malawi, 2012)

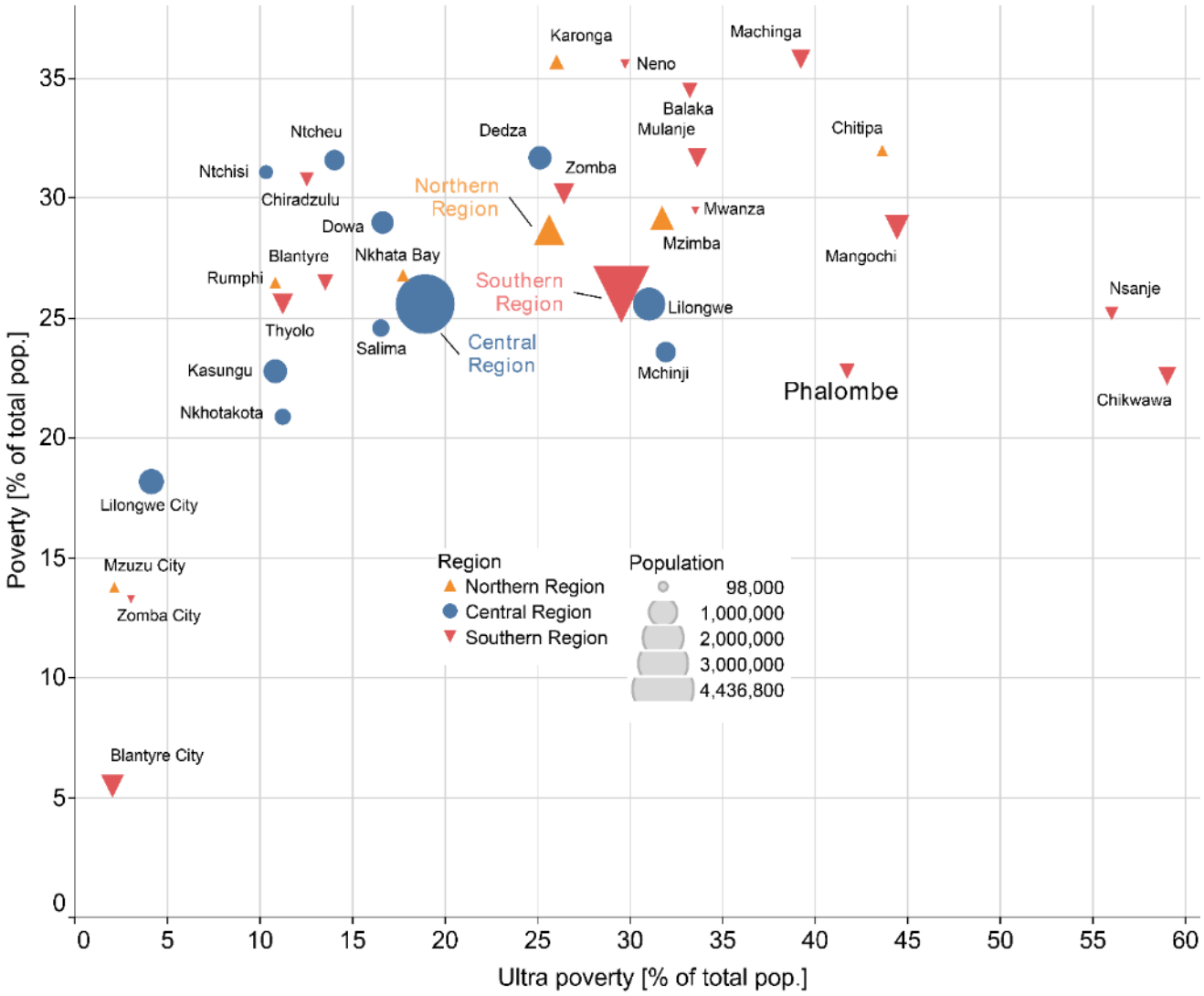

Figure 5: Poverty and ultra-poverty rates in the regions, districts, and major cities of Malawi. The different colours and symbols represent the districts/ cities and their belongings to the regions. The sizes of the symbols represent the sizes of the populations. Their position in the graph depends on the rates of poverty (y-axis) and ultra-poverty (x-axis) in the districts/ cities. The poorer the area, the further up and right it is found in the figure. While major cities are found on the left side of the graph, the upper right part of the graph is dominated by areas of the Southern Region, including Phalombe district. The national poverty line is based on population-weighted subgroup estimates from household surveys, comprising food and non-food components that are needed to obtain the necessary energy requirements to have a healthy life. Ultra-poor households cannot afford to meet the minimum standard for daily-recommended food requirements (World Bank, 2016) (developed in cooperation with Christoph Höser from the GeoHealth Centre, Institute for Hygiene and Public Health, University of Bonn; Data: National Statistical Office Malawi, 2012)

This urban-rural divide and regional trend is also reflected in educational attainment, literacy, as well as the prevalence, knowledge, and prevention of diseases like malaria, tuberculosis, and HIV/AIDS. Among people in the age group 15-49, the Southern Region shows the highest HIV prevalence (14.5%), which is about twice as high as in the Central (7.6 %) and Northern Regions (6.6 %) (National Statistical Office Malawi and ICF Macro, 2011). Figure 6 shows a few of these findings.

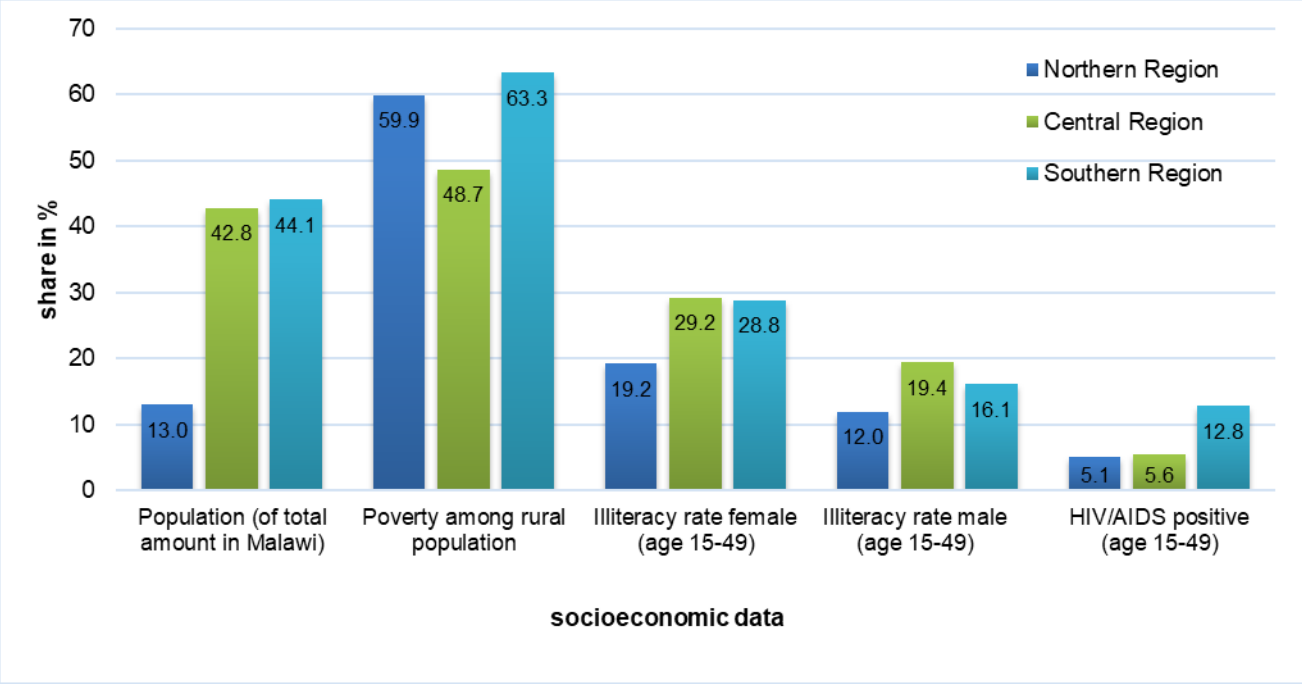

Figure 6: Socioeconomic data by Regions displaying the regional divide regarding the population, poverty among the rural population, illiteracy, and HIV/AIDS positive rates in the Northern, Central, and Southern Region (own design, Data: National Statistical Office, 2015; National Statistical Office and ICF Macro, 2011).

2.1.3 Administrative structure

Malawi is a democratic republic with two spheres of government: A Central and a Local Government. The Central Government contains a parliament, which consists of 193 members. Head of the state and the Central Government is the president, who is elected by adults aged 18 and above for a maximum period of two five-year-terms. The Central Government´s responsibilities include higher education, judiciary, criminal justice and police, social security as well as the planning and provision of basic amenities such as water, sanitation, and electricity (CLGF, 2017)

The responsibility for Local Governments lies within the Ministry of Local Government and Community Development. The Local Government consists of 35 councils, which all have autonomy within their nominated local government area. Twenty-eight of the councils are district councils, which are predominantly rural. Furthermore, there are four city councils, two municipal, and one town council (CLGF, 2017).

Each of the 35 councils works on the same level with no minor or supervisory structure and has the same responsibilities. These include services such as primary health care, primary education, natural resources, forestry, and community services. Central and Local Governments share the authority for hospitals, environmental protection, town planning, roads, and transport (CLGF, 2017).

Figure 7 illustrates the responsibilities of the Central and the Local Government.

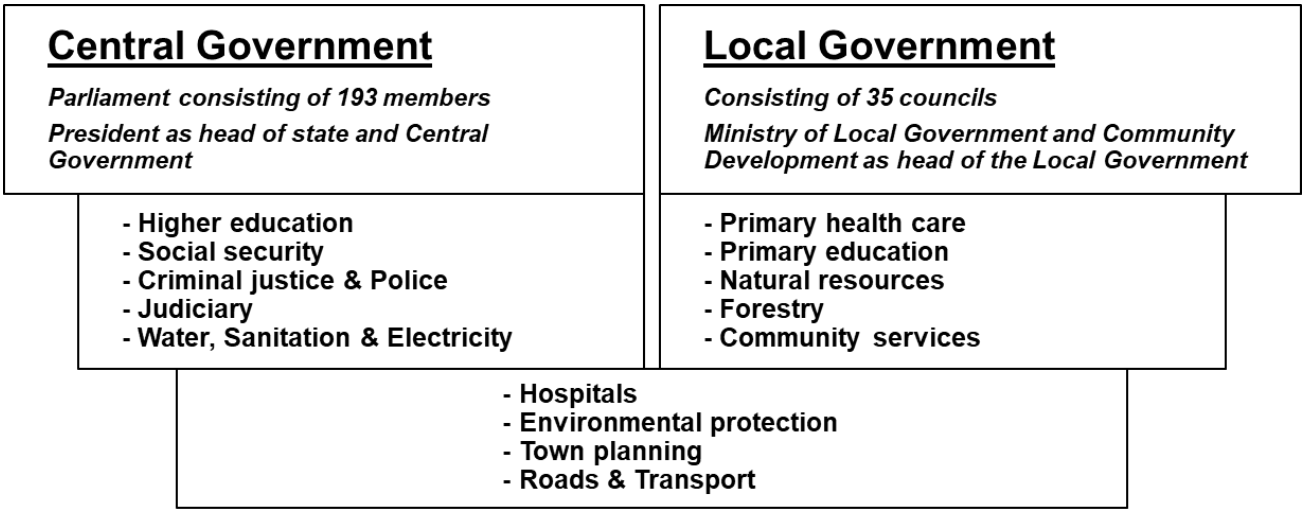

Figure 7: Responsibilities of Malawi´s Central and Local Government (own design, Data: CLGF, 2017)

Politically, districts are divided into constituencies that are represented by Members of Parliament (MoH Malawi, 2011). Administratively, the 28 districts are decentralised into traditional authorities, which are ruled by chiefs. Each of the traditional authorities consists of several villages that are managed by village headmen. Villages represent the smallest administrative units (National Statistical Office Malawi and ICF Macro, 2011).

Major languages in Malawi are the Bantu languages Chichewa, Chitumbuka, and Chiyao, whereas Chichewa is the most common one and recognised as the national language of

Malawi. Chitumbuka is largely spoken in the north of Malawi, while the Yao tribe, which resides along the lakeshore, speaks Chiyao. English is widely spoken in towns and major cities and is the official language of business, higher education, and government (Embassy of the Republic of Malawi, 2017).

Approximately 75 % of the population in Malawi are Christian and belong to the Roman Catholic and various Protestant denominations. Christianity was introduced and spread rapidly under British colonialism (Embassy of the Republic of Malawi, 2017). Islam is the second most prominent religion in Malawi. It was introduced by Arabic slave traders that reached Malawi by lake in the early 1800´s and converted people along the shore. Muslims make up 15-20 % of the population. A small proportion of the population adheres traditional beliefs (Embassy of the Republic of Malawi, 2017).

2.1.4 Economy, Education, and health-related knowledge

While the average Gross National Income (GNI) per capita of countries in Sub-Saharan Africa was 1,637 USD in 2015, Malawi generated a GNI per capita of 340 USD. The GNI comprises the sum of value of foreign and domestic output claimed by residents of a country minus income that is earned by non-residents in the domestic country (World Bank, 2016).

In 2010, 70.9 % of the country´s total population lived on less than the global poverty line of 1.90 USD per day. 50.7 % of Malawi´s population lived below the national poverty line, which is based on a population-weighted subgroup. Therefore, the World Bank rated Malawi as a low-income country (World Bank, 2016).

Malawi´s economy is based primarily on agriculture, which accounts for 35.5 % of the Gross domestic product (GDP). The GDP comprises the sum of monetary value of all final goods and services that are produced in a period (World Bank, 2016).
The agricultural sector accounts for 82.5 % of Malawi´s domestic exports and employs 57.8 % of the country´s adult women and 49.4 % of men (Embassy of the Republic of Malawi, 2017; National Statistical Office Malawi and ICF Macro, 2011).
A dual structure characterises the agricultural sector: The smallholder sub-sector is mainly involved in mixed subsistence farming, whereas commercial estates grow cash crops.

Major agricultural exports are tobacco, tea, sugar, and coffee (Embassy of the Republic of Malawi, 2017). 88.4 % of the households in rural parts of Malawi own agricultural land compared to 40.5 % of the households in urban areas (National Statistical Office Malawi and ICF Macro, 2011).

The performance of agriculture is highly vulnerable to weather shocks. In 2015 and 2016, flooding in southern districts followed by countrywide drought conditions declined agricultural productions as well as the GPD (World Bank Malawi Office, 2016). In that period of time, maize, which is Malawi´s staple crop for food security purposes, had a decline of 30.2 % in production. With this decrease in maize production, the Malawi Vulnerability Assessment Committee estimated that 38 % of the country´s population required food assistance (World Bank Malawi Office, 2016).

Another 11 % of Malawi´s GDP are accounted by the manufacturing sector that contains mainly agro-processing activities in tobacco, tea, and sugar industries (Embassy of the Republic of Malawi, 2017). 22 % of GDP are represented by distribution and services (Embassy of the Republic of Malawi, 2017).

Overall, there has been improvement in educational attainment within the last years (National Statistical Office Malawi and ICF Macro, 2011). In 2004, 20 % of men and 30 % of women had no education at all. In 2010, these numbers decreased to 11 and 19 %, respectively. The median number of school years has increased from 3.1 to 3.5 years for men and from 1.8 to 2.5 years for women (National Statistical Office Malawi and ICF Macro, 2011).

However, there are male-female, regional, and urban-rural differences regarding school attendance rates. The proportion of women that have never attended school is higher than for men across all age groups. The share of men and women with some years of primary education is about the same (64.7 % of males, 63.6% of females) as well as the proportion of men and women completing primary school (6.5 % each). Considering further education, more males than females have attended or completed secondary or tertiary school (17.0 % to 10.6 %) (National Statistical Office Malawi and ICF Macro, 2011). Figure 8 shows school attendance by sex.

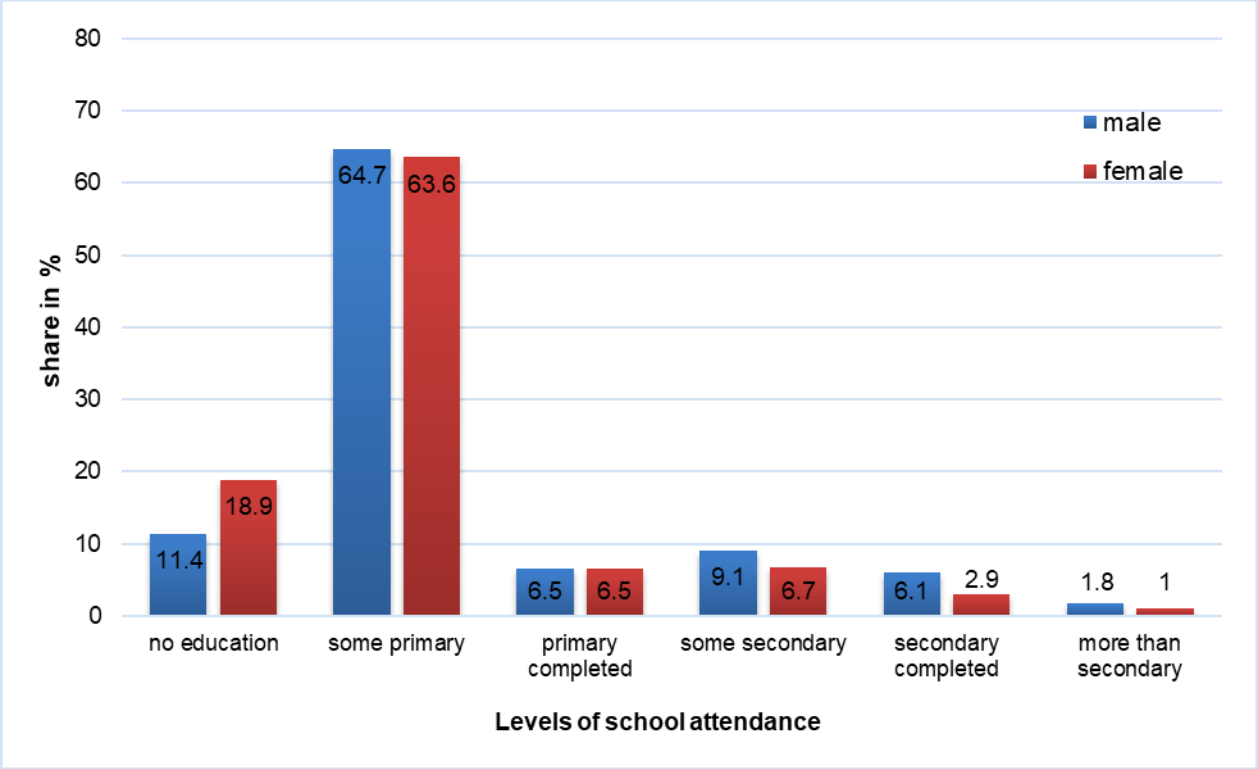

Figure 8: School attendance by sex. Differentiation between the attendance of some years of primary/ secondary school, completion of primary/ secondary, or no education at all. Generally, males seem to have a higher education than females in Malawi (own design, Data: National Statistical Office and ICF Macro, 2011)

There are urban-rural and regional differences concerning educational attainment and literacy. Table 4 shows the median years of schooling and literacy rates by sex and regions (National Statistical Office Malawi, 2015; National Statistical Office Malawi and ICF Macro, 2011).

Nevertheless, the literacy rates in Malawi are higher than the average rates in Sub-Saharan Africa. 69 % of men and 53 % of women in Sub-Saharan Africa are able to read (World Bank, 2016).

Table 4: Mean years of schooling and literacy rates by sex and regions. Differentiation between urban/ rural areas and the three regions. Urban areas show longer years of schooling and literacy rates compared to rural areas. Among the regions, the Northern Region shows the highest years of schooling and literacy (own design; Data: National Statistical Office Malawi, 2015; National Statistical Office Malawi and ICF Macro, 2011).

	Mean years of schooling		Literacy rates, age >15	
Residence	**male**	**female**	**male**	**female**
Malawi	3.5 years	2.5 years	80.5 %	64.0 %
Urban areas	6.9 years	5.3 years	94.9 %	87.5 %
Rural areas	3.0 years	2.1 years	77.7%	59.8 %
Northern Region	4.9 years	4.3 years	88.3 %	79.0 %
Central Region	3.2 years	2.2 years	78.2 %	61.3 %
Southern Region	3.3 years	2.3 years	80 %	61.7 %

In order to reveal health-related education, the Malawi Demographic and Health Survey examined knowledge and misconceptions about HIV/AIDS among men and women at the age of 15-49 (National Statistical Office Malawi and ICF Macro, 2011).

As shown in Figure 9, about three quarters of men and women knew that constant use of condoms prevents HIV transmission (72.6 and 72.0 %, respectively). 85.3 % of the male and 86.7 % of the female respondents recognised that limiting sexual intercourse to one HIV-negative partner, who has no other sex partners, was another method to avoid HIV transmission. Generally, knowledge about HIV prevention was higher in urban areas and increased with level of education (National Statistical Office Malawi and ICF Macro, 2011). The majority of men and women rejected the most common local misconceptions that healthy-looking people do not have HIV (92.5 and 87.0 %, respectively), as well as that mosquitos (75.2 and 73.6 %, respectively) and supernatural means (87.9 and 84.6 %, respectively) transmit the virus. However, only 44.8 % of the male and 41.0 % of the female participants had comprehensive knowledge about prevention and misconceptions (National Statistical Office Malawi and ICF Macro, 2011).

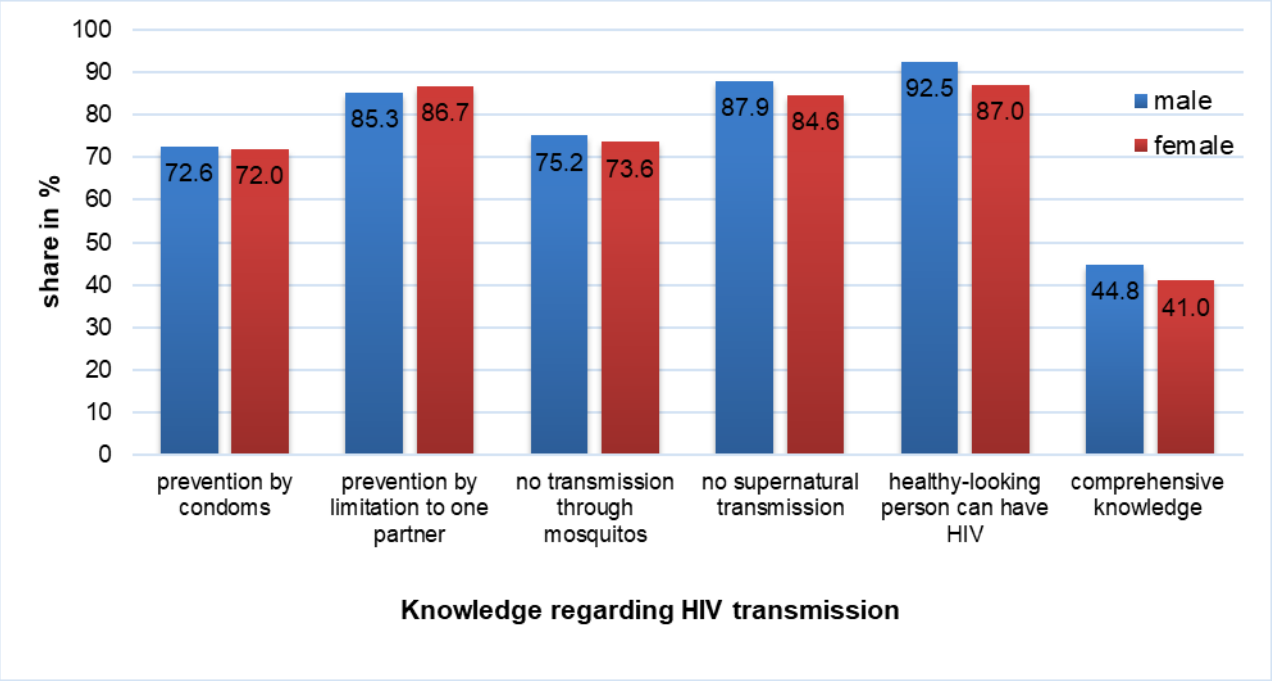

Figure 9: Knowledge regarding the transmission of HIV among males and females. Generally, males show more knowledge than females regarding HIV transmission. All statements have been answered correctly by less than half of the males and females (comprehensive knowledge) (own design, Data: National Statistical Office Malawi and ICF Macro, 2011).

2.1.5 Road network and public transport

As a landlocked country, Malawi highly depends on roads for its international and national transportation system (Roads Authority Malawi, 2014). The public road network is classified into five categories, whereas the main, secondary, and tertiary roads make up the primary road network of Malawi (Roads Authority Malawi, 2014). Main roads provide linkage between major towns and districts as well as international links to bordering countries and ocean ports. Connectivity between rural areas and the main road network is provided by secondary and tertiary roads. District roads and other undesignated roads operate as a feeding and supporting system to the primary network (AFCAP, 2011). The road network has a total length of just under 15,000 kilometres, of which 74 % is unpaved. In addition to this, about 10,000 kilometres of undesignated road network serve rural communities (Roads Authority Malawi, 2014).

Since the unpaved network is greatly vulnerable to weather conditions, all year accessibility is limited, which has an adverse impact on the population in rural areas. Poor

geometric standards and high dust emissions reduce the efficiency of travel and have an impact on safety and health of people and water sources (AFCAP, 2011).
This poor transportation infrastructure with lacking road network, limited access to ports as well as inadequate freight and rail capacity results in high production costs in Malawi´s industries. Transportation represents 55 % of the total production costs, compared to 17 % in other developing countries (Embassy of the Republic of Malawi, 2017).

As there is no railway network for public transportation, people depend on transportation on roads. The main public transport vehicles are mini busses that operate on primary and district roads (National Statistical Office Malawi and ICF Macro, 2011). Bigger busses connect large cities with each other and are available at higher cost. Motorcycles and bicycle-taxis are used for public transport within shorter distances, whereas taxicabs are only available in larger cities (National Statistical Office Malawi and ICF Macro, 2011). Bicycles represent the most frequent vehicle within private households. 48.1 % of Malawi´s households possess a bicycle, whereas 34.5 % of the households in urban and 50.7 % in rural districts own one. Cars or trucks are owned by 2.1 % of the households, while 1.4 % own a motorcycle (National Statistical Office Malawi and ICF Macro, 2011).

2.1.6 Malawi´s health system - Health care providers

Three different providers deliver health care services in Malawi: the public sector, the not-for-profit private sector, and the for-profit private sector (MoH Malawi and ICF International, 2014).

Approximately 63 % of all health facilities in the country belong to the public sector that provides services free of charge to the population (WHO, 2014).
Around 26 % of the facilities work under the Christian Health Association of Malawi (CHAM), the largest provider in the not-for-profit private sector (National Statistical Office Malawi and ICF Macro, 2011). CHAM is made up of independent church-affiliated facilities that provide health services and trainings for health workers in its health-training institutions. Eleven of 16 health-training institutions in Malawi are owned by CHAM and mostly located in rural areas. By financing some essential medicines as well as staff costs within CHAM facilities, the government of Malawi supports CHAM facilities (MoH Malawi, 2011).

The remaining facilities belong to the private for-profit-sector and other non-governmental organisations (NGOs) such as Banja la Mtsogolo and its founding organisation Marie Stopes International (Marie Stopes International, 2012). Table 5 illustrates Malawi´s health care providers.

Table 5: Malawi's health care providers. Providers include the public sector, offering services free of charge; CHAM facilities, which belong to the not-for-profit private sector, and NGO´s/ the for-profit private sector (own design, Data: MoH Malawi and ICF International, 2014).

Malawi´s health care providers		
Public sector (~63 % of all facilities)	**CHAM – Not-for-profit private sector (~26 % of all facilities)**	**NGO´s and For-profit private sector (~11% of all facilities)**
Offers all types of health care facilities	Offers predominantly hospitals and health centers	Offers predominantly clinics and hospitals
Provide services free of charge	User fees are charged except for services within Service Level Agreements (SLA)	User fees are charged except for services within Service Level Agreements (SLA)
Located in urban and rural areas	Mostly found in rural areas	Located in urban and rural areas

Since CHAM facilities charge user fees in order to cover running expenses, major inequities concerning access to health care services occur. Catchment areas of CHAM facilities rarely overlap with those of governmental facilities, which results in major barriers for the poor (MoH Malawi, 2011). In order to increase their access to health care services and to remove user fees for vulnerable people, the MoH encouraged the District Health Office (DHO) to sign Service Level Agreements (SLA) with CHAM and with the private-for-profit sector (Government of Malawi and CHAM, 2016; MoH Malawi, 2011). SLAs are partnership contracts that replace user fees with governmental reimbursements. They aim to remove the financial barrier for the population that would have free health service delivery, if they lived within the catchment area of a governmental facility.

Within the SLAs, the scope of services ranges from limited to full extent of the Essential Health Package (EHP). The scope depends on the capacity of the CHAM health facility

and on the scale of un-met needs for health services, which are defined by the DHO of the particular District (Government of Malawi and CHAM, 2016).

The range of the EHP includes vaccination, acute respiratory infections, malaria, diarrheal diseases, malnutrition, perinatal conditions, ear, nose, and skin infections, growth monitoring, community-based preventive health care services, and the treatment of specific communicable diseases such as sexual transmitted infections (STI), HIV/ AIDS, tuberculosis, and leprosy (MoH Malawi, 2011; MoH Malawi and ICF International, 2014; WHO, 2014). Evidence proved that the elimination of user fees in CHAM facilities resulted in a higher number of patients seeking health care there (MoH Malawi, 2011).

Since its implementation in 2002, 80 CHAM facilities, which is about half of their total number, have entered into SLAs and focus mostly on maternal and new-born health services (Government of Malawi and CHAM, 2016). A few facilities have SLAs that cover the entire range of an EHP. Other CHAM SLAs are inactive and have contractual conflicts, which need to be resolved (MoH Malawi, 2011).

2.1.7 Malawi´s health system - Service delivery levels

The service delivery in Malawi´s health sector is divided into a primary, secondary, and tertiary level. Figure 10 shows the levels of service delivery and the provided services within the different facilities.

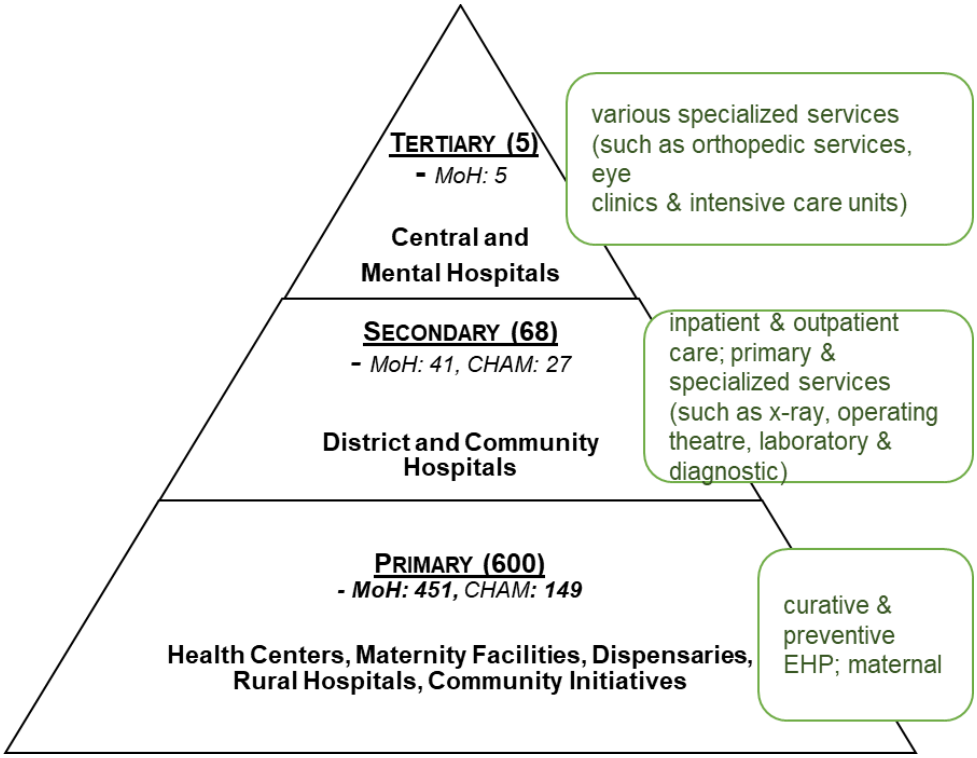

Figure 10: Service delivery levels. Provided services within the primary, secondary, and tertiary level of health care, including the number of facilities and their affiliation to the MoH or CHAM (own design; Data: MoH Malawi, 2011; MoH Malawi CHAI, 2011).

Primary health care is provided by community initiatives, dispensaries, maternity facilities, health centers, and community or rural hospitals (MoH Malawi and ICF International, 2014; Public Health Institute of Malawi, 2016).

At community level, community-based units such as Health Surveillance Assitants (HSA), Village Health Committees, community-based distributing agents, and other volunteers, provide services to community members. The cadre of HSAs represents the biggest group of health community workers (Knowledge for Health Project, 2013). Covering 30 % of Malawi´s total health workforce and targeting a ratio of one HSA to 1,000 people, they are often the only health workers that serve rural areas (Smith et al., 2014). HSAs are recruited by the government and offer promotive and preventive health care services, which include health education, HIV testing and counseling, or immunisation services. In addition to that, some HSAs are trained in family planning, community case management of diarrhoea, respiratory infections, and pneumonia among children under the age of five years. This level of services is provided through door-to-door visits, village, and mobile clinics. Further

health services are delivered by community health nurses and other health units through outreach programs. To which extent these services are offered, varies within different areas (Knowledge for Health Project, 2013; Smith et al., 2014).

Village Health Committees promote primary health care activities through community participitation and work on preventive and promotive health care services including hygiene and sanitation with HSAs (MoH Malawi, 2011).

At primary level, HSAs are supported by health centers and rural hospitals, which are responsible for the provision of curative and preventive services withing the EHP. Service delivery at the facilities of the primary level is carried out mostly by clinical officers, medical assistants, nurses, and midwives. The roles of clinical officers include many medical and surgical tasks that are usually carried out by doctors, such as anaesthesia, prescriptions, diagnosis and treatment of medical conditions (Wilson et al., 2011). Yet, they have a separate and reduced training programme to medical doctors. Doctors, pharmacists, or technicians such as labaratory or dental personnel do not provide health care at this level (MoH Malawi and ICF International, 2014; Public Health Institute of Malawi, 2016).

Services of the secondary level are delivered by district and community hospitals, which are referral facilities for health centers and rural hospitals. Each of the 28 districts is supposed to have one district hospital with an admission capacity of 200-300 beds. The hospitals provide in-patient as well as out-patient services to the local population. They offer the same basic services as the primary care facilities in addition to specialised supportive services, including services in the operating theatre, laboratory, diagnostics, and x-ray (MoH Malawi and ICF International, 2014; MoH Malawi, 2011). Furthermore, district hospitals offer in-service training for health personnel and other support to community-based health programs. A median of one medical doctor, one pharmacist, and five technicians are present in a district hospital (MoH Malawi and ICF International, 2014; MoH Malawi, 2011).

Four central hospitals and one mental hospital, which are located in major urban areas, provide services of the tertiary level (MoH and ICF International, 2014). These institutions act as referral facilities for district hospitals, while offering services in their respective regions. They offer various specialised services including orthopaedic services, eye clinics, obstetrics and gynaecology, or intensive care units. Furthermore, they also have

a mandate to offer professional training, conduct research, and provide support to districts (MoH and ICF International, 2014).
However, according to Malawi´s MoH (2011), central hospitals currently provide services of the EHP, which should be carried out by district health services. In order to avoid overcrowding, gateway clinics are supposed to be established at central hospitals and run by the DHO (MoH Malawi, 2011). Furthermore, urban clinics are meant to be strenghtened to enable patients to receive adeqaute services there. According to the MoH, a visit of a central hospital should only occur after being referred (MoH Malawi, 2011).

2.2 The study site – The district Phalombe

One area that struggles with the provision of access to health care services is Malawi´s district Phalombe (see Figure 3). It is a rural district with a size of 1,394 square kilometres and a population of about 355,300 people (2013) (National Statistical Office, 2015). The district is located in the Southern Region. The biggest city and capital of the district is Phalombe city, which is inhabited by about 5,000 people (Citypopulation, 2016).
Phalombe district is bordered to the east by Mozambique, in its south and west by Malawi´s district Mulanje, and in its north by the district Zomba (National Statistical Office Malawi and ICF Macro, 2011).

52.3 % of the district´s inhabitants are female, whereas 47.7 % are male (National Statistical Office, 2015). Among both sexes, more than half of the population in Phalombe is employed in the agricultural sector: 62.2 % of women and 66.2 % of men in the age between 15 and 49 are occupied in this work field. 20.1 % of the district´s women and 13.2 % of its men are employed in sales and services (National Statistical Office and ICF Macro, 2011).
Table 6 and Table 7 show a few of the district´s education, health related, and socioeconomic data compared to the Southern Region.
According to the data of the National Statistical Office (2011), Phalombe district and the Southern Region show similar trends regarding the data displayed. The highest absolute deviation was 8.6 % for the share of currently employed women (National Statistical Office and ICF Macro, 2011).

Table 6: Socioeconomic and education data of the Southern Region compared to Phalombe. Phalombe district and the Southern Region show similar trends regarding poverty, illiteracy, and employment. The highest absolute deviation was 8.6 % for the share of currently employed women (own design; Data: National Statistical Office and ICF Macro, 2011).

	Poverty, rural population	Illiteracy, female	Illiteracy, male	Employment, female	Employment, male
Southern Region	63.3 %	32.1 %	18.5 %	55.1 %	79.6 %
Phalombe	64.5 %	35.4 %	25,6 %	46.5 %	79.2 %
Absolute deviation	1.2 %	3.4 %	7.1 %	8.6 %	0.4 %

Table 7: Health related data of Southern Region compared to Phalombe. Phalombe district and the Southern Region show similar trends regarding HIV prevalence, knowledge regarding HIV transmission, modern contraception, and mosquito nets in the households. The highest absolute deviation was 7.4 % concerning the knowledge of males regarding HIV transmission (own design; Data: National Statistical Office and ICF Macro, 2011).

	HIV prevalence (age 15-49)	Extensive knowledge of HIV transmission, female	Extensive knowledge of HIV transmission, male	Modern contra-ception, women	Minimum of 1 mosquito net in household
Southern Region	14.5 %	48.3 %	47.1 %	62.2 %	68.9 %
Phalombe	15.0 %	42.6 %	39.7 %	63.1 %	73.8 %
Absolute deviation	0.5 %	5.7 %	7.4 %	0.9 %	4.9 %

Generally, the district´s socioeconomic, education, and health related data might represent further districts of the Southern Region. Therefore, some of the findings within this research might be transferable to other districts in the Southern Region or to other rural parts across whole Malawi. Still, as gaps in health systems are to a large extent context-specific (Abiiro et al., 2014), findings of this study cannot be fully generalised and applied to other contexts and populations.

However, as 84.7 % of Malawi´s total population resides in rural areas (National Statistical Office Malawi, 2015), the investigator assumes that a lot of the study´s findings regarding access and barriers to health care services can be transferred to other rural areas, where similar health system characteristics exist.

2.2.1 Health care services in Phalombe

In 2015, 17 health centers as well as an unknown number of dispensaries and maternity facilities provided health care services of the primary level in Phalombe district (Department of Disaster Management Affairs Malawi, 2015). Generally, these facilities are supposed to provide a package of basic services including outpatient curative care for sick children, immunisation services, or antenatal care. Furthermore, they should have the capacity to provide diagnostic tests and treatment for malaria and HIV/AIDS (MoH Malawi and ICF International, 2014).

The main health center of the district is located in its capital Phalombe city and obtains enhanced equipment and infrastructure compared to Phalombe´s other health centers. It is the biggest governmental health care facility in Phalombe district and serves as the referral health center for other facilities of the primary level. Still, it doesn´t hold an operating theatre or diagnostic equipment such as an x-ray apparatus or a sonographic unit.

Services of the secondary level are only provided by one hospital: The Holy Family Mission Hospital (HFMH). The hospital belongs to the CHAM and therefore to the not-for-profit private sector. According to the hospital´s management, the facility acts as a district hospital, although it was not meant to be one when constructed. The HFMH serves as a referral facility for the district´s main health center and provides the same basic services as the primary level in addition to specialised supportive services. These include further diagnostics, services within the operating theatre, and the laboratory. Therefore, it serves the more complicated cases of the entire district such as Caesarean sections, the reposition of broken bones, or abdominal surgeries. However, the main causes for seeking treatment in the hospital are due to treatment or complications arising from HIV/ AIDS, malaria, and tuberculosis (MalawiMed e.V., 2016).

Only few services are free of charge for the hospital´s patients: HIV testing and treatment,

referrals from governmental facilities of the primary level of health care, and services that were agreed upon within the Service Level Agreements (SLAs). Other health care services need to be paid by the patients themselves. Unfortunately, a list of services that were agreed upon within the SLA is not present although the researcher made several attempts to receive one.

If the HFMH cannot provide needed services to its patients, they are referred to the tertiary level of health care. Zomba Central Hospital is the closest facility of the tertiary level and is located in Zomba district. According to the hospital´s management, the approximate travel time to the hospital is 2.5 hours by car or ambulance.

Generally, referred patients are supposed to get to the health care facility by ambulances, which are provided by the government. However, ambulances are not comprehensively available when needed (see chapter 3.3 and 3.5). Therefore, referred patients either have to wait until an ambulance is present or find other means of transport to reach the facility they have been referred to.

2.2.2 Holy Family Mission Hospital

The study was realised in cooperation with the Holy Family Mission Hospital Phalombe. According to the hospital´s management, the HFMH had a capacity of 223 beds and employed 217 people during data collection in October and November 2016. Generally, inpatient curative care is provided within a male, a female, a labour, and a paediatric ward. Therefore, patients are not assigned to the wards according to their medical condition or the medical specialty, in which treatment is required. Gender and age decide, in which ward they are treated.

Figure 11: Female ward in the HFMH (Photo: R. Ritter, 2016)

Outpatient treatment is provided within a tuberculosis, an HIV, and a general Outpatient Department. The general Outpatient Department is led by two clinical officers that examine and treat various patients with several diseases. Whenever patients are seeking treatment at the HFMH, the outpatient department is the central point of contact. If necessary, patients receive further diagnostics or receive inpatient curative care within certain wards. The majority of patients, who were referred from governmental facilities, go directly to the departments, where they have been referred to. Therefore, most of the patients that seek treatment in the Outpatient Department have to cover the expenses for consultation themselves.

During data collection, there was no medical doctor onsite. Therefore, patients were treated by 17 clinical officers, who were trained in carrying out medical activities such as examinations, anaesthesia, and surgeries. Furthermore, the hospital employed 34 nurses, three laboratory technicians, three pharmacists, a dental therapist, and two radiological technicians. Another 24 employees worked as cleaners, patient attendants, guards, or in the administration of the hospital.

2.3 Framework for the presented study

The Access to Health Care Framework was developed by the investigator based on previous research and theoretical studies presented above (Butsch, 2011; Khan and Bhardwaj, 1994; Obrist et al., 2007; Penchansky and Thomas, 1981). It gives the theoretical foundation for this study and is visualised in Figure 12. It outlines the various partakers and concepts that contribute to the model of access applied in this research.

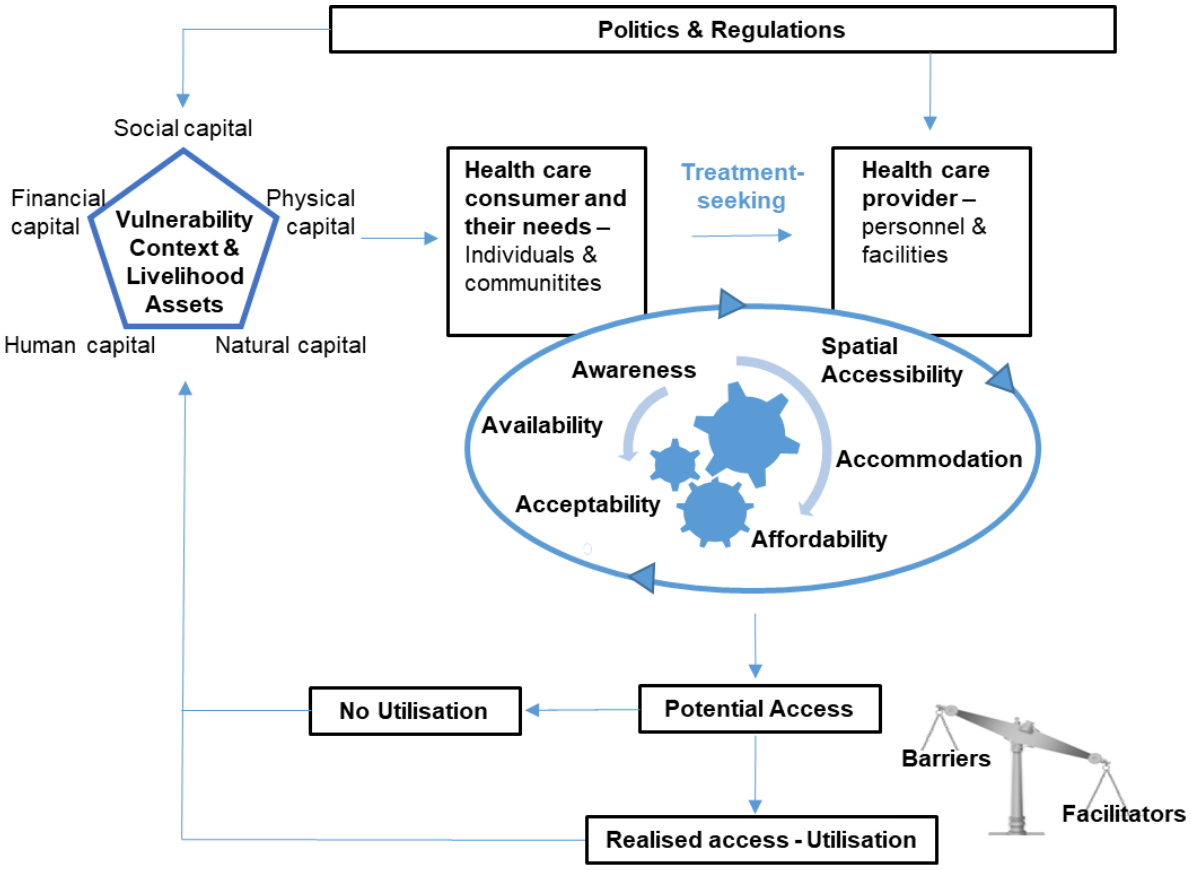

Figure 12: Access to Health Care Framework developed for the study. Potential patients and their treatment-seeking processes are determined by their vulnerabilities and ability of mobilising livelihood assets. Entering the health-seeking process and the health system require the mobilisation of human, social, financial, natural, and physical capital. The framework focusses on the interplay between characteristics of health care providers and patients. The degree of fit between them is determined by the dimensions awareness, spatial accessibility, affordability, availability, acceptability, and accommodation. Potential access and whether it turns into utilisation depends on the trade-off of barriers and facilitators within the dimensions. Utilisation and non-utilisation affect the vulnerability context and livelihood assets of patients. Politics and regulations impact these assets and the health system with its providers (own development, based on concepts of Butsch, 2011; Khan and Bhardwaj, 1994; Obrist et al., 2007; Penchansky and Thomas, 1981).

Potential health care consumers and their treatment-seeking process are influenced by their vulnerability context and their ability of mobilising livelihood assets. As introduced by Obrist et al. (2007), these assets include natural, human, financial, physical, and social capital.

In order to provide a base to bear a living, natural capital including land, water, and livestock becomes an important asset to cover basic needs of a population. Entering the health-seeking process and the health care system require the mobilisation of human capital in form of education, skills, and health related knowledge. Furthermore, deploying financial capital in form of cash and credit as well as mobilising physical capital in terms of means of transport become crucial to access health care. Also, social capital was found to be important as people without sufficient financial means depend on gifts from family or friends in order to cover expenses for treatment or transportation. Moreover, being in a health care facility as an inpatient requires a guardian, who takes care of feeding and washing the patient. Without social support, especially highly vulnerable households fail to obtain regular health care services (Goudge et al. 2009).

This framework integrates health care provision, while focusing on the interplay between characteristics of health care providers and characteristics of the population at risk. The degree of fit between health care consumers and providers is determined by the dimensions awareness, spatial accessibility, affordability, availability, accommodation, and acceptability. Although the dimensions will be presented separately, they are highly interwoven and affect each other.

The degree of potential access and whether it turns into utilisation, depends on the trade-off of barriers and facilitators within the dimensions. Furthermore, utilisation and non-utilisation affect the vulnerability context and the livelihood assets of the population at risk. Politics and regulations impact these assets and the health care system with its health care providers.

2.4 Study design – mixed-method approach

In order to examine potential access that is reached along the dimensions, as well as patients´ individual perceptions, experiences, and health-seeking behaviour, empirical research employs a mixed-methods approach. These research methods and the

theoretical concept, which was introduced in chapter 2.3, are supposed to reconstruct and explain access and people´s perceptions.

Quantitative data was collected in form of a survey among patients of the HFMH and their accompaniment. Generally, the questionnaire-based interviews follow a deductive approach (Mayring, 2002). The framework for the study implies a theory regarding access to health care, including different partakers, facilitators, and barriers within the dimensions. Applying quantitative methods allows the researcher to verify hypotheses and pre-existing knowledge by using statistical methods. According to Girtler (2011), standardised data collection tools aim to apply and test a theory in form of an operational instrument rather than contributing to the development of new theories regarding a research topic.

As the quantitative approach might not depict social realities (Girtler, 2011) and reduce statements of research participants, the researcher expanded the data collection tool by applying also qualitative methods. Herewith, new findings and important information can be explored, while social realities of research participants can be ascertained by direct interaction (Anthonj, 2012; Mayring, 2016). While standardised quantitative methods reduce the complexity of contexts by using closed questions and pre-defined answers, the qualitative approach aims to reveal interdependencies and reconstruct causalities (Kühn, 2018).

The qualitative part of this study included FGDs with inhabitants of three different villages, in-depth interviews with health workers, and an FGD among the management of the HFMH. Generally, qualitative data collection aimed to disclose participants´ perceived access to health care services, including the primary and secondary level of health care. To draw a wide-ranging picture and gain a better understanding about the realities of individual actors and groups within communities, it becomes necessary to gather different perspectives and views. Therefore, the investigator included the hospital´s management and other health personnel to collect in-depth information and experiences from health care professionals.

The researcher conducted the FGDs among villagers and the survey among patients of the hospital in cooperation with a Malawian study assistant. Although English is the official language in Malawi, only people with a higher education mostly speak it. In order to reduce language bias, a Malawian study assistant, who was fluent in English and Chichewa, was

hired onsite. Being a student of the Holy Family College of Nursing in Phalombe, the assistant was part of the health care system and familiar with the facility. Before starting the data collection, the study assistant signed an obligation of confidentiality.

Generally, field research that applies a mixed-method approach mostly starts with qualitative data collection, especially when exploring complex and poorly investigated areas (Kühn, 2018). On this basis, hypotheses can be generated and topics that require further quantitative investigation can be selected in order to prepare standardised data collection tools (Kühn, 2018).
However, within this field research, quantitative information has been collected prior to qualitative data. Access and barriers to health care services and the six dimensions of access have already been investigated within different settings and described in literature. As the researcher applied findings of literature research and pre-exisiting theories in her framework for this study, she found it reasaonable to start with the quantitative data collection. By conducting qualitative research after collecting quantitative data, the investigator aimed to take a closer look and gain a deeper understanding regarding the findings of the survey within social contexts of people (Kühn, 2018). Therefore, the study´s FGDs and in-depth interviews allowed to gain a deeper understanding of the survey´s preliminary results, while providing a meaning of the numbers in social realities (Kühn, 2018).

From a scientific viewpoint, representability of qualitative data is problematic as the outcomes of interviews and group discussions are subjective statements of participants (Anthonj, 2012; Flick, 2016). In order to analyse a phenomenon by combining multiple methods, Denzin (1978) established the triangulation and differentiates between four kinds, which have been used in this research (Anthonj, 2012; Flick, 2016):

(a) *Method triangulation* implies the application of different methods of data collection on the same research topic.
(b) Investigator triangulation involves the employment of two or more people for the data collection and analysis in order to offer different observations and conclusions of the findings.
(c) Theory triangulation describes the analysis of the research topic by the application of different theories.

(d) Data source triangulation implies the use of different data from different groups of people to gain multiple perspectives and validation of data.

Triangulation was found to be helpful to validate the findings of this study, which have been cross-checked with outcomes of the literature review. As described above, the mixed-method approach included different data collection tools that focused on diverse groups of people. The framework of this study (see chapter 2.3) gives the research a basic theory, that is used as a foundation to reconstruct, verify, and enhance pre-existing knowledge. Involving a study assistant for data collection allowed analysis and interpretation of different observers.

2.4.1 Study period

The study took about 4 years, including six months of preparation in Germany and a six-weeks-stay in Phalombe from September until early November 2016. Preparation included conceptualisation of the study, draft and pre-tests of data collection tools, and writing of proposals to obtain ethical approval from the University of Bonn and the Research Committee of Malawi.
Data collection was carried out after the completion of a four-week long medical traineeship in the HFMH. Table 8 shows the timetable of the fieldwork onsite.

Table 8: Timetable of the data collection, from October until November 2016 (own design)

Timetable - data collection	S	O				N			
calendar weeks	39	40	41	42	43	44	45	46	47
Medical traineeship									
Recruitment of an assistant									
Briefing, Pre-Tests, and Training									
Data collection									
De-Briefing									

The traineeship allowed to analyse the patients´ and the staff´s attitudes, their main challenges, realities and needs, for gaining their trust, and for getting to know the severity of the patients´ health status. Based on the information and impressions from the previously completed work, a realistic picture of the facility and the situation onsite was

drawn before the start of the research.

In Mid-October, after recruiting the study assistant onsite, the researcher briefed and trained the study assistant in conducting the questionnaire-based interviews. The survey took place from Monday, October 24 until Saturday, October 29 and was realised by the researcher and the study assistant. By completing the survey at the very end of the dry season, the influence of weather conditions, which could hinder traveling long distances by foot or bike, was reduced. After the survey, the qualitative data was gathered from October 30 until November 4. The de-briefing and discussion of the findings with the study assistant completed the fieldwork in Malawi.

Processing, analysing, and thesis writing were carried out back in Germany and took about 3.5 years. Literature research has been carried out throughout the whole period of the research.

2.4.2 Questionnaires in the hospital – study procedure, population, and sample size

The questionnaire consisted of 24 main questions and addresses the participant´s background, the reasons and enabling factors for health care facility utilisation, the availability and means of transport to reach the HFMH, and the affordability considering the budget needed to seek health care. Furthermore, it revealed the patients´ level of information with regard to service provision and perceived barriers to health care. This included barriers regarding the six dimensions that are under investigation. While some questions concerned access to HFMH specifically, others included access to health care facilities in general, especially access to health centers. For the most part, the questions were formulated as closed questions. Nevertheless, the participant always had the possibility to add comments or the option “else” to the given set of answers.

The researcher used the questionnaire, which Ueberschär (2015) used for her studies on spatial disparities in health center utilisation in Rwanda. It was developed based on studies in Tanzania (Abel-Smith and Rawal, 1992), in Ghana (Buor, 2003), in the United Kingdom (Field and Briggs, 2001), and in South Africa (Tanser et al., 2006). The researcher modified Ueberschär´s questionnaire by adding questions about enabling factors to seek health care.

It was drafted in English and translated into Chichewa by a Malawian teacher of a

secondary school in Zomba. The study assistant reviewed the translation before data collection.

The majority of patients that seek treatment in the outpatient department have to cover occurring costs themselves. This raised the question, why these people seek treatment in the private hospital rather than in a governmental facility of the primary level of health care. By collecting data among patients of the HFMH, the researcher aimed to disclose barriers, which hindered them to get treated in a governmental facility, where services are free of charge. Furthermore, by entering the facility, the targeted group had already realised access to health care services. Revealing their facilitators and enabling factors might lead to formulate strategies to overcome barriers of non-users.

Study population and sample size

The targeted group of the survey included patients of the HFMH and their accompaniments, who came to the outpatient department in order to seek treatment (see Figure 13). By including the patients´ accompanying people, parents that attend their children can be taken under consideration in this study. Thus, potentially increased barriers due to additional transport costs and expenses for food and beds can be considered.

The researcher aimed to represent the average population that seeks treatment in the hospital. In order to cover different age groups and socioeconomic backgrounds, simple random sampling was applied, in which every fifth patient was selected to take part in the survey. Therefore, the probability of being selected among the population of all patients, who entered the outpatient department, was relatively equal (Bortz, J. and Döring, N., 2006). By conducting the survey throughout the whole day, participants from close by as well as participants that needed more time to get to the hospital, could be reached.

75 questionnaire-based interviews were conducted in total. Generally, one very important inclusion criterion was an informed consent to participate in the study (Appendix A). People that did not agree to take part or that felt too sick to answer the questions were excluded from the study. However, sampled participants showed a high acceptance to be interviewed, as only two patients declined to take part in the survey.

Procedure

Quantitative data collection aimed to conduct a total population survey each day of data collection, while interviewing as many people as possible. Therefore, the research team arrived at the outpatient department in the morning and stayed until there were no patients left to be interviewed.

After arrival and registration of the potential participant at the hospital, the research team moved more or less through the line of registered patients and picked every fifth person that was waiting for consultation. If the expected waiting time for attendance was higher than 20 minutes, he or she was asked to do the questionnaire-based interview immediately in a separate room in the outpatient department, where other patients, family members, or staff were unable to hear. The research team informed him or her briefly about the survey, its content, purpose, aim, and the expected benefits of the study. Moreover, they were informed that participation is purely voluntary and that it did not have any effect on receiving services at present or in the future. Patients were made aware that they agree to participate in the survey by giving their informed consent (see Appendix A). Participants´ names were coded with a referral number. While the questions were read out in Chichewa by the study assistant, the researcher noted the answers in English.

Figure 13: Outpatient department of the Holy Family Mission Hospital (Photo: R. Ritter, 2016)

2.4.3 Focus group discussions – study procedure, population, and sample size

The qualitative part of this study included FGDs with the management of the HFMH, and with inhabitants of three different villages, with six to eight participants each (see Appendix C and D). The discussions among villagers focussed on revealing participants´ perceived access to health care services, including the primary and secondary level of health care.

The explicit focus of this data collection method lied on reporting the perspective of community members. As these residents are rarely given the chance to contribute towards health policy debates in their country (Abiiro et al., 2014), their concerns and opinions are seen as valuable sources of information regarding gaps on health coverage. Furthermore, the former survey targeted patients that already overcame their individual barriers. Within the FGDs among villagers, the researcher aimed to investigate perceived access among people, where potential non-users of health care can be found.

Generally, group discussions allow to investigate the position of several individuals within one interview, while revealing similarities and differences of opinions and viewpoints. This enabled the investigator to gather a wide range of information and data with relatively little economic expenditure (Anthonj, 2012). Complex attitudes, perceptions, feelings, needs, and motivations of groups and individuals could be explored (Kühn, 2018), while each and every interviewee was given the chance to share knowledge, experiences, and ideas. Furthermore, insight in the dynamics and the communication among members of a social group can be gained when discussing about a certain topic (Mayring, 2016). Hearing the position and opinion of other participants might stimulate thoughts and impulses of individuals concerning the content of the discussion. By sharing those, more ideas can be developed and expressed (Bortz, J. and Döring, N., 2006). Furthermore, discussions disclose how opinions are built, suppressed, and changed within a social group. Extreme positions of individuals can be filtered in order to extract a broad consent of the group (Flick, 2016).
The study´s framework and outcomes of the questionnaire-based interviews gave the FGDs a basic guideline of topics to explore and questions to be asked.

An FGD with the hospital´s management took place after presenting the study´s preliminary results. The discussion aimed to receive feedback, ideas, and clarifications for preliminary findings and to include knowledge about the region, challenges of the health

system and the HFMH. By including the hospital´s management in the data collection, insight from administrative units of the hospital could be gained.

Study population and sample size

Focus group-discussions were conducted in three villages with six to eight participants each. The participants belonged to the poor rural population of Phalombe district. By conducting FGDs in these settings, the investigator aimed to reveal perceived barriers to health care services of people that might have limited accessibility to facilities or health care services in general.

The study assistant, who lived in Phalombe district, suggested villages for data collection. As requested by the researcher, the villages were supposed to be outside the catchment area of the hospital, while having a health center closer by. Therefore, health care provision within health centers became the focus throughout all three discussions. The villages, where the FGDs took place, their distances to the HFMH, and to the next health center are shown in Table 9.

Table 9: Focus group discussions in villages. The table shows the distances from the villages to the HFMH and the next health center, the duration of the FGDs, and the number of participants per discussion (own design; Data: empirical research).

Village	**Distance to HFMH**	**Distance to next health center**	**Number of participants**	**Duration of discussion**
Nalingula	8 km	3 km	7	36 min
Njumwa	9.5 km	4.5 km	8	42 min
Mariko	11 km	2 km	6	28 min

The FGD with the hospital´s management included the Human Resources Manager, the Accountant, and the Matron of the HFMH, who has the function of a chief nurse.

Procedure

The FGDs were conducted on a Sunday in order to increase the chance that a high number of community members was present at the villages, rather than working elsewhere. After arriving in each village, the study assistant and the investigator searched for the village headman to explain the content, purpose, and aim of the study. The village headman was asked to gather six to eight participants that would be willing to take part in the group discussion. After the potential participants assembled, the research team introduced themselves, the study, and the procedure of the following discussion. To break the ice, participants were asked to introduce themselves by telling their names and age.

Predefined questions were prepared by the researcher to initiate and lead the discussion (see Appendix C). Initially, the participants were asked about their general experiences with health care facilities, the means of transport they used to reach them, and the barriers they faced when seeking for health care services. Additionally, they were requested to describe their needs, experiences, problems, and give some recommendations to improve access. In doing so, lively discussions arose that gave the investigator the opportunity to detect main priorities and problems.

As not all participants spoke English, the discussions were held in Chichewa by the study assistant. In order to enable the researcher to react to contributions of the participants, the initial plan was to translate the discussion into English after the comment of each person. However, the immediate translation disturbed the flow of the discussion. Therefore, the study assistant acted as the moderator of the problem-oriented discussions. He took detailed notes simultaneously and summarised the inputs of the participants at the end of every discussion.

After the participants gave their consent to participate, the discussions were audio-recorded, transcribed, and translated into English by the study assistant (see Appendix D).

Figure 14: Phalombe´s village Njumwa (Photo: R. Ritter, 2016)

2.4.4 In-depth interviews with health workers - study procedure, population, and sample size

This study used semi-structured problem-oriented interviews that followed key questions with health personnel as the targeted study population (Mayring, 2016). By using predefined key questions, the researcher created a structure for the data collection and the following analysis. Nevertheless, choosing a loose bound to the pre-defined questions, created the opportunity for the interviewee to answer freely. The method left enough room to ask additional questions and include further topics (Anthonj, 2012; Bortz, J. and Döring, N., 2006). The participants had the chance to touch upon topics and problems that were of importance to them without the restriction to predefined responses. This helped to capture in-depth information, personal experiences, and subjective perceptions of individuals. Moreover, a deeper understanding of the first identified findings of the survey and the FGDs, peoples´ problems, and their decision-making processes were generated. Received feedback included regional knowledge, the availability and cost of transport in Phalombe district, and information about the served population. Questions that came up during the survey could be answered to some extent within the in-depth interviews.

Key questions were defined by the researcher before the start of data collection. However, after the completion of the survey and the FGDs in the villages, the investigator changed and adapted the questions according to the outcomes of the research process (see Appendix E).

Study population and sample size

With a sample size of two in-depth interviews, the study included one male clinical officer from the HFMH and one female nurse from the main health center in Phalombe. During the medical traineeship in the HFMH, the researcher got to know the staff of these facilities. Based on own impressions concerning their willingness to share information, the investigator selected potential participants for the interviews in order to gain insight of different facilities and different groups of health workers. In addition to the FGD with the hospital´s management, the number of two interviews seemed to be sufficient to gain a glance of health workers´ point of view.

Procedure

The interviews followed predefined key questions in order to create a structure for the interview. Nevertheless, the flow of the interviews led to additional questions and further topics.

Since the interviewees were fluent in English, the researcher conducted the interviews in English without the presence of the study assistant. After the participants had given their consent, the interviews were audio-recorded and transcribed by the investigator (see Appendix F). The semi-structured interviews lasted 27 and 19 minutes and took place in absolute privacy and discretion between the researcher and the interviewee. Figure 15 summarizes the mixed-methods approach applied in this study.

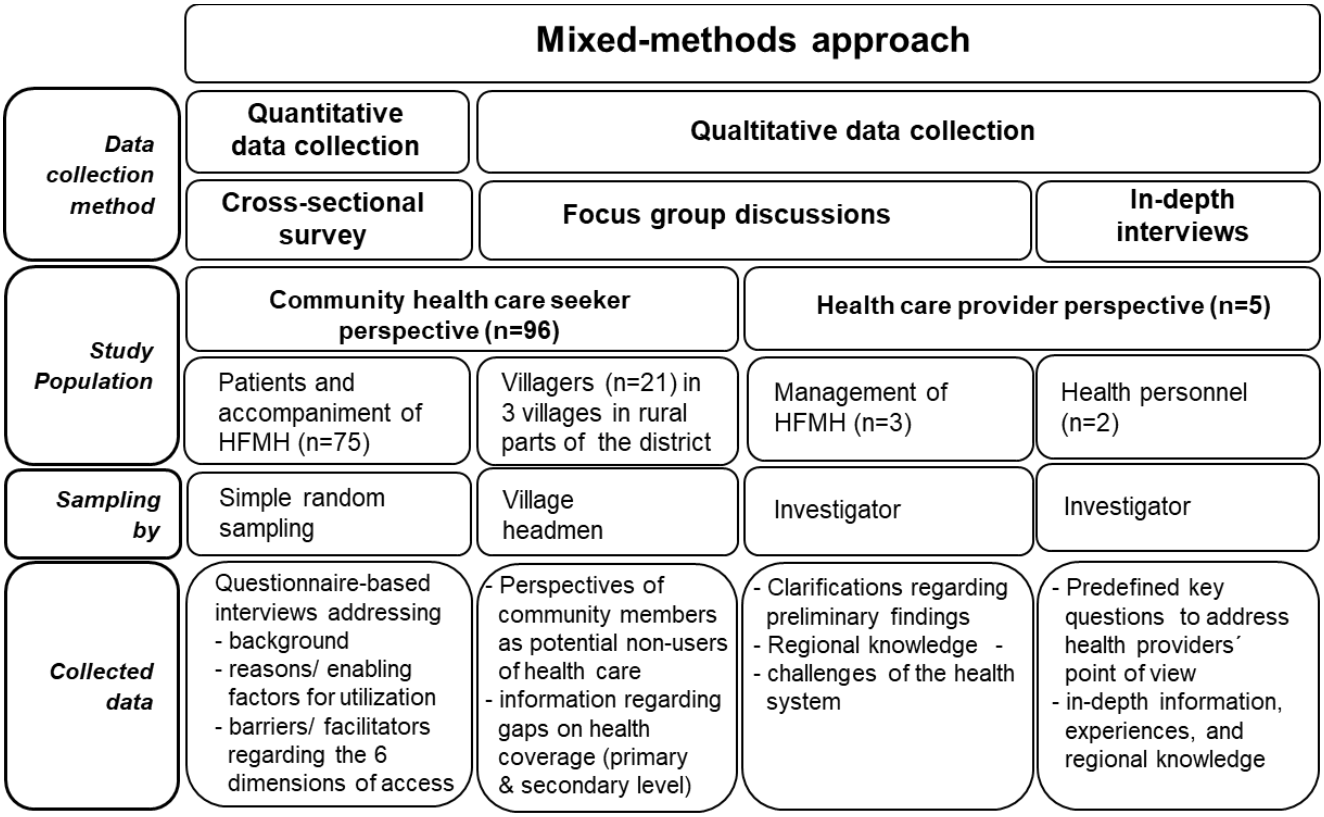

Figure 15: Mixed-methods approach applied in the study. The data collection method, the study population, the sampling, and the collected data are summarised for quantitative and qualitative data collection of this research (own design).

2.5 Analysis of data

Storage and analysis of the quantitative data occurred with Microsoft Excel, while the files were stored in a password-protected folder, where only the investigator had access to. Participants´ names were coded with a referral number.

Results of the questionnaires at the HFMH are presented by using descriptive statistics such as demographic data and schooling. Furthermore, data was analysed according to the dimensions and to possible correlations of travelled distances, the means of transport, and expenditures for transportation. Moreover, the utilisation of health care services, health facility related factors, and decision-influencing aspects were analysed.

Storage and analysis of the qualitative data occurred with Microsoft Word. The data was audio-recorded and transcribed by putting the interviews into writing directly after conducting the FGDs and interviews. This procedure enabled the investigator to review the interviews critically and reach a higher methodological security (Anthonj, 2012). Within

analysis of the qualitative data, the researcher investigated the opinions and viewpoints of the group as a whole and of individual interviewees.

Since the FGDs in the villages were held in Chichewa, the research partner translated and transcribed the material after extensive briefing. The discussion within the hospital´s management and the in-depth interviews with health personnel were held in English and therefore transcribed by the researcher herself.
Within a second step, the language was smoothed and corrected by the researcher, while the focus was on the contents. To prevent misinterpretation of the modified protocols, these were controlled by comparing them with the original transcript, by rehearsal of the original audio record, and by discussing the protocols with the research assistant.

Generally, findings of the questionnaires, the FGDs, and of the in-depth interviews were ordered, categorised, and coded deductively (Mayring, 2002). According to the Access and Health Care Framework (see chapter 2.3), passages and quotes were categorised regarding the dimensions spatial accessibility, affordability, availability, acceptability, awareness, and accommodation.
Based on the concept of Anthonj et al. (2015), which they applied in their study on impact of flooding on people living with HIV in Namibia, codes and subcodes were added to the categories. These arose from the analysis of the categories and the literature review. Their aggregation is illustrated and described within the findings of each dimension.

2.6 Ethical consideration - Collaborative agreements

To ensure ethical and scientific standards of the epidemiological and social study, which was carried out on human subjects, the permission to conduct the survey was approved by a German and a Malawian Ethical Committee.
The permission was approved on June 26, 2016 with the operation number 156/16 by the Ethikkommission an der Medizinischen Fakultät der Universität Bonn. The National Health Science Research Committee of Malawi approved the study on December 12, 2016 with the operation number 16/11/1687.
Study protocols had to be submitted to both of the Ethics Committees. After the discussion of the proposal within the committees, recommendations for changes were given to the researcher. An improved version of the proposal had to be submitted again to both

committees before the study was approved for one year. The approvals of these Committees were independent from each other.

3. Results and Discussion

The following chapter will present and evaluate findings of the empirical data collection. Results of the questionnaires at the HFMH are displayed in the first section by using descriptive statistics, such as demographic data and schooling (see chapter 3.1). An overview of the main perceived barriers and enabling factors, which were identified within the survey, will be revealed.

Subchapters will present the different dimensions separately. As described within the methodology, collected data was categorised deductively according to the dimensions Awareness (see chapter 3.2), Spatial Accessibility (see chapter 3.3), Affordability (see chapter 3.4), Availability (see chapter 3.5), Accommodation (see chapter 3.6), and Acceptability (see chapter 3.7). After presenting the findings of empirical data collection, these results will be evaluated and discussed with findings of the literature research. Literature research includes secondary data in form of reports and statistics of governmental and non-governmental agencies, as well as various empirical studies within Malawi and other settings. Generally, by categorising and comparing data from different data collection tools, findings can reinforce, explain, or relativize each other.

When participants of the FGDs or in-depth interviews are quoted, their names are coded. Concerning the FGDs within the villages, these codes are a combination of their village and a fictive name. Participants of the survey are quoted by using the referral number of their questionnaire, while quotations from employees or the hospital´s management are coded as “Staff” and “Management”, respectively.

3.1 Descriptive Statistics of the HFMH sample

About 63 % of the survey´s participants have been patients, whereas 20 % accompanied a friend or a relative. The remaining 13 % attended their child. Questions regarding the demographic information and the level of education have been answered in behalf of the

interviewed person. In the following, all questioned participants will be named as patients.

3.1.1 Characters of the sample

56.0 % of the interviewed people were male, whereas 44.0 % were female. Compared to the total population in Phalombe district, where only 47.7 % of the inhabitants are male, men were slightly overrepresented in this survey (National Statistical Office, 2015). However, due to the total number of 75 participants in this survey, demographic data can easily be distorted by only few participants.

With a share of 45.4 %, the age group between 30 and 49 years had the highest number of interviewed patients. Half of them were female. Figure 16 shows the distribution of the interviewed population regarding sex and age group in percent.

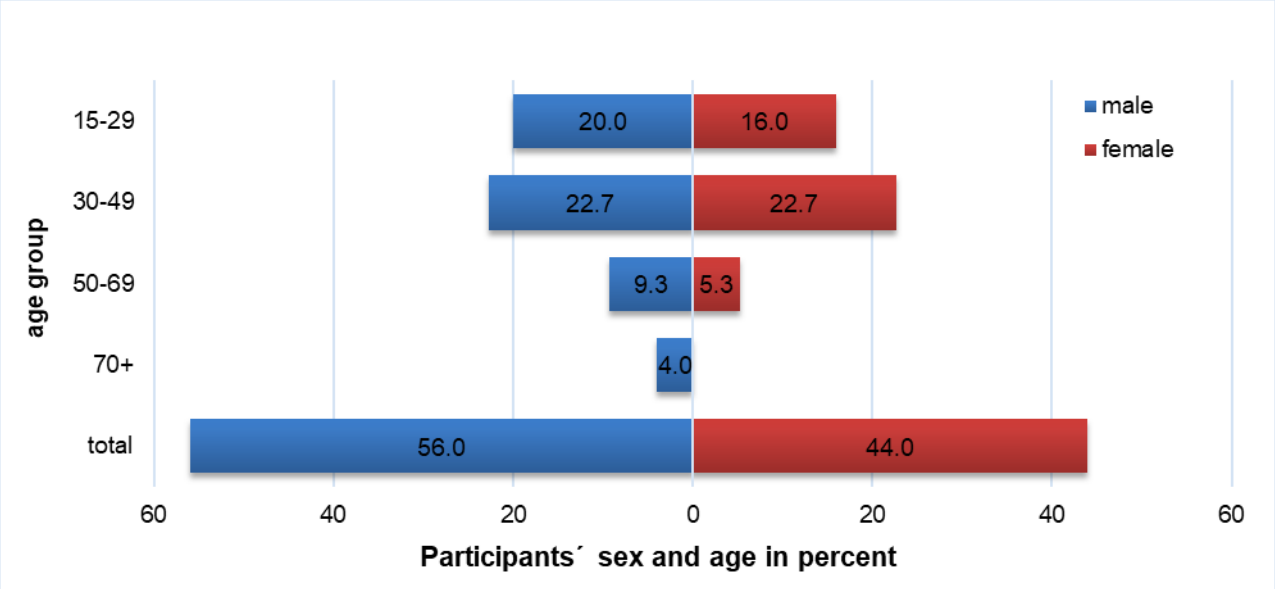

Figure 16: Distribution of the survey´s participants concerning sex and age in percent. 56.0 % were male, 44.0 % female. Compared to the total population in Phalombe district, where 47.7 % of the inhabitants are male, men were slightly overrepresented in this survey (own design, Data: empirical research).

56.3 % of the male participants at the age between 15 and 49 years answered to work as farmers, whereas the district´s average showed a share of 66.2 % that was enrolled in agriculture (National Statistical Office and ICF Macro, 2011). 28.1 % of all male patients

worked in sales and services, while the district´s average showed a share of 13.2 % in that sector.

Women that were working in the agricultural sector were overrepresented in the survey (73.3 % compared to 62.6 % of all women in the district). 10.0 % of the female patients were enrolled in sales and services and therefore underrepresented compared to Phalombe´s average of 20.1 % (National Statistical Office and ICF Macro, 2011).
Figure 17 shows the profession of the participants at the age between 15 and 49 including the district´s averages in percent.

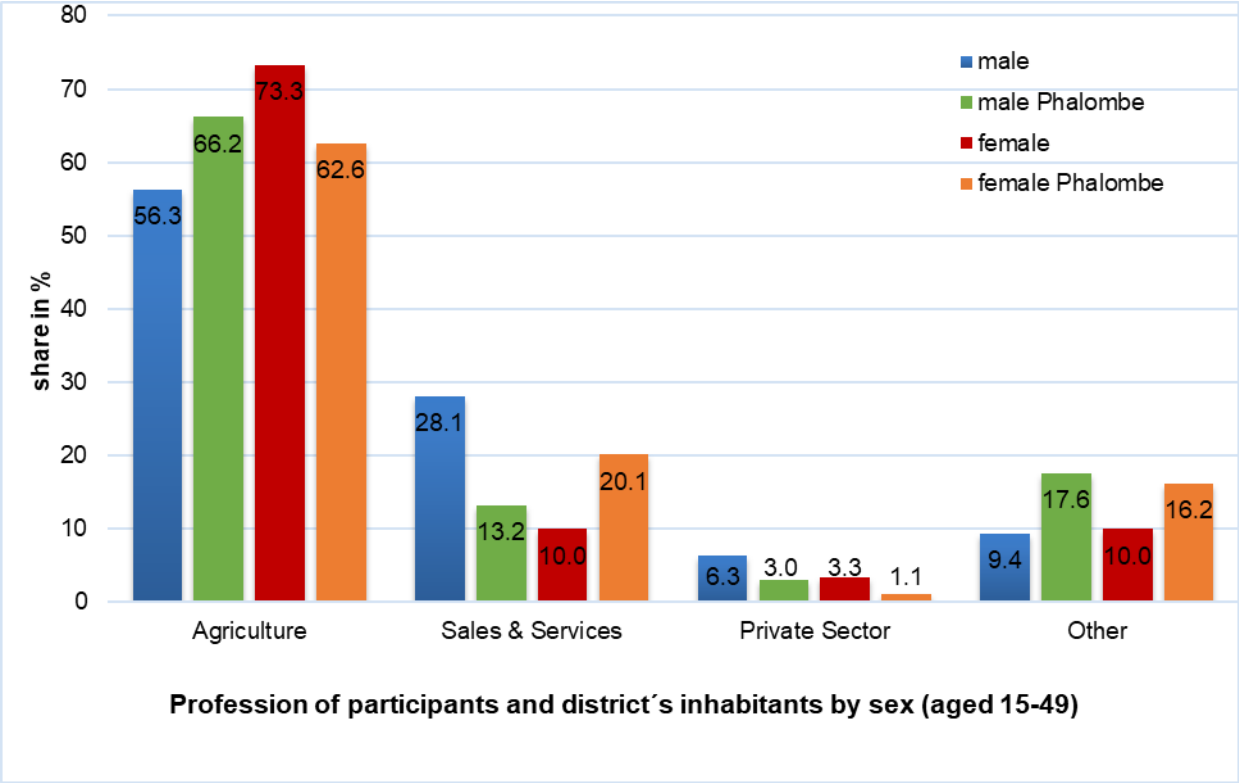

Figure 17: Percentage of patients' professions (aged 15-49) by sex in comparison to district averages. Compared to the district´s average (66.2%), male farmers were under-represented (56.3 %), while male workers in sales and services were overrepresented in this study (28.1 %) compared to the district´s average (13.2 %). Women in the agricultural sector were overrepresented (73.3 % compared to 62.6 %). Women in sales and services were underrepresented in the study (10.0 % compared to Phalombe´s average of 20.1 %) (own design, Data: empirical research; National Statistical Office and ICF Macro, 2011)

Concerning school attendance and education, the share of illiterate male patients was way lower than the average in Phalombe district (14.3 compared to 25.6 %). Furthermore, the number of male participants that did not attend school at all (2.4 compared to 10.4 %) or primary school for only a few years (57.1 compared to 73.4 %) was lower than the district´s average. The opposite was found regarding the share of participants that finished primary school (21.4 compared to 5.3 %), attended or even finished the secondary (16.6 compared to 9.6 %) and tertiary level (2.4 compared to 0.5 %) (National Statistical Office and ICF Macro, 2011).

The situation was similar among female participants. The share of interviewed women that have not attended school at all (18.2 compared to 18.7 %) or only a few years of primary school (39.4 compared to 68.7 %) was lower than the district´s average. The number of women that finished primary (18.2 compared to 7.5 %), attended secondary (18.2 compared to 4.4 %) or the tertiary level of education (6.1 compared to 0.1 %) was higher among the participants in the survey compared to Phalombe district. However, the share of illiterate women in the survey was slightly higher compared to the district´s average (39.4 compared to 35.4 %).

Figure 18 shows education and school attendance by sex in comparison to the district´s average percentages (National Statistical Office and ICF Macro, 2011).

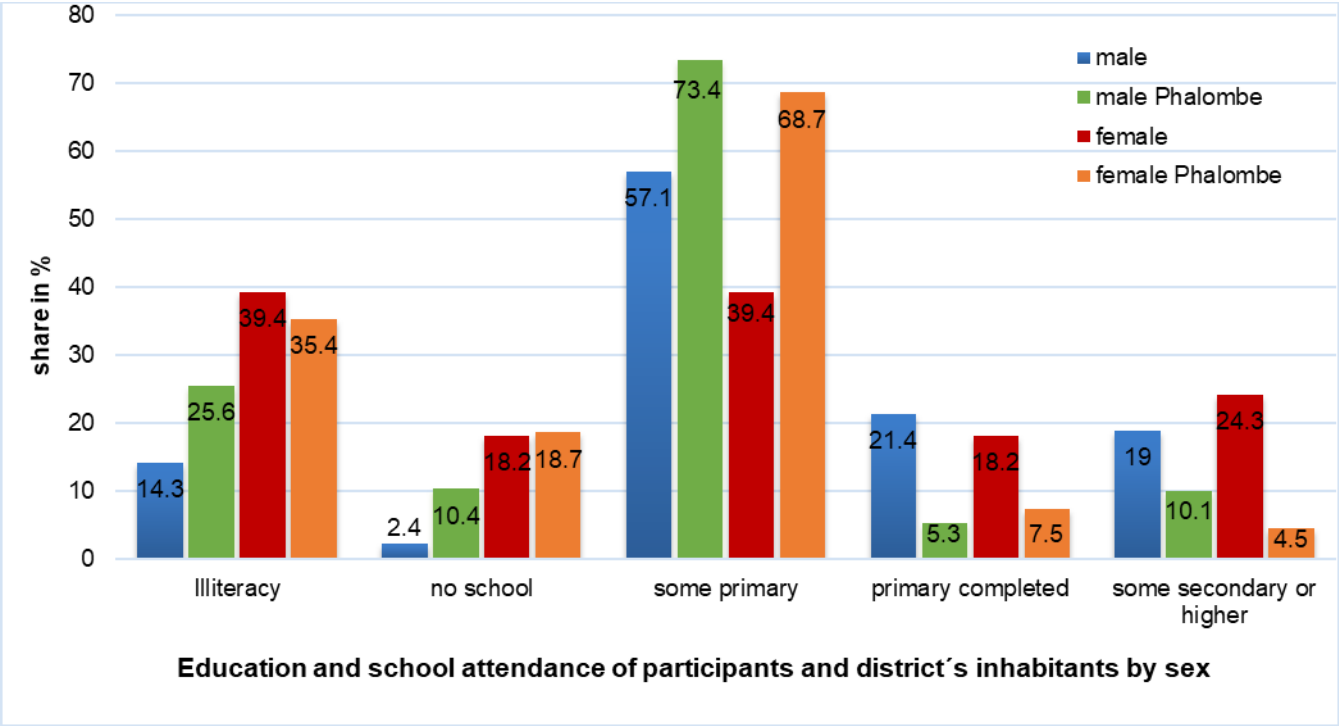

Figure 18: Education and school attendance by sex in comparison to district average percentages. Generally, people with lower levels of education (illiterate people, no school, some primary school) were underrepresented in the study compared to the district´s average. Participants with higher levels of education (primary school completed, some secondary or higher schools) were overrepresented compared to the district´s average (own design, Data: empirical research; National Statistical Office and ICF Macro, 2011).

3.1.2 Utilisation of health care facilities

When they felt the urge to seek treatment within the previous twelve months, 9.3 % of the survey´s participants stated that access to health care services and medical care has been a problem for them almost every time (question 23). 16.0 % had to face barriers often while 73.3 % stated that access had been a problem a few times.

One female participant reported that she never faced problems concerning access within this period. Working in the private sector, having finished university, living 0.5 kilometres from the HFMH, and owning a car might be interpreted as enabling factors to seek health care services whenever urge became apparent.

Within the group of participants that perceived problems in accessing services often or almost every time (25.3 %), no correlation concerning age, sex, or schooling was apparent. Yet, the total amount of 19 participants, who stated this high occurrence of barriers, was too small to find a valid correlation.

Question 23a addressed perceived barriers in accessing health care services within all levels of service provision. Participants had to state whether listed barriers were one of the hindering factors, when feeling the urge to seek treatment within the previous twelve months.

Figure 19 visualises the share of participants that perceived listed barriers. While some factors seemed to be more important than others, the chapters 3.2 – 3.7 will present all of them according to their dimensions and categories. However, it became apparent that inadequate equipment and services (77.3 %), cost of the visit and transport (68.0 %), lack of transport (65.3 %), and poor attitude of health personnel (64.0 %) were the main barriers that the survey´s participants perceived.

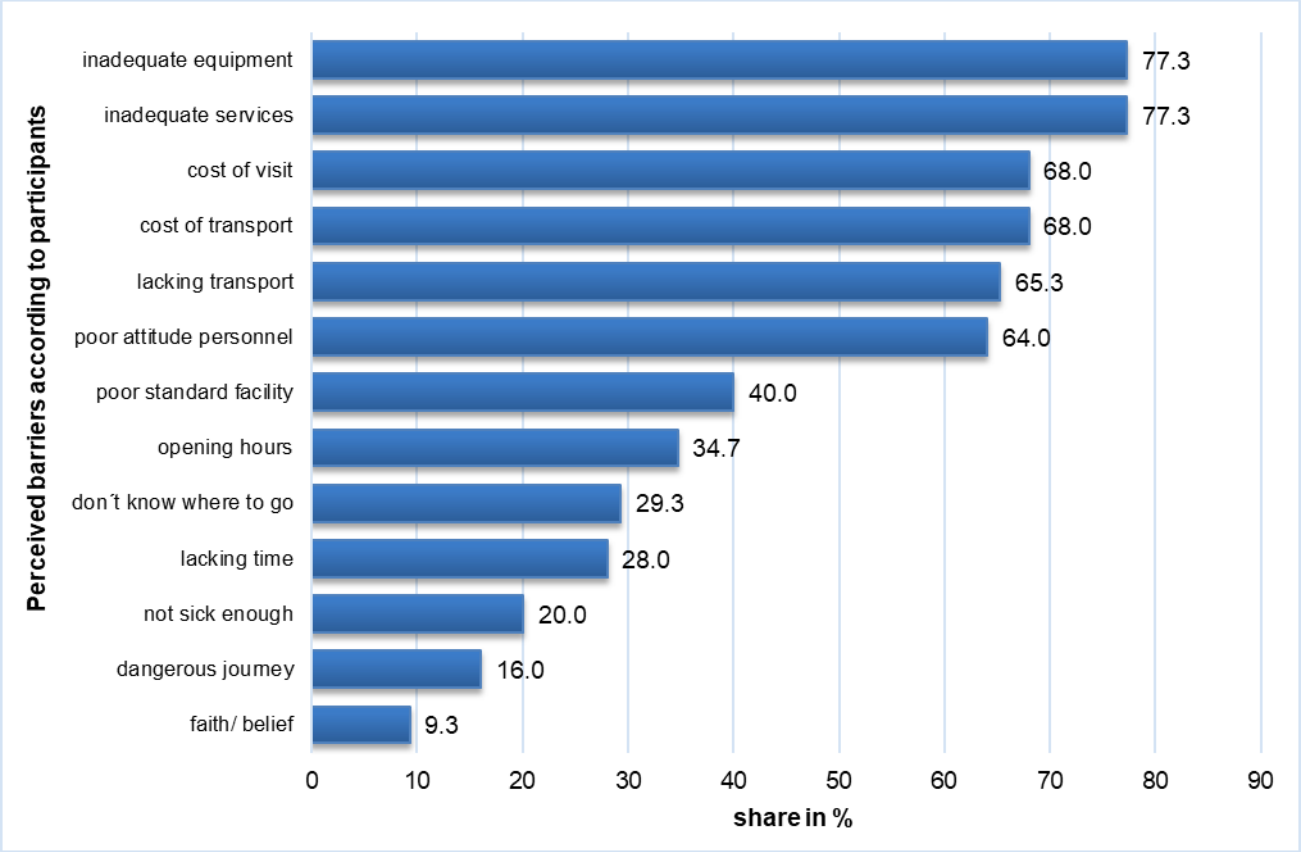

Figure 19: Perceived barriers according to the participants of the survey. Barriers regarding availability of equipment (77.3 %) and services (77.3 %), affordability of the visit (68.0 %) and transport (68.0 %), lacking transport (65.3 %) and acceptability regarding the attitude of personnel (64.0 %) were perceived to be the main barriers according to the survey´s participants (own design; Data: empirical research)

Yet, question 23 left room for interpretation: “In the last twelve months, how many times has the access of health care services and medical care been a problem for you when you felt the urge to seek treatment?”.
Initially, the researcher wanted to reveal perceived barriers concerning access to all kinds of health care facilities, including health centers and the HFMH. As the other questions of the interview referred to the current visit of the hospital, it might have been unclear that question 23 included health centers as well. While conducting the survey, the investigator decided to add verbally “including health centers” in order to emphasise the inclusion of these facilities. Due to that addition, some participants only described their perception of services in health centers when answering this question. Others answered the questions more generally. Therefore, it cannot be fully distinguished whether given answers referred to one specific type of health care facility or whether different types were considered by the interviewee. Within the presentation of the findings, question 23 was evaluated according to its initial purpose and referred to access to health care services in general.

In order to seek services for the same symptoms, the majority of patients consulted one or a combination of different health care facilities before coming to HFMH (61.3 %). Most of the patients within this group consulted at least a health center beforehand (95.7 %). 10.9 % consulted another hospital, and 2.1 % a maternity facility before coming to HFMH. Within the group of people that sought services in other facilities before, 17.4 % have been referred to the hospital. The remaining 82.6 % came without a referral letter, as they expected to receive better health care services in the HFMH than in the facilities they have been to initially.
While 60.9 % of this group stated to pay the fees out of their own pocket, 30.4 % of the charges were paid by the government (referrals and patients with HIV/AIDS coming for antiretroviral therapy). The remaining fees (8.7 %) were covered by the employer, insurance, or funding.

Among the participants that went to the hospital directly (38.7 %), 72.4 % expected to receive better health care services and therefore came straight to HFMH, rather than consulting another facility beforehand. Another 24.1 % stated that they came directly due to the hospital´s proximity to their homes. Better opening hours led the remaining 3.4 % to seek services in the HFMH.

Within this group that sought services in the HFMH directly, 79.3 % had to pay consultancy out of their own pocket. Government paid 13.8 % of the charges while the remaining 6.9 % were covered by the employer and funding.

Figure 20 visualises utilisation of HFMH, the coverage of costs for services, and the reasons why patients decided to seek health care in the private hospital instead of in health care facilities, where services were free of charge.

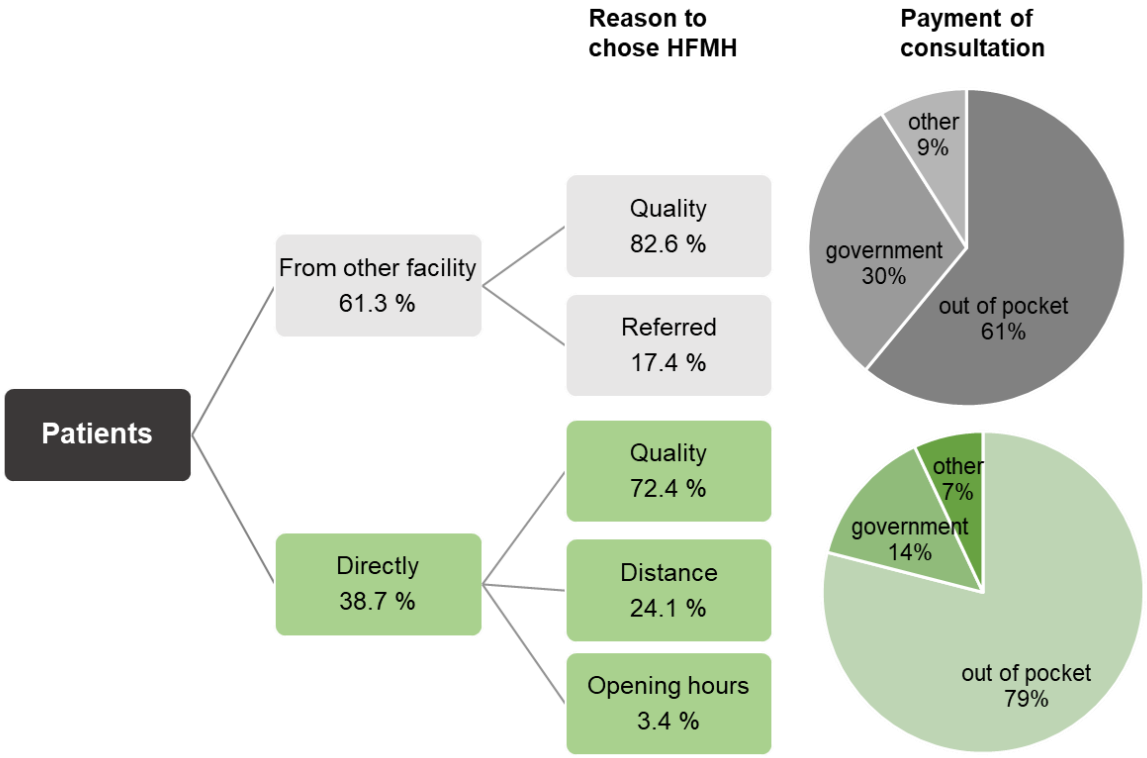

Figure 20: Utilisation of HFMH, coverage of costs, and reasons for seeking services. The majority consulted at least one facility before coming to HFMH (61.3 %), while most of them (82.6 %) sought services without a referral letter, as they expected to receive better health care. 61 % within this group stated to pay the fees out of their own pocket, 30.4 % of the charges were paid by the government. Among the participants that went to the hospital directly (38.7 %), 72.4 % expected to receive better health care services, while 24.1 % stated to come directly due to the hospital´s proximity. The majority (79.3 %) had to pay consultancy out of their own pocket (own design; Data: empirical research).

81.3 % of all interviewed patients stated that the hospital was not the closest health care facility to their homes. Still, they decided to seek services in HFMH. However, the majority explained that they are not satisfied with health centers and the services they provide.

Lacking quality of health care provision (76.6 %), not trusting in the competence of health centers (4.5 %), poor attitude of health workers (3.0 %), opening hours of health centers (3.0 %), and poor standards of those facilities (1.5 %), are stated as reasons to seek services in HFMH rather than in the health centers nearby.

3.1.3 Enabling factors

After revealing barriers that hindered participants to access health care services in the different levels of health care provision, question 23b addressed participants´ enabling factors to seek services in the HFMH on that particular day. Factors, which are related to the category affordability, were mentioned by 60.0 % of the participants. 26.7 % stated that they have just earned some money, while another 9.3 % received money from family members in order to pay consultancy. 24.0 % of the participants reported that government was paying for their treatment. This number included referrals (10.7 %) and people living with HIV/AIDS seeking for ART (13.3 %).

Higher quality of health care services in the hospital compared to other facilities was stated as an enabling factor by 4.0 % of the patients. One participant (1.3 %) stated that he found a bike, which enabled him to overcome barriers that were related to spatial accessibility. However, 34.7 % of interviewed people did not know how to answer this question.

In order to explain some of the stated findings, the following chapters will present the results of the data collection within the categories awareness, spatial accessibility, affordability, availability, accommodation, and acceptability.

3.2 Awareness

As presented within the developed framework for this study (see chapter 2.3), the patient´s first step towards the health care system is the perceived need to enter it and to initiate the treatment-seeking process. Since this process is highly influenced by the patient, his perceived needs, and the recognition of the individual´s health status, the study investigates the dimension awareness. Furthermore, the dimension examines the level of information about the health care system and knowledge about where to go and who to consulate with certain issues. This includes awareness regarding different formal

suppliers, utilisation of traditional medicine, and cultural beliefs.

Table 10 aggregates the findings of empirical data on awareness. Codes and subcodes, which arose from data analysis, divide the findings into sections.

Table 10: Overview of aggregation and analysis of the empirical research data on awareness (own design, based on Anthonj et al., 2015; Data: empirical research)

Code	Subcode	Quantitative data	Qualitative data		
		Survey: hospital	**FGD: villages**	**FGD: management**	**Interviews: staff**
Level of information	Education	X			
	Recognition of own health status	X		X	X
	Places to receive adequate service	X	X	X	
Beliefs and practices	Traditional medicine	X		X	X
	Cultural beliefs and hierarchies			X	X

3.2.1 Findings

Level of information

As presented within the Descriptive Statistics (see chapter 3.1), participants of the survey obtained a better education compared to the district´s average. While 85.7 % of the male participants were literate, the share of literates in Phalombe district counted 74.4 %. The number of male participants that finished primary school or attended the secondary or third level of education was 40.4 %, while the district´s average counted 15.4 % (National Statistical Office and ICF Macro, 2011).

However, the share of literate female participants was slightly lower compared to the district´s average (60.6 % and 64.6 %, respectively). Still, the number of female participants that finished at least the primary level of education was 42.5 %, while the district´s average counted 12.0 % (National Statistical Office and ICF Macro, 2011).

None of the participants of the survey or the group discussions stated that they did not know about the existence of other health care facilities rather than the HFMH. All of them were aware of the availability of health centers or other providers such as maternity facilities, where health care services were free of charge.

Despite the knowledge of the facilities´ presence, 29.3 % of the survey´s participants had

to face the problem that they did not know where to go, when they felt the urge to seek health care services within the previous twelve months. No remarkable connection was noticed between this statement and schooling, sex, or age. However, it is not clear whether patients did not know where to go due to lacking information or due to other barriers that hindered them to seek services.

20.0 % of the survey´s patients stated that within the previous twelve months, they thought they were not sick enough to attend a facility although feeling the urge to seek services. Again, no correlation with schooling, sex, or age of the interviewed people can be noticed. However, the number of questionnaires was not sufficient for significant findings concerning education, sex, or age groups.

As stated by the hospital´s management and interviewed staff, community members were often not aware of their own health status. Instead of going to a formal health care facility when becoming sick, people stayed at home and waited until their medical condition had worsened. Therefore, insufficient recognition of the own health status and lacking perception of the medical condition could cause potential patients not to seek services although feeling the urge to do so.

> *“The people stay and wait at home until they are very sick. But if the community had the habit to come to the hospital before the condition has worsened, maybe some of these issues wouldn´t get such a big problem.”* *[Management]*

> *“The hindering factors? There should be a lot. One: Ignorance of the patients themselves, of their own health. If they suffer from illnesses, they are supposed to go to the hospital. But there are beliefs in the villages, that if they suffer from this or that, they should go to traditional healers. That this illness should not be treated in a hospital, that it is supposed to be treated traditionally. I think this is ignorance of their own health.”* *[Staff]*

Additionally, the management reported cases of corruption and the provision of services by a vendor, who ran a private health business in the catchment area of the hospital without being trained to carry out medical services. According to the management, he used medicines and diagnostics that were found in the hospital, such as malaria tests, malaria drugs, or antibiotics. Although this man was not a trained health worker and charged more money for his services than the HFMH, many people in the district sought

his services rather than going to a formal facility. Due to the high amount of infections after injecting medicines, hospitals preferred the usage of oral drugs. Yet, this particular vendor mainly used injections. According to the hospital´s management, people in Malawi did not trust oral drugs and believed that injections speeded up their healing process. Blisters and serious infections were consequences that patients had to deal with after consulting him. Concerning the vendor´s standards of hygiene, it was unclear whether he worked with sterile syringes or whether he used the same needle for every patient and therefore passed on infections. Nevertheless, many of the district´s inhabitants trusted the vendor and sought his services.

> *"People still have a belief in injections. Lots of medication you get here as an oral drug due to the amount of infections. But he is still injecting the people and they believe that they will be healed faster with the injection. That´s why they still go to him. They just don't trust the oral drugs and go to the vendor to get the infection. We even don't know about the hygiene and the syringes he is using. Does he boil them? Does he get the sterile ones? Or does he use the same syringe for everyone and is passing on infections.*
> *The issue with this gentleman was even discussed at district level. […] When he was arrested, he had a lot of people behind him who wanted him to set free again. Some people even went to hire lawyers on his behalf. So, it seems that people have developed trust in him, more than in hospitals or health centers."*
> *[Management]*

Furthermore, the hospital´s management reported that there are lacking or even wrong information within the communities concerning cost and utilisation of certain services in the hospital. Many women, for instance, think that they have to pay for antenatal care each time they used these services. Yet, only the first visit is charged, while the following are free. Therefore, not many pregnant women used antenatal care services in the HFMH.

<u>Beliefs and practices</u>

24 % of the survey´s participants stated that they have been to a traditional doctor due to the same issues that led them to seek treatment in the hospital. No connection was noticed between this statement and schooling, sex, or age. According to interviewed staff and the management of the HFMH, going to a traditional doctor was still the first priority for many people in Malawi. On top of that, habits and beliefs within the communities prevented

inhabitants to seek health care services in time. As stated by the management, some delivering mothers believed that they were not supposed to walk to a health care facility during the day. Therefore, they waited until it was dark to head towards a facility, which resulted in a delay of consultation and potentially worsening of the women´s conditions. A health worker stated that extended civil education should teach people to go to formal health care facilities when feeling sick.

> *"We are Africans. When we are sick, the first priority for us is to go to an African, a traditional doctor. When the situation worsens afterwards, that´s when they go to the hospitals. This belief, this habit needs to be abolished. […] Another belief is, when I am pregnant and labour starts, I should not walk during the day to go to the health facility. I have to wait until its dark. So, when labour starts during the day, women stay at home and wait until it is night."* *[Management]*

> *"I think there should be massive civil education to tell the people that the only place to go, when they are sick, is a hospital, not the traditional doctors. Cause most of the times when the people go there for a month or two, their condition when they come here is worse and more complicated."* *[Staff]*

In addition to these cultural beliefs, practices due to hierarchies within the communities were reported to be problematic when it comes to utilisation of health care services. According to the hospital´s management, mothers with sick children, for instance, often had to ask for permission to visit a health care facility. Therefore, their husbands, fathers, or uncles had to authorise these women before seeking services, which might result in a delay or even prevent receiving health care.

> *"There are those small issues that need to be dealt with by community chiefs. So, there are issues that my uncle or whoever has to authorize me to go to the hospital. Let´s say for example, my baby is sick. If I am married, I can go with the issue to someone. If in my family my baby is sick, I cannot just decide on my own to go to the hospital. I have to ask my uncle 'Uncle please, my baby is sick, can I go?' If I don't tell him and just go to the hospital and the baby dies there, he might say 'How come that you go to the hospital without my consent.' So there are small issues, small beliefs, that prevent us from receiving care in time. So, people end up at the hospital when things get really complicated."* *[Management]*

3.2.2 Discussion

Level of information

Within the survey, the investigator intended to quantify to which extent the participants´ level of information was a hindering factor to seek services. As presented in the empirical findings, about one third of the survey´s participants had to face the problem of not knowing where to go, when feeling the urge to seek health care services within the previous twelve months. However, this question might have not been formulated properly, as it did not become clear whether patients did not know where to go due to lacking information or due to other barriers that hindered them to seek services. Participants might have not interpreted this question according to its initial intention, thus quantifications regarding participants´ level of information cannot be made.

As pointed out within qualitative data collection, lacking or even wrong information regarding health-related topics prevented community members to seek services in formal facilities when feeling sick. The hospital´s management described the practice of a non-professional, who ran a private health business in Phalombe. Although using unclear standards of hygiene and not being trained to carry out medical services, some people in the district sought his services rather than going to a formal facility. This practice indicated lacking information about where to go to receive needed services. Further reasons for seeking services at the non-professional could be related to other barriers such as spatial accessibility or acceptability. However, this practice and people´s reasons for seeking his services have not been investigated any further within this research.

The hospital´s management and staff stated that many people were not aware of their own health status and waited too long before seeking services at a formal health care facility. Instead of going there when becoming sick, patients waited too long while their medical condition worsened. Therefore, insufficient recognition and perception of the individual´s medical condition caused potential patients not to seek services although there was perceived and actual need to do so.

Findings within literature research confirm that the decision-making process, whether to seek medical services or not, was influenced by people´s education (Agha, 2000; Ensor and Cooper, 2004; Hjortsberg, 2003; Trania et al., 2011), their economic status (Akin et al., 1998), the recognition of the own health status, and the perception of illness (Pokhrel

et al., 2010). According to Pokhrel et al. (2010), people decided to seek medical services only once they perceived themselves to be sick. Awareness, as well as type and severity of an illness, led individuals to choose whether they enter the health care system by seeking medical services. Without adequate knowledge of their own condition or where to receive required treatment, some patients switched several times between healers, as they did not know who to consulate in order to get relief (Goudge et al., 2009).

However, survey data for poor countries show that the poor report illness less often than the better-off (Akin et al., 1998). They more often do not perceive themselves to be ill when their health status was at a stage, where wealthier people in the same state did perceive illness. Akin et al. (1998) suggested that the poor were more adapted to certain deprived health conditions. Thus, they did not consider themselves to be sick when, by wealthier people´s standards, they were.

Moreover, education was found to be one of the most important determining factors to access health care services. It provided a greater base on health knowledge and recognition, a basis for assessing where to seek required services, and more income potential (Ensor and Cooper, 2004; Trania et al., 2011). This included education of the head of a household as well as education of the individual health care seeker (Hjortsberg, 2003). Furthermore, education beard potential to improve individual´s ability to produce health themselves through healthier lifestyles (Ensor and Cooper, 2004).
A Pakistan-based study indicated that the level of parent´s education had a significant effect on infant survival. Infants of mothers without any schooling were 2.5 times more likely to die as those of mothers with eleven or more years of schooling (Agha, 2000). Therefore, the level of health knowledge, education, recognition of an illness, and perceived disease severity, influenced the decision-making process to seek health care services (Hjortsberg, 2003; Pokhrel et al., 2010).

Among participants of the survey, who sought services in the HFMH and entered the health care system, school attendance and literacy were higher compared to the district´s averages (see chapter 3.1 and 3.2.1). It has to be considered though that the sample size of 75 questionnaires was not big enough to allow valid comparisons or tendencies. Furthermore, the information regarding education and literacy in Phalombe district was taken from the Malawi Demographic and Health Survey, which was conducted by the

National Statistical Office in 2010 and 2011. Updated numbers regarding education in the district were not available. To which extent these numbers are still valid is not clear. Yet, comparing data from the empirical study and the Malawi Demographic Health Survey indicate a higher level of education among the study´s participants and therefore among users of services in the private hospital. As the study did not address the actual income level, it could not be distinguished to what extent higher education reinforced the user´s financial ability or raised their awareness regarding their own health status.

Generally, in order to enable people to recognise their own health status and to take appropriate action, human capital, including local knowledge and education (Obrist et al., 2007), needs to be mobilised and addressed. Close communication between health care providers and villagers is necessary to overcome information barriers and create awareness regarding availability and quality of different health care services. Comprehensive provision of information needs to clarify misapprehensions and address people´s expectations on services.

Jacobs et al. (2012) suggest that empowerment of communities can lead to an improved flow of information regarding health aspects, reduction of transport and opportunity costs, and access to sufficient cash within the community when needed. By strengthening community participation and individuals, household expectations as well as community and cultural preferences can be addressed, while barriers and effects of limited confidence in health care services can be decreased (Jacobs et al., 2012).

In order to tackle maternal and infant health problems, Rosato et al. (2012) evaluated strategies, which were developed and implemented by women´s groups in a rural Malawian district. Health education, which was mostly carried out by HSAs, was a commonly identified strategy to address prioritised issues. Generally, the whole community was invited to attend the sessions on topics such as sanitation and hygiene, malaria, nutrition, anaemia, diarrhoea, family planning, and vaccinations. Members of women´s groups gained knowledge from education sessions and shared it through door-to-door health education sessions. The study indicated that mobilisation of communities through women´s groups might bring broader, more effective, and long-lasting benefits to individuals and communities. Addressing these general livelihood and sanitation activities led some groups to clear surroundings of their house (57.9 %), to treat water with chlorine (54.8 %), and to dig pits for latrines (48.7 %) and rubbish (40.6 %) (Rosato et al., 2012)

Beliefs and practices

In accordance with other research, the high relevance of traditional medicine became apparent within findings of the empirical study. A qualitative study of Munthali et al. (2014) examined non-users of formal health services in different Malawian districts. According to their study, a lot of people tend to use traditional medicine instead of modern services due to misbelief in modern medicine, higher costs in accessing some of the formal facilities, and better spatial accessibility of traditional medicals (Munthali et al., 2014).

A qualitative study by Fisher et al. (2017) evaluated community attitudes and the utilisation of formal and informal health care services in rural communities in the north of Malawi. While the majority of participants reported combined utilisation of traditional and formal medicine, the study could not reveal the order, in which the sectors where used. If one service failed to diagnose, treat, or cure a medical condition, an alternative provider or health care sector was sought (Fisher et al., 2017). Furthermore, health-seeking behaviour among community members was also influenced by the belief, whether a disease was of biological or spiritual nature. Illnesses with well-understood mechanisms and treatments, such as tuberculosis, malaria, and HIV/AIDS, were recognised to be treated best in formal health care facilities. However, when formal facilities were perceived to be unable to provide explanations for a symptom or when insufficient diagnostic and treatment modalities hindered service provision, the cause was believed to be spiritual and traditional medicine was pursued (Fisher et al., 2017).

Within this study, the hospital´s management and staff indicated that traditional medicine and cultural beliefs concerning health care hampered potential patients to access formal services. However, the usage of traditional medicine has not been addressed within the FGDs. Among participants of the survey in the HFMH, only 24 % stated that they have been to a traditional medical because of the same issues that led them to seek treatment in the hospital. Yet, it has to be kept in mind that the quantitative survey was carried out among visitors of the hospital and therefore among users of the formal health care sector. There is no quantitative data available regarding usage of traditional medicine among non-users of formal health care in Phalombe district. Nevertheless, empirical findings indicate a parallel usage. As suggested by Munthali et al. (2014), it can be assumed that utilisation of traditional medicine is higher among non-users as different barriers might hinder them to use formal health care services.

Further studies need to investigate the extent and reasons to utilise traditional medicine by targeting non-users of formal services in Phalombe. This might help to understand, whether community members utilise traditional services due to barriers in accessing formal facilities or due to cultural beliefs and preferences. Additionally, further research needs to reveal, whether utilisation of formal or informal services would be preferred if both were accessible equally.

As presented within the findings, cultural beliefs hampered mothers in labour to walk to a health care facility during the day, which resulted in a delay of consultation and potentially worsening of the women´s condition.

Findings within the literature confirmed the existence of several cultural beliefs that influenced health-seeking behaviour. A qualitative study in Malawi explored women´s reasons to deliver at home without skilled attendance despite receiving antenatal care at a health center (Kumbani et al., 2013). Although being informed to go to a health care facility once labour has started, participants failed to deliver there. Some reported fear of being bewitched not to deliver in time, even when labour has already been in progress. Therefore, women preferred to wait and seek delivery in a health facility once labour was well established and could not be disturbed by witchcraft. Consequently, they attend a health care facility with delay or do not go there at all (Kumbani et al., 2013).
A study of Roberts et al. (2015) revealed that due to cultural beliefs, women did not disclose their pregnancy and did not attend antenatal care until gravidity was visible. Some women reported that they were sent away by health care providers, who followed this belief. They were told to return to the health care facility, when pregnancy was visible (Roberts et al., 2015).

In addition to cultural misbeliefs, findings of empirical research indicated problematic practices due to hierarchies within the communities. Obligatory authorisation from a male family member limits women´s self-determination and autonomy to seek health care. Moreover, the shares of male and female patients within the survey imply disparities regarding gender distribution: 56.0 % of the participants were male, while the district Phalombe only counts a share of 47.7 % males (National Statistical Office, 2015). Although the number of 75 questionnaires might not be big enough for a valid statement, it indicates an unbalanced distribution of male and female patients that seek treatment in

the private hospital, possibly due to problematic hierarchies within households and communities.

As suggested by Ensor and Cooper (2004), health-seeking behaviour is strongly related to the relative position of family members, while community and cultural preferences, attitudes, and norms affect beliefs and behaviour. The authors pointed out that in some communities, women had inferior access to resources. Therefore, they might be hindered from making their own decisions (Ensor and Cooper, 2004). As this affected health-related issues and other aspects of an individual´s lifestyle, weaker members of society need to be empowered to make independent choices. According to Ensor and Cooper (2004), more impact could be gained, if social issues were addressed across the government rather than from the narrow perspective of a sector ministry.

Generally, increasing awareness and utilisation of formal health care services is more complex than increasing the provision of services and health education advice (Ensor and Cooper, 2004). Community and cultural factors are complex to address and need combined demand and supply-side interventions to deliver appropriate services to communities. As suggested by Ensor and Cooper (2004), cultural and community factors might be related to information failures, which are linked to failures either in form of knowledge of health care choices or in the ability to utilise information in an effective way. Potentially, cultural and community aspects could be addressed if they arose due to misinformation or inappropriate service arrangements. Misapprehensions need to be tackled in the first place, while correct information and culturally sensitive health care have to be delivered (Ensor and Cooper, 2004).

3.3 Spatial Accessibility

The dimension spatial accessibility looks at the relationship between the location of health care service providers and patients. It includes patients´ travel distance, time, their means of transport, and transportation cost. Table 11 aggregates the presented findings of the empirical data on spatial accessibility. Codes and subcodes, which arose from the analysis of the data, divide the following findings into sections.

Table 11: Overview of aggregation and analysis of the empirical research data on spatial accessibility (own design, based on Anthonj et al., 2015; Data: empirical research)

Code	Subcode	Quantitative data	Qualitative data		
		Survey: hospital	**FGD: villages**	**FGD: management**	**Interviews: staff**
Remoteness	Travel distance	X			
	Travel time	X			
	Road and weather challenges	X			
Transport	Means of transport	X	X		X
	Cost	X	X		

3.3.1 Findings

Remoteness

The 75 participants of the survey were inhabitants of 62 different villages, whereas 55 of these villages are located in Phalombe district. The remaining seven villages are located in Mulanje district, which is bordering Phalombe to its southwest. Reported travel distances and times are based on estimates of the interviewees.

18.7 % of the participants stated that HFMH was the closest health care facility to their homes, while 81.3 % find at least one health center that is closer to their households. The estimated distances from the patients´ home to their closest facility ranged from 0.2 to 12.0 kilometres, while the average distance was 2.4 and the median 1.5 kilometres. 89.3 % of the interviewees lived within a distance of 5 kilometres, whereas 2.6 % resided 10 or more kilometres from a facility.

In comparison to that, the estimated distance from the patients´ home to HFMH ranged from 0.5 to 71 kilometres. The average was 13.6 and the median 7.0 kilometres. 41.3 % of the participants lived within a distance of 5 kilometres, while 42.7 % resided at least 10 kilometres away from the hospital.

Table 12 shows the reported travel distances from the participants´ homes to their closest health care facility and HFMH.

Table 12: Reported distances from participants´ homes to the closest health facility and the HFMH (own design; Data: empirical research)

	Closest facility	**HFMH**
Range	0.2 – 12.0 km	0.5 – 71.0 km
Average	2.4 km	13.6 km
Median	1.5 km	7.0 km
≤ 5 km	89.3 %	41.9 %
≥ 10 km	2.6 %	36.5 %

However, it is not clear, to what extent patients were aware of the accurate distances between their homes and the hospital, as the reported travel distances varied significantly across participants from the same village: Participant number 28 from Khanaja estimated a travel distance of 5.5 kilometres, while participant number 25 from the same village stated a distance of 10 kilometres from his home to the hospital. Two villagers from Mukota reported a travel distance of 3 and 10 kilometres, respectively. Participant number 23 from Kolokivo estimated a distance of 32 kilometres, while participant number 27 from the same village stated a distance of 27 kilometres from his home to HFMH.
Unfortunately, the researcher was not able to find data regarding the actual distances between the individual villages and the hospital. Therefore, the travel distances could not be validated.

The travel time to the hospital ranged from 5 to 420 minutes. The mean travel time was 100.8 minutes, while the median was 65.0 minutes. 18.9 % reported that they reached the hospital within 30 minutes whereas 36.5 % needed more than 90 minutes to get there. Again, it is not clear, to what extent patients were aware of the approximate travel time they needed to reach the facility.
Figure 21 shows the travel time to the hospital as stated by the participants.

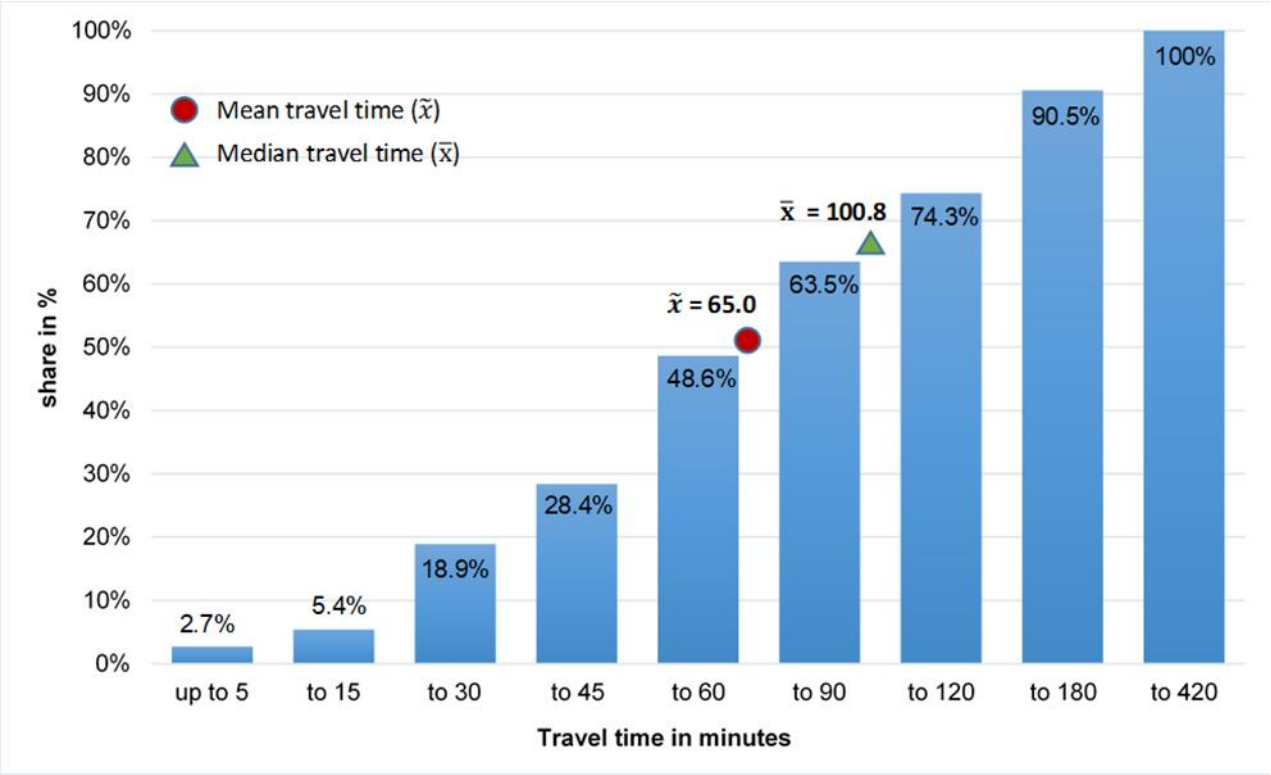

Figure 21: Reported travel time to HFMH. The travel time ranged from 5 to 420 minutes. The mean travel time was 100.8 minutes, the median was 65.0 minutes. 18.9 % reported to reach the hospital within 30 minutes. 36.5 % needed more than 90 minutes to get there (own design; Data: empirical research).

The correlation of travel distance and time varied within the different means of transport. While the correlation of distance and time among participants that travelled by minibus was moderate (=0.43), it was stronger for those, who came by foot (=0.6), bike (=0.75), motorbike (=0.79), or ambulance (=0.92).

Only 18.7 % stated that HFMH was the nearest health care facility to their home, whereas remaining participants find health centers that are closer to their houses. Compared to this low number, 54.6 % rated it to be the facility with best access to public transport, most likely due to the mini busses that run on the district road and stop in front of the hospital. 45.4 % indicated that they can reach the health care facility the quickest and even 52.0 % stated to access it the most comfortable way (Figure 22).

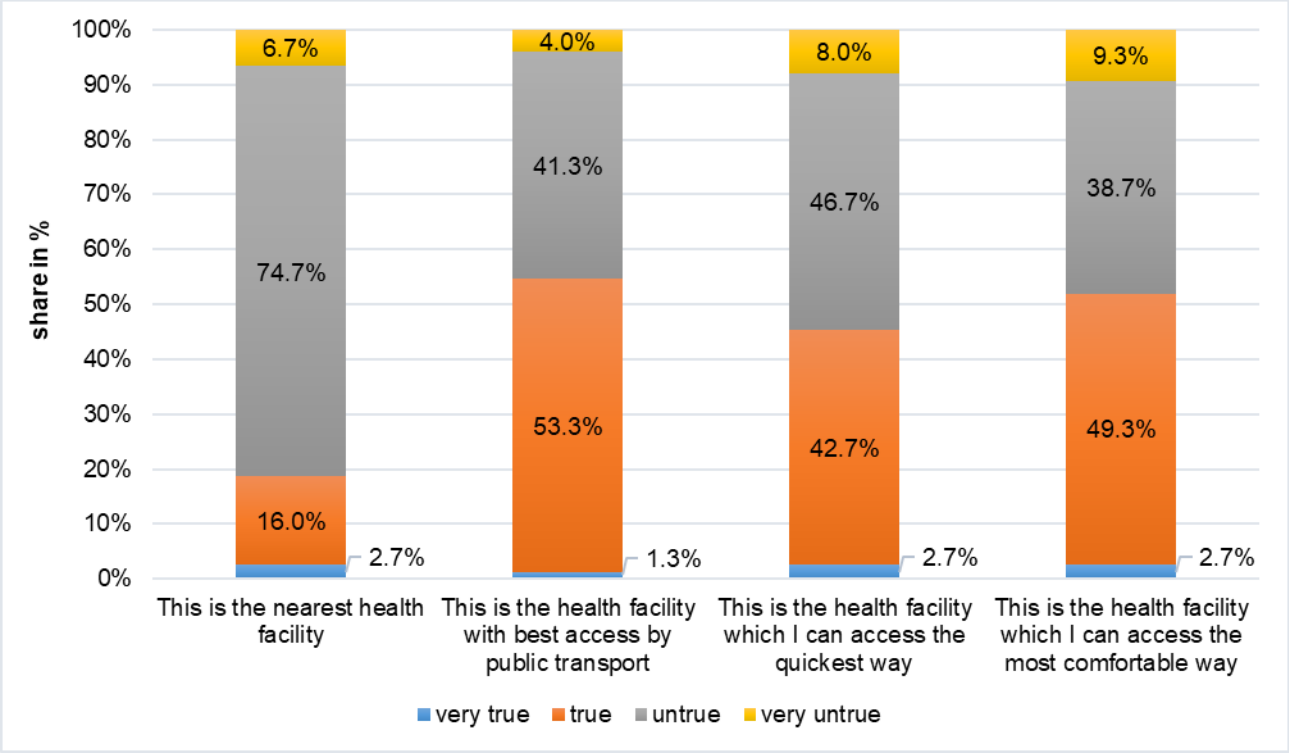

Figure 22: Participants´ categorization of statements concerning accessibility in "very true", "true", "untrue" and "very untrue" (own design; Data: empirical research)

Regarding the influences of rainfalls on the usability of paths, 81.3 % of the participants stated that they could use the same tracks during the dry and the rainy season in order to reach the hospital. 14.7 % could not use their paths at all and have to take a longer road to reach the HFMH. The remaining 4 % could use the same routes but are facing difficulties in utilisation. Therefore, the minority of the survey´s participants was affected by the rainy season. Still, weather conditions had an impact on accessibility of the hospital and health care facilities in general.

Road and weather challenges have not been addressed within the FGDs. Therefore, it cannot be stated to what extent potential non-users of health care services might be affected by these factors once the rainy season has started.

Transport

Due to lacking public transport in rural Malawi, only 5.3 % of all participants of the survey used public transport in form of mini busses, partially in combination with walking a certain distance. Mini busses, which run on the district road between Phalombe city and the

neighbouring district Mulanje, stop at HFMH. However, people that do not live close to places, where mini busses run by, hardly benefit from this form of transportation. Therefore, the majority used private transport to reach the HFMH: 49.3 % got to the hospital by bicycle, which includes people that came with their own bike and by bicycle-taxi. 20.0 % of the participants walked, whereas 17.4 % used a motorbike or a car. After being referred from another health care facility, 8.0 % came by ambulance (Figure 23).

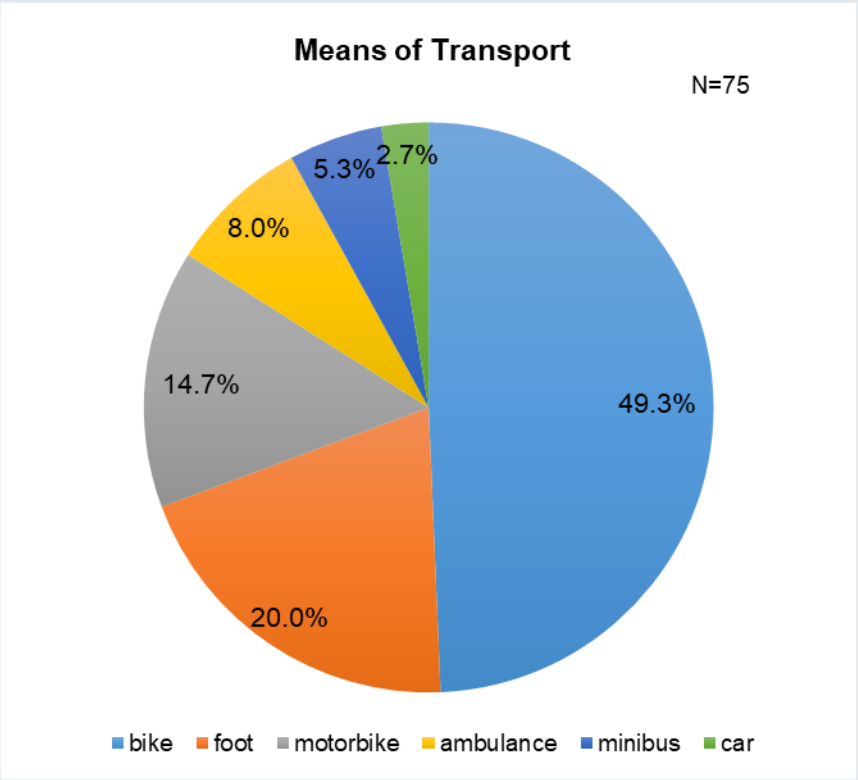

Figure 23: Means of Transport used to access the HFMH. The majority of participants reached the hospital by bike (49.3 %) or by foot (20 %) (own design; Data: empirical research).

Generally, 68.0 % of the participants stated that within the previous twelve months, they could not afford the cost of transportation to reach a health care facility, when feeling the urge to seek services. Furthermore, 65.3 % stated that within this period a lack of transportation hindered them to seek services. Another 16.0 % perceived the journey to the hospital as too dangerous.

Concerning actual travel costs, 32.0 % of all participants had to cover travel expenses ranging from 300 to 7,000 Malawian Kwacha (MK) to reach the facility. Among this group,

the mean transportation costs were 1,454 MK for one way (approximately 2 USD). 41.7 % paid less than 1,000 MK whereas 25.0 % paid 2,000 MK or more. The correlation of distance and expenses is low to moderate (=0.34) and depended mainly on the means of transport and the number of patients and accompanying people that travelled to the hospital. However, among the group that had to pay for transport, only 58.3 % of participants stated that they could not afford the cost of transport during the previous twelve months.

Similar results were found within the FGDs in all three villages and the in-depth interviews with staff. Villagers reported to use a bicycle, if there was one available. However, most of the times, they did not find a bicycle to use or the money to pay a bike taxi, when feeling the urge to seek services. Therefore, patients reported to walk in order to reach the facility. As shown in chapter 2.4.3, the distance from the villages to their next health center is about 3 kilometres for Nalingula, 4.5 kilometres for Njumwa, and 2 kilometres for Mariko.

In case of referral from a health center to the secondary level of health care provision, a governmental ambulance is supposed to bring patients to HFMH. However, according to participants from Nalingula and Njumwa, an ambulance was not always available. Thus, villagers were forced to walk from the health center, which they have visited initially, to HFMH in order to receive required services. The distances from the villages to HFMH are 8 kilometres for Nalingula, 9.5 kilometres for Njumwa, and 11 kilometres for Mariko, respectively.

Staff of the health center and the hospital confirmed that sick people struggle to travel long distances, which can cause them, not to seek services at a formal facility when needed.

> *“You mean you walk from here to Phalombe health center and then to Holy Family by foot?” “Depending on the severity of the condition, we don´t care about the distance. We just walk.” [Njumwa, interviewer and Sylvia]*

> *“You find that some people live very far from health facilities. So, if someone falls sick, it is hard for them to travel to the hospital or for someone else to carry the patient´s body. So, they prefer to stay home rather than going to the facility today.” [Staff]*

Concerning the expenses for transport by bicycle taxi, participants from Njumwa reported that they pay 500 MK (approximately 0.70 USD) in order to reach the next health center. If they were referred to HFMH, but do not find an ambulance to bring them there, they pay another 300 to 500 MK for transportation in order to seek services at the hospital.

According to health workers, especially pregnant women faced barriers concerning their transportation, when seeking antenatal care or delivery in a health care facility. An employee of the hospital presented the initiative of an organisation and criticised villagers´ way of dealing with donations. In order to enable villagers to transport their sick patients, an organisation gave out bike ambulances, which were equipped with a troy and a mattress. These bicycles were given out to the 32 villages in the catchment area of the hospital, serving about 20,000 inhabitants. An agreement between the donating organisation and the communities defined that villagers should contribute little money per month in order to maintain these bicycles. As these fees for maintenance had not been paid by the villagers and the bicycle ambulances had not been taken care of, most of them were broken and would not be used for transporting patients.

> *“There was an organisation, I forgot the name, they gave out bike ambulances to almost each and every village. So, when someone is critically ill and there is a lack of transport and ambulances, the relative had to go to the village headman and ask for the bicycle ambulance. The bicycle had a troy with a mattress on top where the patient could be carried on and taken to the hospital. Unfortunately, most of the bicycle ambulances are broken now, no longer working. When we gave the bikes out, we agreed that there should be committees within the villages and people should be contributing very low money per month in order to maintain the bicycles. But the villagers were always saying ‘No, there has been a drought, we cannot pay to maintain the bicycles. We are using the money for food’. Now that´s the problem. […] Unfortunately, there are only a few villages left, where the bicycle ambulance is still working. The others are just not working anymore. They are failing to repair them.”*
>
> *“I think we did it last year, I think February. There are 32 villages in our catchment areas. I am just talking about the catchment areas. You know, Phalombe is big. Our catchment area has a population of about 20,000.”*
>
> *[Staff]*

3.3.2 Discussion

Remoteness

The minority of the survey´s participants (18.7 %) reported that HFMH was the closest health care facility to their homes, while the majority found at least one health center that was closer. Thus, the majority travelled the extra distance in order to receive services at HFMH. Reasons for this were displayed in chapter 3.1.2 and will be discussed within the following dimensions.

However, findings concerning travel time and distance have to be interpreted carefully. As presented above, it is not clear, to what extent participants were aware of the accurate travel distances and time between their homes and a health care facility. Within the research, 89.3 % of the survey´s participants reported to live in five kilometres range of a health care facility, mostly to a health center. 41.9 % lived up to five kilometres to HFMH. Data sources from WHO stated that only 46 % of Malawi´s population lived within a five kilometres range of a health facility that is either public or private (WHO, 2015; WHO - Regional Office for Africa, 2009). It has to be kept in mind though that presented findings of the survey are based on patients´ statements that had already entered a health care facility. Consequently, they are already users of services and overcame potential barriers to access health care. People from far-off might not have been able to enter the HFMH. Thus, they are not included in the survey.
In order to gain a comprehensive picture of quantitative hardships regarding spatial accessibility in rural Malawi, non-users have to be reached in form of extensive data collection, while this data has to be triangulated with geographic information.

Findings within the literature concerning hardships due to spatial remoteness are in line with the data of empirical data collection. Findings of Abiiro et al. (2014), Goudge et al. (2009), Kumbani et al. (2013), and Munthali et al. (2014), indicated that spatial differences in population coverage resulted in major barriers in reaching services and in perceived disparities in financial protection. Living close only to a private health care facility is associated with financial burden for transportation and consultation (Abiiro et al., 2014). Generally, Lishner et al. (1996) stated that the more remote an area is the bigger are the problems to access medical care due to transportation issues, geographic distances, and inadequate supply of local providers.

According to a study of Brems et al. (2006), people from rural regions struggle more with access to health care services than those of urban areas. Due to geographic remoteness, weather and road challenges, transportation issues, and travel distances, small rural communities report the most severe barriers. Therefore, even short distances to services can become a big issue without transportation (Arcury et al., 2005).
Especially the vulnerable, disabled, and elderly people, face major problems to overcome long distances in order to reach health care facilities (Munthali et al., 2014).

Transport

Empirical data indicated barriers regarding transportation to health care facilities. As described within the regional context (see chapter 2.1.5), weak road network, unpaved roads that are frequently affected by weather conditions, and lacking public transport, hinder people to travel further distances. Participants of the FGDs, the in-depth interviews, and two third of the survey´s patients reported hardships to afford cost and find means of transportation, when seeking services within the previous twelve months. Only 5.3 % of the survey´s participants used public transport in form of mini busses as public transport was not widely available.
While only half of the households in rural Malawi own a bicycle, remaining people have to walk, find vehicles to borrow, or pay for travelling with bicycle taxis or mini busses. However, even the possession of a bicycle can create severe hardships to transport very sick and vulnerable patients, as ordinary bikes are not equipped with a troy and mattress.

The survey´s data does not offer valid quantitative information concerning barriers that very sick and vulnerable people have to face when it comes to spatial accessibility in rural Malawi.
The questionnaire-based interviews were carried out in the hospital´s outpatient department, which was the first place to go to when seeking treatment at HFMH. The majority of patients sought ambulant consultation and treatment. If necessary, they were forwarded to certain wards in order to receive inpatient curative care. Although there was no follow-up concerning the share of interviewed patients that turned out to be an emergency, the investigator assesses this number to be low. Further research needs to reveal quantitative data regarding barriers that very sick and vulnerable patients have to

face when it comes to spatial accessibility.
Moreover, lacking infrastructure and availability of ambulances in case of referral or emergency became apparent within qualitative data collection. This interdependency between spatial accessibility and lacking availability of ambulances will be discussed within the dimension availability in chapter 3.5.

Concerning expenses for transport, about one third of the survey´s patients had to cover transportation costs to reach HFMH. The average expense for one way was 1,454 MK (about 2 USD). Considering the fact that 70.9 % of the population in Malawi lived under the global poverty line of 1.90 USD per day in 2010 (World Bank, 2016), the average travel cost that is needed to reach HFMH is high, especially for the very poor and vulnerable. Among the total group of patients, 68.0 % stated that within the previous twelve months, they could not afford cost of transportation to a health care facility when feeling the urge to seek services. Within the group of participants that had to cover travel costs to reach the facility this share was lower (58.3 %). This appears to be contradictory as it might seem obvious that patients, who have to pay for transport, perceive this as a barrier more often than those, who do not cover travel expenses. However, this group of patients might be financially able and willing to pay transport fees to reach the facility and therefore face less barriers related to spatial accessibility and affordability.
Generally, the more remote an area is, the bigger are the hardships concerning spatial access and the higher is the financial burden for transport. Consequently, a delay of treatment or no treatment at all can occur in many cases. Obtaining financial and physical capital in form of infrastructure and means of transport (Obrist et al., 2007) become facilitators and preconditions to access health care facilities.

Findings of the empirical data collection are in line with the literature. According to a study that was based in rural South Africa, highly vulnerable households have been unable to complete previous courses of tuberculosis medication, as transportation costs to reach the health care facility were too high (Goudge et al., 2009).
A study of Abiiro et al. (2014) collected qualitive data on gaps in health coverage from community residents and personnel in health care facilities in two Malawian districts. Residents reported transport issues as an important barrier. These issues did not only concern transport from the patient´s home to the health care facility, but in case of referral,

finding transportation from the first facility to the referred one. Insufficient availability and fuelling of emergency transport and public ambulances, which are supposed to be free of charge, were found to be another exposure to financial risk and delays in seeking services (Abiiro et al., 2014; Goudge et al., 2009).

Non-users of health care services, who were interviewed within another Malawi-based study, stated that they would become users of services if health facilities were closer by and if appropriate means of transport were available (Munthali et al., 2014).

Kumbani et al. (2013) carried out a qualitative study in Malawi, in which they explored women´s reasons to deliver at home without skilled attendance despite receiving antenatal care at a health center. Although being informed and having the intention to deliver at a health center, participants stated that a lack of transport hindered them to reach a facility. When labour started, women reported to go directly to a traditional birth attendant or deliver on their way to the facility, as they cannot manage to walk too far in their condition (Kumbani et al., 2013).

In 2009, strategies that were supposed to tackle maternal and infant health problems were developed and implemented by women´s groups in Mchinji, a rural district in Malawi. Rosato et al. (2012) evaluated these initiatives. According to their evaluation, the majority of all women´s groups (88 %) identified means of transport or bicycle ambulances to address most of the maternal health problems. Within all women´s groups, 48.2 % pushed for bicycle ambulances from different donors to address transport barriers. After establishing a committee to raise money for the vehicle and maintenance, the communities found safe places for storage, identified volunteer drivers, monitored usage, and resolved disputes within and between communities. Consequently, 40 bicycle ambulances served 201 villages and enabled 88 pregnant women, 111 children aged under five, and 149 other community members to reach health care facilities (Rosato et al., 2012). Community members described these vehicles as very helpful. Rather than carrying the patient or making him walk to the facility, the bicycle ambulance enabled a safer and quicker transport for the patient and his or her guardian (Rosato et al., 2012). No follow-up regarding long-term usage and maintenance of the vehicles is available as evaluation took place the year after implementation. However, the women´s groups continued to meet at least in 2010 and 2011, which indicates a sustainable implementation of strategies. As local women´s groups identified and implemented strategies to address

access barriers themselves, communities were empowered to take action and monitored implementation (Rosato et al., 2012).

As reported by an employee of HFMH, bicycle ambulances have been introduced to the catchment area of the HFMH to tackle transport barriers. According to his report, they have been implemented one year and nine months before data collection and served a population of about 20.000 people from 32 villages. Most of these bicycles were broken by the time of the interview, as they have not been taken care of by the villagers. Within the interview and further research, it did not become clear, how long they have been used for and the particular reasons for the vehicles´ breakdown. Therefore, it is not possible to state to which extent this donation could have been a sustainable initiative to tackle spatial accessibility and whether certain parameters have to be changed to succeed permanently. Generally, donators and villages would have needed to define clear responsibilities and duties for maintenance. Comprehensive evaluation and follow-ups after implementation might have helped to understand and improve the project´s effectiveness and sustainably. However, the evaluation of Rosato et al. (2012) suggested that community empowerment and proactive participation in designing and creating health care services can be one effective approach to address hardships due to spatial accessibility.

3.4 Affordability

The dimension affordability examines the relationship between patients´ income and prices that they have to pay in order to seek health care services. Clients´ knowledge of prices and total cost are also considered in this dimension.

Table 13 aggregates the presented findings of the literature and empirical data on affordability. Codes and subcodes, which arose from the analysis of the data, divide the findings into sections.

Table 13: Overview of aggregation and analysis of the empirical research data on affordability (own design, based on Anthonj et al., 2015; Data: empirical research)

Code	Subcode	Quantitative data	Qualitative data		
		Survey: hospital	**FGD: villages**	**FGD: management**	**Interviews: staff**
Costs	Direct	X	X		
	Indirect/ informal	X	X	X	
	Coverage of costs	X		X	
Financial vulnerability	Economic status	X	X	X	
	Dependency on social network	X			

3.4.1 Findings

Costs

The HFMH is a private hospital, where only certain groups of patients are treated without being charged: patients that are referred from governmental health care facilities, HIV-positive patients, who receive antiretroviral therapy (ART), and patients that seek services within the Service Level Agreements (SLAs). Therefore, the majority of patients has to cover the costs for treatment and medication themselves (68.0 %).

Twenty-four percent of the participants reported that government was paying for their treatment. This number can be split into the group of HIV-positive patients that sought ART (13.3 %) and patients that were referred from facilities of the primary health care level (10.7 %). No patient reported to seek services within the SLAs.

The costs of the remaining six patients (8 %) were covered by either the employer (2.7 %), funding (2.7 %), or a health insurance (1.3 %). One participant (1.3 %) did not know at that point how to cover the costs for treatment. Figure 24 illustrates how the costs of consultation are covered.

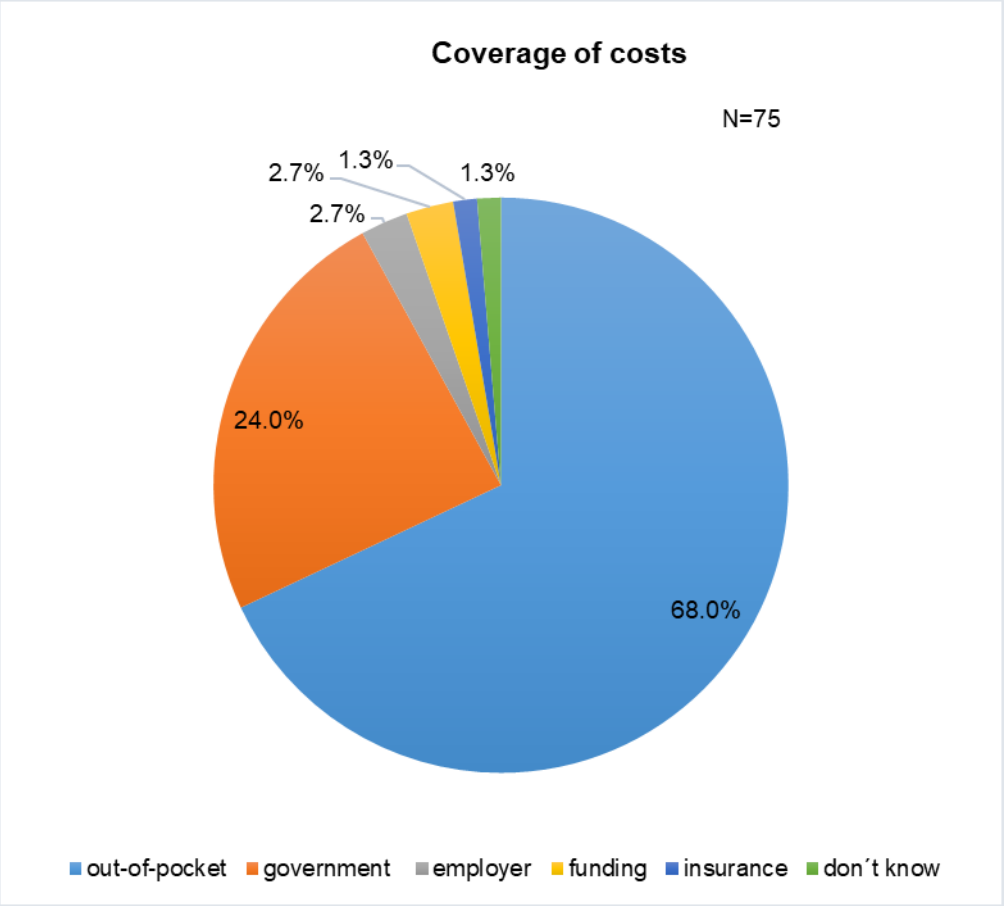

Figure 24: Coverage of costs for the visit at the HFMH. The majority (68.0 %) had to cover services out of their own pocket, while 24.0 % were covered by the government (own design; Data: empirical research)

As the costs are covered by the government for 24 % of the participants, this group did not have to pay for their visit or their medication. 46.7 % of all patients did not know how much they would have to pay for health care services as the interviews took place before consultation. Remaining 30.3 % reported fees ranging from 650 to 5,000 MK.
43.5 % of the group, which were aware of the costs for consultation, said that their fees would be within the range of 1,500 MK (approximately 2 USD). An amount of 3,000 MK or more had to be paid by 26.1 % of the patients.

Within the FGDs in the villages, the participants reported that occurring fees for transport and consultations are a severe barrier to access health care services. The villagers reported that they only go to HFMH when they are referred to the hospital, as the total cost of the visit was too high.

“If we visit Holy without a referral, we have to pay on our own. We pay a lot of money for seeing a doctor and treatment there.” [Njumwa, Sylvia]

Although the health centers in Phalombe are governmental facilities, where patients do not have to pay for consultation and prescribed drugs, informal costs can arise. When prescribed drugs are not available at a certain facility, patients are sent to vendors within the private sector in order to get their medication. Instead of getting the needed drugs free of charge, they have to pay vendors for the treatment, which was reported as a barrier by participants of all three group discussions.

“Sometimes they tell us to find money to buy drugs from the private pharmacy.” [Nalingula, Peter]

However, the hospital´s management stated that health care services should not be free of charge for all patients since not everybody was poor, whereas the very poor should still receive subsidy. Instead of getting all health services for free, the management of the HFMH suggested to introduce health insurances or cost-sharing between the government and the patients. In their opinion, providing all health services at governmental facilities free-of-charge was killing the country´s health care institutions.

“That has actually killed most of the Malawians. We are used to get free things. Once these free things are removed, we just sit back and wait and say “I am still waiting for the government to do it for me”. There is a discussion about it in the government. I think they should introduce cost-sharing. Even in governmental institutions. Because not everybody is poor. There are people that are very poor and that deserve subsidy. But some can really afford it. So, whether you are poor or you can afford it, you are treated equally. Because of that, we have a lot of challenges with our health care. Free this, free that, everything for free. Even for those that are not deserving it. Unless they introduce insurances. Otherwise, the way we do it, is killing the institutions.” [Management]

Financial vulnerability

Within the previous twelve months, 85.3 % of the survey´s participants faced issues in affording the cost of the visit or transport when they felt the urge to seek health care

services. No remarkable linkage was noticed between this statement and schooling, sex, profession or age.
89.3 % of the participants categorised the statement that the HFMH was the facility that they can access the most affordable way as untrue or very untrue. Remaining participants verified the statement (8.0 %) or didn´t know what to answer (2.7 %). However, those participants, who stated that HFMH was the most affordable facility, were people that lived with HIV/AIDS and came to the hospital to receive ART, which was covered by the government.

When participants were asked to state factors that enabled them to seek services at the private hospital on that particular day, 60.0 % of all answers were related to monetary aspects: 36.0 % stated that earning or receiving money from relatives or friends were enabling factors. Patients, who were not charged for their treatment due to their referral from the primary level or due to their receival of ART, were exempted from payment and herewith enabled to seek health care services at the hospital (24 %).

3.4.2 Discussion

Costs

As presented within the findings, reported fees for consultation ranged from 650 to 5,000 MK, while less than half of the participants paid less than 1,500 MK (approximately 2 USD). As these numbers did not include transportation fees, patients, who did not come with an ambulance or own means of transport, had to cover additionally travel expenses with average costs of 1,454 MK one way (approximately 2 USD).
As already stated within the dimension spatial accessibility, 70.9 % of the population in Malawi live under the global poverty line of 1.90 USD per day in 2010 (World Bank, 2016). The average expenditure that is needed to seek health care services at HFMH is therefore relatively high, especially for the very poor and vulnerable.
Not knowing the cost of the consultation is another barrier, as almost half of the participants did not know what costs to expect (46.7 %).

However, financial vulnerability due to high cost was not only an issue when seeking health care at the private hospital. Informal costs can arise when seeking services in

governmental facilities, as stated by villagers, survey´s participants, and literature. The majority of the survey´s participants (85.3 %) perceived issues in affording the cost for consultation or transportation within the previous twelve months. Villagers of the FGDs and interviewed health care providers defined high cost to be one of the main barriers to seek health care, especially at private facilities. Reasons for this are shortages of medicines, insufficient equipment, lacking emergency transport, and quality of care in governmental facilities, as well as relatively high fees at the HFMH.

Nevertheless, some authors suggest that the decision whether to seek health care is not only determined by the economic status of individuals. A study in the Philippines examined factors for women to choose between delivery at home or at health care facilities (Schwartz et al., 1988). With few exceptions, income of women and increasing prices of health care services did not have a significant effect on the choice of where to deliver. According to their study, travel time, hours of operation, availability of drugs and equipment, as well as the provision of trained midwives at public facilities have a bigger effect on utilisation of health care facilities than monetary factors (Schwartz et al., 1988). Alderman and Lavy (1996) pointed out that consumers in low-income households are willing to pay fees for improved access and services of high quality, rather than using subsidised public care that is less or not effective. A rise of payments without an associated improvement in services though worsens people´s health status and reinforced malnutrition and child mortality rates (Alderman and Lavy, 1996).

Results of this study´s survey reinforce the suggestion of Schwartz et al. (1998) and of Alderman and Lavy (1996). Empirical findings indicate that patients are ready to travel extra distance and pay extra money in order to receive services of perceived higher quality: 86.0 % of the survey´s patients, who had to cover fees for consultancy themselves, chose to come to HFMH to receive better services. It has to be kept in mind though, that these interviewed patients had already overcome barriers to access health care services when entering the hospital. Whether they were economically better-off than non-users of health care and to what extent they can afford to pay higher fees for quality services, has not been investigated.

Albeit affordability was perceived as one of the main barriers by participants of this study and in the literature, the hospital´s management voiced opinion that health care services

should not be free of charge for every Malawian as not everybody was poor. They argued that providing all services at governmental facilities free-of-charge was killing the country´s health care institutions. Yet, the very poor should receive subsidy.

The effectiveness of introducing or removing user fees in order to improve access to health care in low- and middle-income countries has been a matter of research and discussion within different studies. Some authors point out that changes in fees have a big effect on the quantity of medical services that are demanded by customers. By examining the impact of price changes on medical care by income groups in Tanzania, Sahn et al. (2003) have empirically confirmed that costs for health care are one of the substantial factors of demand for medical care. According to this study, individuals, especially the poor, were highly sensitive to the price for health care services. Increasing prices of services resulted in a decline of utilisation of health care services. Furthermore, the study implied that policies such as subsidies and user fees had a bigger impact on utilisation of households with lower incomes.

Results of a study in Uganda showed that the abolition of fees for health care services was followed by a continuous increase in the utilisation of health care services in public facilities (Nabyonga et al., 2005). Utilisation among the poor increased more compared to other socio-economic groups. Despite drug-stockouts, utilisation remained higher than during the time of cost-sharing. Similar findings are reported in studies based in Cambodia and Tunisia (Jacobs and Price, 2004; Alberti et el., 2007).

Within their review, Lagarde and Palmer (2011) analysed the quality of existing evidence regarding the question, whether to charge for health services in low-income countries. The authors identified methodological weaknesses in most of the studies included in their review. They only found limited evidence to suggest an increase of utilisation of health care services after reduction or removal of user fees (Lagarde and Palmer, 2011). When fees were introduced or increased, use of services decreased in most studies in form of one sharp reduction. However, it was unclear whether this effect persisted beyond the initial drop.

Two studies found increases in utilisation when quality improvements were combined with the introduction of fees. Still, no evidence was found regarding long term effects of fee changes on the quality of care, drug use, health worker motivation, and health outcomes (Lagarde and Palmer, 2011).

Therefore, high quality evidence concerning this question is still missing. Further research is required to reveal the effect of fees on presumed higher quality health care services.

Financial vulnerability

As presented within the findings, 85.3 % of the survey´s participants faced hardships to afford cost for transport or consultation within the previous twelve months. When asked to state enabling factors for visiting the hospital that particular day, 60.0 % of the answers were related to affordability. These facilitators included the need to earn extra money, to receive money from friends or relatives, or to be referred to HFMH. Therefore, obtaining financial and social capital, in form of family members or friends that provide financial means (Obrist et al., 2007), becomes a necessity to seek health care services, especially in private facilities and the informal sector.

These results are in line with the findings of literature research. A qualitative study of Abiiro et al. (2014) was carried out in two Malawian districts and indicated similar hardships. Due to lacking financial means, patients faced delays in seeking care, early discharges, or detainments in the hospitals for non-payment of bills. In order to pay fees for consultation, patients had to borrow money, sell farm products, and rely on contributions from family members (Abiiro et al., 2014; Munthali et al., 2014). These necessities indicate financial vulnerability and gaps in financial protection when it comes to affordability of health care services (Abiiro et al., 2014; Munthali et al., 2014).

Within their study on patients´ access to health care and medicines across low-income countries, Srivastava and McGuire (2015) displayed that income and health insurance were important factors for health seeking behaviour. Findings from Sierra Leone demonstrated that poorer people had worse access to clean water, food, maternal health care, and to health care services in general (Trania et al., 2011).

According to Goudge et al. (2009), inability to pay for consultations, medication, or transportation, prevented access to health care services. Seeking services can mean high expenses for poor households, especially for chronic conditions that required repeated visits. Households, which obtained a higher income or that received social grants, were financially less vulnerable and were therefore able to seek services more regularly (Goudge et al., 2009).

In her study on utilisation of health care services in Zambia, Hjortsberg (2003) pointed out, that income and consumption of professional health care services were related with each other. According to her findings, health-seeking behaviour was influenced by the costs of utilisation and the individual´s perceived benefits of care. Sick individuals were more likely to seek health care services and receive the medicines they need when they were better-off economically. Thus, paid employment and the economic status of the patient´s household influenced the decision whether to seek services, as they obtained access to monetary income or health insurance (Hjortsberg, 2003).

Within a qualitative study in two Malawian districts, participants reported to be obligated to seek services at private facilities, as a consequence of shortages of: medicines and health workers, insufficient equipment and facilities, lacking access to emergency services, long distances and transportation issues, poor attitude of health personnel, and poor quality of care in governmental facilities (Abiiro et al., 2014). Despite patients´ awareness of free health care services in governmental facilities, they stated to be forced to pay out-of-pocket for medical services at private facilities and at private pharmacies to seek treatment. Regarding costs for health care in Malawi, no formal costs arise for consultation and medication within governmental facilities. Still, due to lacking drugs and resources, informal costs may result when patients are sent to buy their prescribed medication from private vendors (Abiiro et al. 2014).
Hardships regarding lack of medical supply, drugs, and health personnel will be discussed within the dimension availability (see chapter 3.5).

Districts will have to develop effective financing structures that are adapted to the socioeconomic status of a certain population, its epidemiological situation, as well as the management capacity of its authorities (Ekman et al., 2008). Glassman et al. (2013) suggested conditional cash transfer programs to address health service utilisation among the poor. Within these programs, cash transfers are made to households when showing compliance concerning certain health behaviours. These cash transfers can be used for treatments or transportation (Jacobs et al., 2012). When people are exposed to a certain program for a longer period, conditional cash transfers might bear the potential of sustainable behaviour changes and learning effects that result in greater utilisation of

services (Glassman et al., 2013). Therefore, they address household resources while dealing with low education and health awareness.

A systematic review of studies on conditional cash transfers and their effect on maternal and new-born health outcomes showed reductions in the incidence of low birthweights, an increase of antenatal visits, skilled attendance at birth, and delivery at facilities (Glassman et al, 2013). However, the potential impact of a conditional cash transfer depends on the design of a program as well as on the infrastructure and interplay of social, cultural, and health system factors. According to Glassman et al. (2013), behavioural changes due to conditional cash transfers have not been studied in particular yet, although some evidence suggests this assumption.

In order to address inequities regarding access to services in Phalombe, new Service Level Agreements (SLAs) will have to be agreed upon. As presented within Malawi´s health system (see chapter 2.1.6), SLAs have been signed between the DHO and the private sector since 2002. These agreements are supposed to remove financial barriers and increase access to health care services. The range of services, which were included in the SLAs, varied from limited to full extent of the EHP (Government of Malawi and CHAM, 2016 and MoH Malawi, 2011).

As reported by the management of the HFMH, the hospital´s SLAs were expired by the time of data collection. New contracts need to expand the range of services that can be received free of charge, especially for those living in the catchment area of the private hospital.

By collecting quantitative and qualitative data from nine CHAM facilities in eight districts across Malawi, Gama et al. (2013) carried out a study that investigated the consequences of contracting out health care services in form of SLAs. Participants for the study were acquired from managers and key personnel of CHAM institutions as well as from Malawi´s district health management teams and policy makers (Gama et al, 2013).

According to their findings, these contracts improved access to health care services to maternal and child health care by increasing the capacity of primary health care. The utilisation of SLAs increased the probability to seek health care services when people feel ill. Furthermore, they reduced financial risk that was associated with out of pocket payments for health care services (Gama et al., 2013). Within the Health Sector Strategic

Plan, Malawi´s MoH (2011) reported that elimination of user fees in CHAM facilities resulted in a higher number of patients seeking services in these facilities. However, only little evidence became apparent concerning the meaningful development in quality and efficiency (Gama et al, 2013). Since SLAs put demand side factors in the center of attention, supply factors such as resources, materials, and infrastructure continued to be inadequate. Additionally, spatial distance from CHAM facilities, cost of food, and accommodation still acted as barriers, which hindered individuals from seeking health care services (Abiiro et al., 2014; Gama et al, 2013).

The qualitative study of Abiiro et al. (2014) collected data on gaps in health coverage from community residents and from personnel in health care facilities in two Malawian districts. Health workers from CHAM and private-for-profit facilities confirmed that spatial inequalities in accessing services of the EHP occurred due to operational ineffectiveness of SLAs, depending on the distribution of private and governmental facilities. According to Gama et al. (2013) difficulties in implementation and efficient utilisation of SLAs occurred due to information asymmetries and mistrust between CHAM facilities and government agencies. In this context, both parties operate opportunistically by misusing information asymmetry on the true cost or the quality of services (Gama et al., 2013): CHAM facilities criticised that DHOs neither ensured the supply of essential drugs and medical supplies nor the provision of necessary transport for complicated referral cases. Despite the knowledge that facilities have provided claimed services, governmental institutions manifested opportunism in delaying and not paying SLA bills. Knowing that most CHAM facilities will continue contracting with the government, since there are no alternative consumers of their services, governmental agencies had capped prices and delayed reimbursements (Gama et al, 2013). District health officials on their part accused CHAM facilities of inappropriate claims by blowing up utilisation figures and by overprescribing medication. Inadequate monitoring and evaluation of treatment, which facilities claim to carry out under the arrangement of SLAs, disable officials to determine whether these claims are warranted or whether some facilities use invented cases (Gama et al, 2013).

Nevertheless, if the contracting arrangements and implementation of SLAs in Malawi were strengthened by covering all services of the EHP, by governmental commitment, and by regular payments of bills, SLAs could offer potential for universal financial protection and

for strengthening access to health care services (Abiiro et al., 2014).

3.5 Availability

The dimension availability refers to the relationship between patients´ needs and existing services. It looks at the appropriateness of the supply of personnel and facilities as well as the supply of services and resources, such as equipment and drugs.
However, this study did not aim to proof the actual availability or absence of drugs, equipment, workforce, or diagnostic tests in the district´s health care facilities. Rather than counting and checking the readiness of items and services, the perceived availability and the extent, to which this perception hinders people´s access, were investigated. Input from health personnel and the management of the HFMH complemented the patients' and villagers' perception with further insight. Table 14 aggregates findings of the literature and empirical data on availability. Codes and subcodes, which arose from the analysis of the data, divide the findings into sections.

Table 14: Overview of aggregation and analysis of the empirical research data on availability (own design, based on Anthonj et al., 2015; Data: empirical research)

Code	Subcode	Quantitative data	Qualitative data		
		Survey: hospital	**FGD: villages**	**FGD: management**	**Interviews: staff**
Resources in health care facilities	Health personnel	X	X	X	X
	Drugs	X	X		X
	Medical supply and diagnostic equipment	X	X	X	
	Preventive and curative services	X	X	X	X
Health infrastructure	Referral system	X	X	X	X
	Ambulances and emergency transport	X	X	X	X
	Outreach programs			X	X

3.5.1 Findings

<u>Resources in health care facilities</u>

Figure 25 visualises the statements concerning the dimension availability. According to this, the majority of patients that sought health care in HFMH was content or very content

with the provided services in the hospital. 72.0 % perceived that their needs are met by the hospital´s supply, while 86.6 % stated to know about its good services. The HFMH offered the needed services was said by 92.0 % of the patients.

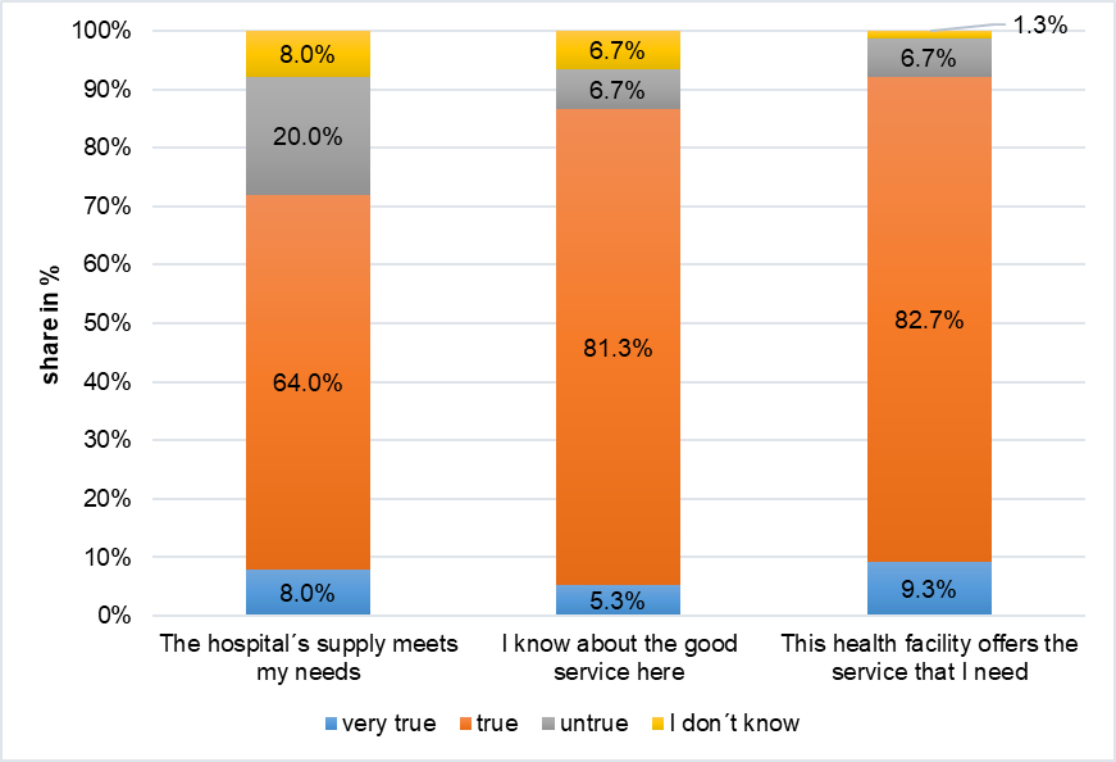

Figure 25: Participants´ categorization of statements concerning availability in “very true”, “true”, “untrue” and “very untrue” (own design; Data: empirical research)

However, when participants of the survey, who stated to be satisfied with the provided services, had the opportunity to add their perceived problems or to give further comments, they criticised the availability of health personnel in HFMH (=6). According to them, the number of health workers was not sufficient, which resulted in long waiting hours. Management and staff of the hospital acknowledged hardships due to low numbers of qualified health workers that were employed in Malawi´s health care facilities. According to the management, high workload of health personnel was a contributing factor to bad attitudes towards patients. These attitudes will be discussed within the dimension acceptability (see chapter 3.7).

Furthermore, a lot of student-nurses and trainee-clinicians work by themselves and attend patients without the supervision of qualified health workers. Therefore, expected quality

of services could not be achieved.

> *"For Holy Family, we are supposed to have 65 nurses, but right now we have 34 nurses. Of those 34 nurses, some are attending some upgrading training courses. So, it´s like we have 20 something. Divide the remaining ones to the departments… That's why you find a lot of students working there. The quality that is expected is not achieved because they are still students. Qualified staff is really an issue. […] We have the same issue with clinicians because of trainee-clinicians. The number is enough but they are using trainee-clinicians that need supervision of a senior-clinician. Ideally, a trainee is supposed to sit next to a senior when he is attending a patient. But because of the shortage, you see a trainee-clinician working on his own, seeing patients. No one to supervise them, so they are forced to see patients on their own. What do you expect? The quality is not the same. […] But we only have a few qualified clinicians and trainees seeing patients alone. But if he messes up? Nobody will know."* *[Management]*

For some positions, such as the radiographer or the orthopaedic clinician, only one person was employed, which caused problems regarding service delivery when these employees were off-duty. In addition to this, other health workers obtained more than one position which resulted in long waiting hours for patients.

> *"Concerning the long waiting hours in the radiology. We only have one radiographer. So sometimes, he is off-duty. He is a human being; he needs to rest. Sometimes patients will come that had been prescribed to go to radiology. But it can´t be done, so the patient is sent back or has to wait. Those are some of the issues concerning the shortage of staff."* *[Management]*

> *"Maybe the issue of long waiting-time in the outpatient department is due to the fact that there are 2 clinicians and one of them being the anaesthetist. When there is a procedure in the theatre, he is supposed to leave the patient and go to attend the procedure. What happens to the patient? He sits there and waits […] So, all of the other patients in the OPD have to wait and stand still until the procedure is done. You find that the patients wait two hours or four hours because the clinician has left the room."* *[Management]*

Since government paid the salary of health care personnel in governmental and in private facilities, health care institutions depended on the government´s ability and willingness to recruit additional staff. According to the hospital´s staff, there were a lot of qualified nurses

and doctors, who were unemployed. Due to the lacking ability of the government to employ additional health personnel, recruitment of staff stopped all over Malawi and facilities remained chronically understaffed.

> *"Even the issue of inadequate health-personnel is a national-wide thing. Because currently, the government has stopped to employ health-personnel. So, there are people that are qualified that are just staying at home, not being employed. Because the government doesn´t have enough money to put the people on payroll. This is a very big problem, I don´t know how it can be solved."* *[Staff]*

> *"Whole Malawi has the same problem in its facilities. We have a lot of nurses that are qualified, the government is not able to recruit them because they say they don't have the money to pay. Those nurses are hanging there in the communities, just sitting there. Holy Family cannot employ them because we don't have salary to put them. […] Government has stopped institutions like Holy Family from recruiting because of the issue of money. […] Even the doctors, they are hanging in the communities. They are qualified but cannot be employed by the government. That's why they leave the country to find someone who can pay them. Training is being conducted but there is no employment. […] The recruitment stopped all over Malawi. They don't want to add more staff on the governmental payroll."* *[Management]*

Concerning availability of resources in health care facilities in general, including health centers and the HFMH, 77.3 % of interviewed participants stated that no adequate services were available in the facilities. Another 77.3 % perceived lacking readiness of adequate drugs or equipment when seeking health care services, especially in health centers.

Participants of the FGDs in all three villages reported similar issues and criticised not receiving quality health care services in health centers due to lacking drugs and diagnostic equipment. Therefore, as already presented within the dimension affordability (see chapter 3.4), health workers directed patients to buy their medication at the private sector at their own expenses.

> *"We are told that the drugs, which are prescribed, are not available in that particular health center. So, they direct us to the private sector to buy them there. This is a big problem for us."*
> *"Better drugs are sold to private sectors. The drugs are sent from a distributor*

to different hospitals but after two days no drugs are found in the health centers due to this attitude of the health workers." [Nalingula, Lena and Kathrin]

"Doctors also give treatment contrary to patient´s condition. There is no adequate equipment, a lack of full investigation to find out, what the patient is suffering from. Sufficient treatment is only given to rich people. Furthermore, we face a problem about deaths of patients due to inadequate treatment or care at health centers." [Njumwa, Sylvia]

In addition to the villagers, the hospital´s staff recognised that lacking resources hindered patients from accessing adequate services and caused them to return home without being treated sufficiently. Not having adequate equipment forced staff to improvise regarding diagnostics and treatment, which decreased the quality of care and could be dangerous for both, health workers and patients. Limited investigative mechanisms prevented further diagnostic and led to treatment that was based on assumptions and clinical symptoms. According to hospital´s staff, ensuring that resources were always available at health care facilities needed political will and was a nation-wide problem.

"It needs to be made sure that the supplies are always there in all of the health centers. And that there are always enough, not to be out of stock. Because once the drugs are out of stock, the patients and the community suffer. Some even die." [Staff]

"Because for us to work effectively, we need all the necessary resources to be available. Sometimes we just don't have the resources, we only improvise, which is not good for our safety, for the patients´ safety, for the quality of care that we are supposed to give. For example, here we have limited investigative mechanisms. We can´t do further investigations and just treat based on assumptions, based on signs and symptoms. So, there should be enough investigative mechanisms, enough resources to work comfortably. You need a good working-environment, you cannot just work all frustrated." [Staff]

Health infrastructure

When participants of the survey had the chance to add comments, they criticised the referral system, which took too long to bring emergency cases from health centers to the hospital. Villagers of the FGDs, the hospital´s management, and health workers recognised similar problems regarding the referral system. In their opinion, referrals took too long and the number of ambulances was not sufficient to refer patients from or to the

hospital.

As reported by the hospital´s management, especially pregnant women, who faced complications during labour, suffered from the current referral system and lacking transport. A delay in reaching the hospital could cause complications or even threat the mother´s and unborn baby´s lives.

Generally, after attending any health care facility in the district that was not able to handle certain complications, the patient would be sent to Phalombe Health Center, the district´s main health center. If Phalombe Health Center was not capable of handling the case, the patient would be referred to HFMH by ambulance. However, if there were no other people to be referred or if there was no ambulance available at that time, the patient would have to wait until transport was vacant and until three or four people were ready to be transported. By the time the patient reached the HFMH, the medical condition could have become way more complicated or even life threatening.

> *"A pregnant mother [...] would go to health center A and form there be referred to health center B. Health center B will think of referring her to the Holy Family Hospital. That time, there will not be any transport available. So, she has to wait even longer. By the time she gets here, the situation has become even more complicated. And then with the ambulances, they wait until they have more than one person to transport. So, when there are 3 or 4 patients, they pack them into the vehicle and bring them to the hospital. That is really a big issue."* *[Management]*

Even in cases of emergency, patients of the hospital´s catchment area, who were not able to pay their fees, were supposed to bypass HFMH and attend a health center. If the health center was not able to take care of the case, the patient would be referred, which allowed him to get services free of charge at the hospital. By the time the patient reached the hospital, his condition might have become much more complicated.

A health worker criticised this procedure as it was a waste of time and costed a lot of lives. In his opinion, emergencies should be allowed to go to the hospital directly and get their referral letter afterwards.

> *"You find sometimes cases, where someone around this area is very sick, sometimes even a convulsing kid. But if these people can´t pay the treatment*

here, they have to pass here to go to Phalombe Health Center to get referred, and then come back here. Which is a waste of a lot of time. Some people even die on the way because they have to pass the hospital to go to the health center first.
So, I think I would be happy, if there was this provision, that those people, who are very sick, could just come here instead of going to the health center first to get the referral letter. I think that would be saving a lot of lives." *[Staff]*

However, the hospital´s management and staff described a former system, in which emergency cases could come to the hospital directly and get their referral letter afterwards. Unfortunately, it had been abused in the past and therefore it had been abolished again.
As the DHO and the hospital´s management expected a high increase of patients and insufficient resources to take care of additional cases, the current system was kept in place. Unless there was an emergency case, who cannot afford treatment, referral letters were not accepted after arrival at the hospital.

"It can be possible [that emergency cases come here directly and get the referral letter later] but the problem is that it would be going to be abused. The people would start to make advantage of that and would just be coming straight here. We had several discussions with the DHO. We tried to do that but then it was abused. And we decided that if we allow this to happen, the patients would just be flocking in here.
We would find a lot of patients, but not enough resources to take care of them. We have to maintain the system like that and only accept emergency cases that are referred by the health center, we don´t accept to get the referral letter after the patients already arrived. Unless we see that an emergency case cannot afford the treatment. We ask the health centers then to write a referral for that one. But unfortunately, we are not allowed to do that with any other cases. We allow it for emergencies but we don't want to be too open about it because it can be abused too easy." *[Management]*

Additionally, patients that are referred from health care facilities of the primary level to the HFMH, as well as patients that are referred to Zomba Central Hospital, have to face challenges concerning lacking availability of ambulances. Although being referred to the hospital, participants of group discussions in Nalingula and Njumwa reported that they were told by health workers to look for their own transport, as there was currently no ambulance available. In order to reach the facility, patients were therefore obligated to

walk or to find and pay other means of transportation. According to Kathrin from Nalingula, patients even died on their way to Zomba Central Hospital due to the delay of transport. Furthermore, a lack of fuel for the ambulances hindered health care institutions to collect patients and bring them to the particular facilities, as reported by a health worker.

> *"It happens sometimes that we are told at the health centers that the ambulance is gone. So, we walk to Holy Family."* *[Njumwa, Linda]*

> *"The problem I observed is about referrals to Zomba Central Hospital. It happens sometimes that patients die on the way to Zomba"* *[Nalingula, Kathrin]*

> *"Most of all, we need enough fuel. Sometimes the ambulance is unable to go and collect the patients, because there is no fuel. The funding money is all used up. So, there is only one ambulance that can go and travel to collect the patients from the other health centers. The furthest health center is in Lambaso, close to the border to Mozambique. Sometimes, the people hire the ambulance from the mission, which is expensive."* *[Staff]*

In order to provide health care services to people of its catchment area, who lived far away from the next facility, health centers and the HFMH, have the responsibility to carry out outreach programs. Within these outreach programs, services for pregnant women and children under five, such as antenatal care, vaccination, child curative care, and family planning, were offered. Serious cases that were detected within these consultations were taken into a health care facility in order to be treated there.

Yet, these outreach programs did not include services for men or women that were not pregnant. In order to offer services to those that cannot access services themselves, a health worker proposed to establish a comprehensive outreach clinic that screened everybody, who was sick.

> *"Unfortunately, the outreach clinics that we do are only for children under 5, pregnant women, immunisations, and malnutrition. But there are others in the villages as well that are sick and cannot access health care services because of the reasons that I have already given to you. So, there should be a comprehensive outreach clinic to screen everyone that is sick."* *[Staff]*

Figure 26: Patients waiting for service provision within an outreach program (Photo: R. Ritter, 2016)

However, the hospital´s management reported that they depended on financial support from donors in order to cover expenses for fuel, the personnel´s allowance, and the equipment that was needed to provide outreach clinics. As the government did not support these expenses for private hospitals, the HFMH might have to stop providing these services to villages once funding faded out. According to a health worker, staff would not be willing to go to outreach clinics pro bono or during their working hours, as a lot of them did not have empathy with the poor. Therefore, expenses for personnel remained to be covered by the HFMH and could not be avoided in order to keep up the outreach program.

> *"As a hospital, it is one of our responsibilities to go to those villages in our catchment area as a team. And to provide those services. But the challenge for us as a hospital is our very tight budget. We are supposed to go there with a clinician, with nurses, homecraft workers. If there is a serious case, it should be brought to the hospital.*
> *We do it as a project. But once the project phases out, that is the end of it. […] Because of the shortage, we utilise nurses that are off-duty. We cannot withdraw someone, who is on the wards. […] That's why you have to give them at least something, they work although they should rest, during their lunch hour. And this expense for the extra day is on the hospital. So that is a cost again. If we had no shortage of personnel, we could assign one of the normal shift to go to the outreach. Still, when they go in the morning and return late, you have to*

give them at least something, even if it is just a Fanta.
Otherwise, outreach clinics are very important. And it is our mandate to do that in our catchment area. […] How do we reach the village that is 10 km away? You need fuel to get there. You need personnel to come with you. It is supposed to be done at least once a month. Or twice, if you want to achieve our goals."
[Management]

One problem though, health workers would not do it pro bono or not during their working hours. They require an extra allowance to do so. Lots of the health workers do not have empathy with poor people and would not do it without extra payment. Therefore, outreach clinics require funding for the allowances and the transport." *[Staff]*

The hospital´s management acknowledged limited resources and structural deficits in the government´s health policy. Within the discussion, the management mentioned lacking funding of the government as a cause for various problems. Not providing enough ambulances, drugs, health workers, and money to cover the running expenses of the hospital as well as nationwide problems with electrical supply are some of the explanations for insufficient infrastructure in health care facilities.

"Right now, we don´t have electricity. We want to assist patients in the theatre, we don´t have fuel for the generator. We asked the DHO for funds for the fuel. How do they expect us to serve the patients that are laying there? The cases will become more complicated. Sometimes the patients even know that there is no funding. So, they just sit at home. They know, if they go to the hospital, they will be told that there is no drug, no this, no that. So, the people just sit at home without going to the hospital." *[Management]*

3.5.2 Discussion

Resources in health care facilities

In order to meet the existing demands for health care services, resources need to be constantly available at facilities. However, perceived lack of health care facilities, personnel, diagnostic capacities, drugs, as well as insufficient services were dominating topics within empirical data collection.

In its Health Sector Strategic Plan, Malawi´s MoH (2011) pointed out that low output from health training institutions led to shortages of staff. Furthermore, shortages of drugs, the

status of basic medical equipment, and other medical supplies continued to be one major issue in health care facilities. Weak logistical information systems, insufficient and unpredictable funding for medicines, and inadequate infrastructure contributed to drug shortages. Additionally, numerous districts spent too much money on drugs by buying them at higher prices from the private sector (MoH Malawi, 2011).

In order to evaluate health systems, the WHO (2010) recommended key components including financing, service delivery, and workforce to be monitored. These components allow comparisons of the effectiveness, efficiency, and equity of different health system models in order to identify strengths and weaknesses. Furthermore, areas that needed investment concerning number and density of facilities, health information systems, or well-trained human resources could be recognised (World Bank, 2016).

Facilities and personnel

Lacking personnel in health care institutions was matter of discussion within the survey, interviews, and the FGDs. To compensate lacking staff, the hospital´s management reported that a lot of student-nurses and trainee-clinicians attended patients without the supervision of qualified health workers. Thus, expected quality of services could not be achieved. As presented in the following, hardships due to lacking staff and low densities of health care facilities seem to be apparent in health institutions all over Malawi. Statistics verify perceived lack of health workers in the HFMH and other health care facilities in Phalombe.

Although the total number of health facilities has grown over the past years (MoH Malawi, 2014), the density of workforce and health infrastructure in Malawi remained way lower than the global and African average (WHO, 2015).

In 2012, 0.2 physicians, 3.4 nurses and midwives, and 0.04 hospitals per 10,000 inhabitants provided services in Malawi (WHO, 2015). Meanwhile, the global average counted 13.9 physicians and 28.6 nurses and midwives. In comparison to that, the average density in Africa showed 2.7 physicians, 12.4 nurses and midwives, and 0.08 hospitals per 10,000 people (WHO, 2015).

Table 15 shows the density of health workforce and hospitals in Malawi per 10,000 inhabitants compared to the African and global density in 2012.

Table 15: Density of Health Workforce per 10,000 inhabitants in Malawi, Africa, and the globe in 2012. Lacking staff and low densities of facilities are apparent in health institutions in Malawi compared to the African and global averages (own design; Data: WHO, 2015).

	Physicians	**Nurses and Midwives**	**Dentistry personnel**	**Pharma-ceutical personnel**	**Hospitals**
Malawi	0.2	3.4	0.1	0.2	0.04
Africa	2.7	12.4	0.5	0.8	0.08
Global	13.9	28.6	2.8	4.5	N. N.

According to the Workforce Optimization Model of Malawi´s MoH (2011), it would take many years to reach the amount of health care workers that is needed to provide minimum standards of service delivery. Referring to the numbers of 2011, governmental and CHAM institutions needed to increase their health workforce of medical and clinical officers, medical assistants, nurses, and midwives by a total number of 7,664 employees in order to meet the population´s existing demand for health care services. Therefore, almost two third of needed health workforce was lacking in Malawi´s facilities. Another 12,600 HSAs were needed to provide one HSA per 1,000 inhabitants in 2011 (MoH Malawi and CHAI, 2011).

However, these numbers do not reflect the actual or perceived need for health workforce, but existing demand resulting from current service utilisation. As a significant number of the population was not reflected in the data, the amount of lacking staff would be much higher if non-users entered the formal health care sector and utilised services (MoH Malawi and CHAI, 2011).

Figure 27 shows Malawi´s employed and lacking health workforce within the different cadres of health workers in absolute numbers in 2011. Active and lacking numbers are displayed regarding their affiliation to the Ministry of Health and CHAM institutions (MoH Malawi and CHAI, 2011).

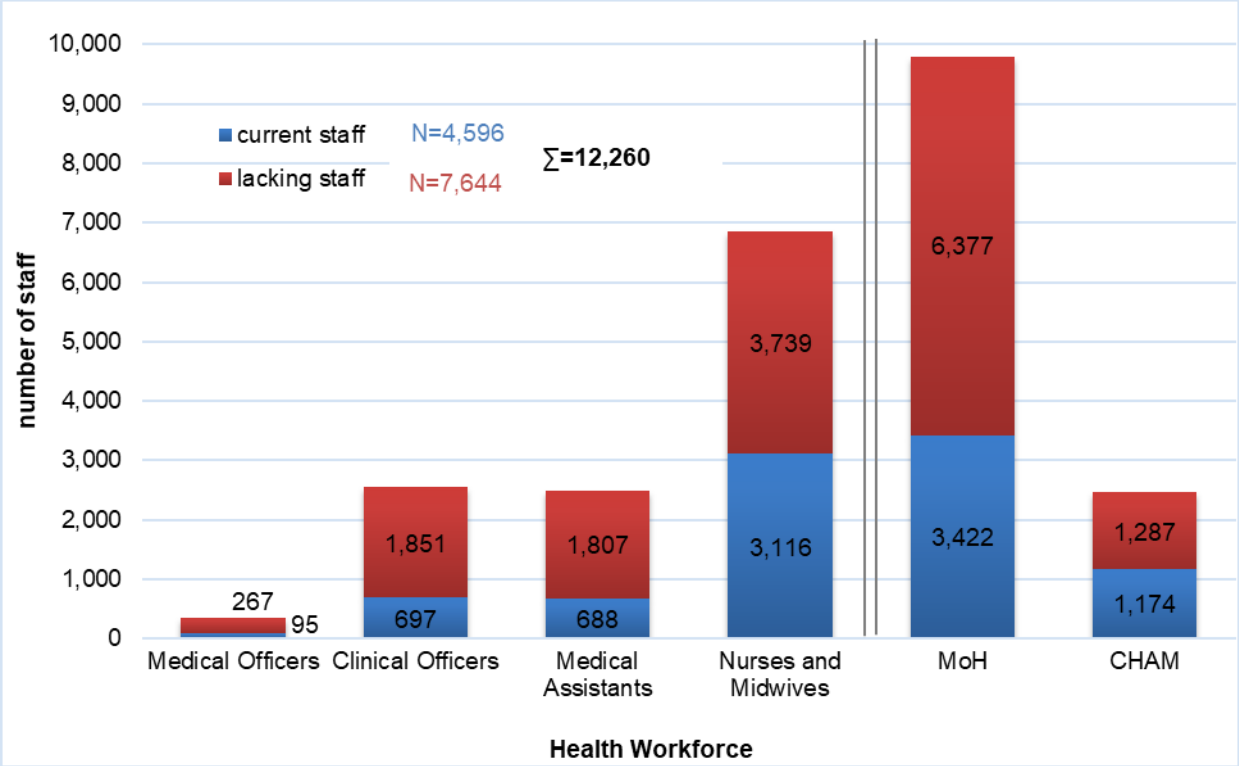

Figure 27: Malawi´s current and lacking Health Workforce. According to calculations of Malawi´s MoH, governmental and CHAM institutions needed to increase their health workforce of medical and clinical officers, medical assistants, nurses, and midwives by a total number of 7,664 employees to meet the population´s currently existing demand for health care (own design; Data: MoH Malawi and CHAI, 2011).

Table 16 compares lacking workforce in health care facilities in Phalombe district to facilities all over Malawi in 2011 (MoH Malawi and CHAI, 2011). Again, these numbers reflect existing demand resulting from current service utilisation. According to the data displayed, a lack of personnel was apparent within all staff groups on both, national and district level. Regarding whole Malawi, lack ranges from 54.5 % for nurses and midwives up to 73.8 % for medical officers.

Within health care institutions in Phalombe district, these numbers were even worse. At current service utilisation, 65.3 % of nurses and midwives are missing to deliver a minimum standard of services. As no medical officer was employed in the district in 2011, the number of lacking medicals was 100 % (MoH Malawi and CHAI, 2011).

These statistics explain the perceived lack of health personnel as described within empirical data.

Table 16: Lacking Health Workforce in Phalombe compared to whole Malawi. According to the MoH and CHAI, a lack of personnel was apparent within all staff groups on national and district level. In Phalombe, the lack ranged from 65.3% % for nurses and midwives up to 100 % for medical officers to deliver a minimum standard of services at current service utilisation (own design; Data: MoH Malawi and CHAI, 2011).

	Medical Officers	**Clinical Officers**	**Medical Assistants**	**Nurses and Midwives**	**MoH**	**CHAM**
Phalombe	100 %	85 %	71.7 %	65.3 %	/	/
Malawi	73.8 %	72.6 %	72.4 %	54.5 %	65.1 %	52.3 %

The development of human resources, which includes adequacy in number and skills, is a challenging task for the health care system of a country (Ekman at el. 2008). In order to be able to perform effectively, it becomes an important function of the district´s leadership team to support all cadres of health workers by regular supervision and training. Evidence-based procedures, community-oriented, and cost-effective approaches, need to be implemented in training and service delivery (Ekman et al., 2008).

As supervision and training provide system-wide standards and expose staff to a wider scope of ideas and experiences, it helps to increase quality of services in health care facilities (MoH Malawi and ICF International, 2014). In order to get a large-scale and detailed look at the status and provision of services in health care facilities in Malawi, the Malawi Service Provision Assessment (MSPA) was conducted in 2013 and 2014 (MoH Malawi and ICF International, 2014). According to the assessment, 80 % of Malawi´s facilities had external supervisory visits within the previous six months. Hospitals (84 %) and health centers (88 %) were more likely to receive external supervision than clinics (67 %). The great majority of health facilities (95 %) had in-service staff trainings that aimed to update health workers´ skills, knowledge, and technical competences (MoH Malawi and ICF International, 2014). Yet, effectiveness of these supervisions and trainings have not been addressed.

However, mere improvements regarding availability of resources and skills of personnel within formal health care facilities are not sufficient to reach the poor and improve spatial access to services. Moreover, facility-based services often concentrate on curative and neglect preventive care (Haines et al., 2007). In this context, community-based programs and the cadre of community health workers can play a central role to extend availability of

basic health care services to underserved populations in Malawi.

Within different countries and settings, community health workers offer a wide range of different services (WHO, 2007). According to the WHO (2007), these non-professionals should be recruited within their community and supported by the health care system. Their services can include promotive services, such as health education on handwashing and breastfeeding, family planning, and community development activities. Preventive services can cover immunisation, maternal and child health. Health workers in other settings might offer curative interventions, such as first aid, treatment of common illnesses like pneumonia or malaria, and care for patients with tuberculosis and HIV/ AIDS. If necessary, community health workers refer patients to formal health care facilities (WHO, 2007). Serving as advocates for the community, who respond to local societal and cultural norms, community health care workers can become an integral part of the health care system that is accepted by its community (Haines et al., 2007; WHO, 2007).

What functions individual community health workers can perform effectively is matter of debate. In that context, level of education, type of training, health needs of the community, as well as size and geographical spread of the served population, have to be considered. However, little scientific evidence exists concerning the optimal mix and number of functions (WHO, 2007). Having clearly defined roles and specific tasks rather than undertaking a wide range of responsibilities would most likely improve performance (Haines et al., 2007).

Different studies and analysis have shown increase in immunisation and reductions in mortality due to community health workers (Bang et al., 1999; Pegurri et al., 2005; Sazawal and Black, 2003).

In Malawi, this cadre of community health workers is represented by Health Surveillance Assistants (HSAs), as introduced in Malawi´s health system (see chapter 2.1.7). To which extent these services are offered, varies within different areas (MoH Malawi, 2011). Still, the range of services and interventions that they deliver is limited.

Community health workers are not the solution for a weak health system and do not replace the need for adequate facility-based health care services (Haines et al., 2007). However, in a resource-poor environment with lacking human resources, it can be reasonable and cost effective to prioritise community level in order to reduce inequities, increase coverage of essential interventions, and reach the poor (Haines at al., 2007). So

far, research has been limited to relatively short-term studies in selected populations. More research is needed to describe key factors that sustain performance and positive health outcomes over years and decades (Haines et al., 2007).

In order to understand performed and documented roles of HSAs, their training system, and their supervision, Smith et al. (2014) conducted a cross-sectional analysis of enrolled HSAs in a Malawian district. Their study included observations of HSAs´ performance, FGDs, and interviews with HSAs, policy-makers, and HSA supervisors. Within this study, HSAs reported to be hampered by lacking medical and office supplies, equipment, bicycles, and mobile phone credit (Smith et al., 2014). Moreover, they expressed stress and frustration, as they were expected to take on roles and tasks, which they were not qualified for. Policy-makers and HSA supervisors felt that the training, which HSAs received, was not adequate considering their expanding tasks. Additionally, they reported weaknesses in supervision, which was perceived as a constraint of HSAs´ effectiveness, especially when further tasks were added to their duties. Moreover, HSAs reported to be called to fill gaps within facility-based human resources, which was perceived to endanger preventive efforts in the communities of their catchment area (Smith et al., 2014).

According to the Workforce Optimization Model of Malawi´s MoH (2011), Phalombe district lacked 71.7 % of required HSAs to provide one HSA per 1,000 inhabitants. Regarding whole Malawi, 57.2 % of HSAs were missing to provide comprehensive services within the communities (MoH Malawi and CHAI, 2011). Insufficient supplies and training (Kok et al., 2016) and lacking numbers of HSAs endanger effective performance of this cadre of health workers. Although they cannot fill resource gaps within facilities, a sufficient number of HSAs could play a central role to provide preventive and basic curative health care services to underserved populations in Malawi.

Availability and acceptability of HSAs have not explicitly been addressed within this research, as the focus was put on access to formal health care facilities. Thus, no empirical data has been collected to reveal perceived performance, utilisation, and effectiveness of HSAs in Phalombe district. Further research needs to target users and non-users of formal health care services in order to find out about their effectiveness and the role that HSAs play in providing health care services to the district.

Diagnostics and services

The majority of the survey´s participants (77.3 %), villagers, and health care professionals perceived inadequate service provision as barriers to obtain health care within formal facilities. Interviewees reported that lacking resources in form of equipment and diagnostics hindered patients from receiving quality health care services. Without adequate equipment, staff was forced to improvise regarding diagnostics and treatment. This influenced the quality of care and might endanger health workers and patients. Limited investigative mechanisms prevented further diagnostics and led to treatment based on assumptions and symptoms. Therefore, as reported by a health worker, a lot of patients left a health care facility without being treated sufficiently, which affected perceived quality of care. Due to these barriers, some patients turn into non-users of formal health care services, although feeling the urge to seek services.

Comprehensive provision of services and resources, especially of basic pieces of equipment, laboratory tests, and diagnostic imaging, was a nation-wide problem. As certain equipment is required to deliver quality basic health services, the WHO and the United States Agency for International Development (USAID) proposed a list of seven basic pieces of equipment, which should be present at any health facility in order to assure its readiness to provide basic health services. This list contains an adult scale, a child scale, an infant scale, a stethoscope, a thermometer, blood pressure apparatus, and a light source (MoH Malawi and ICF International, 2014).

Within the MSPA, Malawi´s MoH got a large-scale and detailed look at the status and provision of health care facilities (MoH Malawi and ICF International, 2014). According to this, the most common available pieces of basic equipment in Malawi’s health care facilities were stethoscopes (89 %) followed by thermometers (83 %), adult scales (82 %), and blood pressure apparatus (78 %). In comparison to that, child and infant scales were less likely to be found (57 % and 45 %, respectively), whereas light sources were available in only 34 % of Malawi´s facilities (MoH Malawi and ICF International, 2014). Figure 28 depicts the availability of basic equipment.

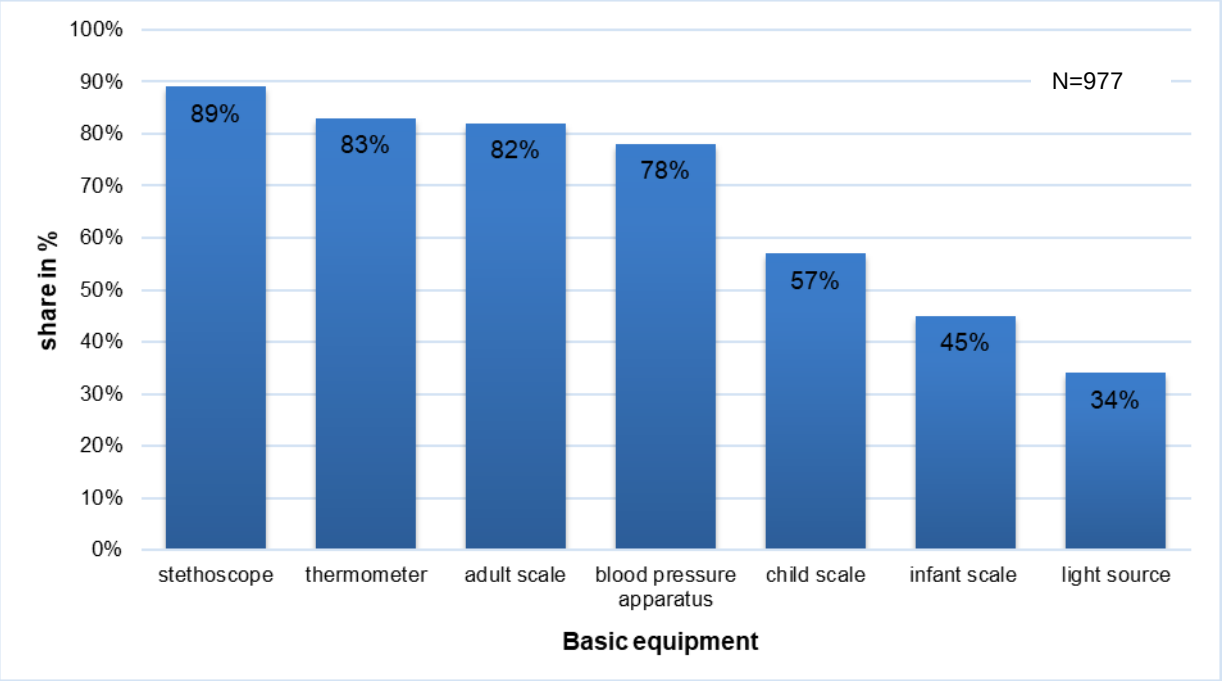

Figure 28: Availability of basic equipment in Malawi´s health care facilities. Among the seven basic pieces of equipment to provide basic health services. the most common available in Malawi's health care facilities were stethoscopes (89 %) followed by thermometers (83 %), adult scales (82 %), and blood pressure apparatus (78 %). Child and infant scales were less likely to be found (57 % and 45 %, respectively). Light sources were available in 34 % of the facilities (own design, Data: MoH Malawi and ICF International, 2014).

Concerning offered services, the great majority of facilities offered malaria diagnosis or treatment (96 %), STI diagnosis or treatment (95 %), and outpatient curative care for sick children (94 %) (MoH Malawi and ICF International, 2014). HIV testing was provided by 78 % of the facilities, whereas 67 % delivered ART, HIV care, and support services. About half of all facilities offered services for delivery and new-borns (54 %) and tuberculosis diagnosis or treatment (52 %). Since caesarean delivery is only provided by hospitals, it is the least available service and only offered by 7 % of all health care facilities (MoH Malawi and ICF International, 2014).

Another contributing factor to patients´ health-seeking behaviour is the availability of basic health care services. MSPA defined outpatient curative care for sick children, child growth monitoring, antenatal care, child vaccination services, modern methods of family planning, and services for STI, as basic client services (MoH Malawi and ICF International, 2014). The package of all basic services was offered by about half of Malawian health care

facilities (52 %), whereas each of them was available in at least 65 % of the facilities. Health centers were more likely to offer all basic services (84 %) than hospitals (58 %) (MoH Malawi and ICF International, 2014). Figure 29 shows the share of facilities that provided the different basic client services.

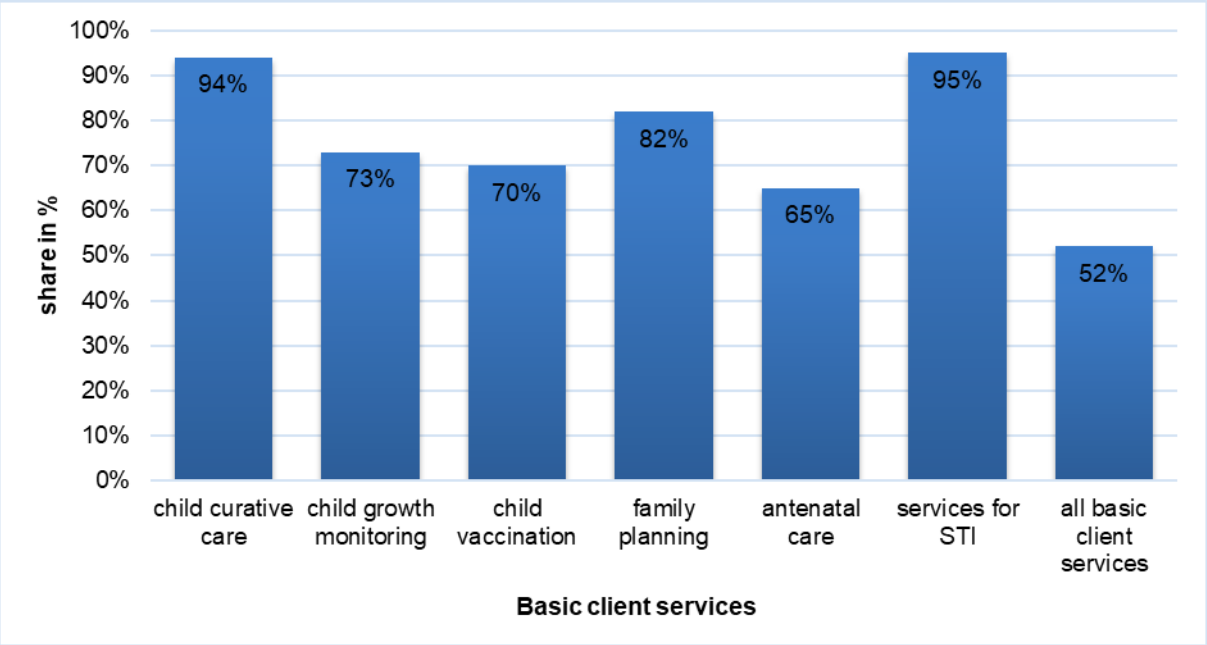

Figure 29: Provision of basic client services in Malawi´s health care facilities. MSPA defined outpatient curative care for sick children, child growth monitoring, child vaccination services, modern methods of family planning, antenatal care, and services for STI, as basic client services. About half of Malawian health care facilities (52 %) offered the package of all basic services, while each service was available in at least 65 % of the facilities (own design; Data: MoH Malawi and ICF International, 2014).

Providing diagnostic services, such as laboratory tests and diagnostic imaging, is essential for delivering quality health care services. However, various diagnostic services were only offered by few facilities in 2014. Apart from malaria and HIV diagnostic tests, basic and advanced laboratory tests were only found in less than 25 % of Malawi´s facilities. Generally, hospitals were more likely to provide diagnostic tests than other types of health care facilities. Diagnostic imaging equipment, including X-ray machines, ultrasonography, and CT-scans, were only available in hospitals. Additionally, various diagnostic tests were found more often in CHAM facilities than in facilities that were managed by other authorities (MoH Malawi and ICF International, 2014).

Figure 30 shows a range of diagnostic services of Malawi´s hospitals and health centers.

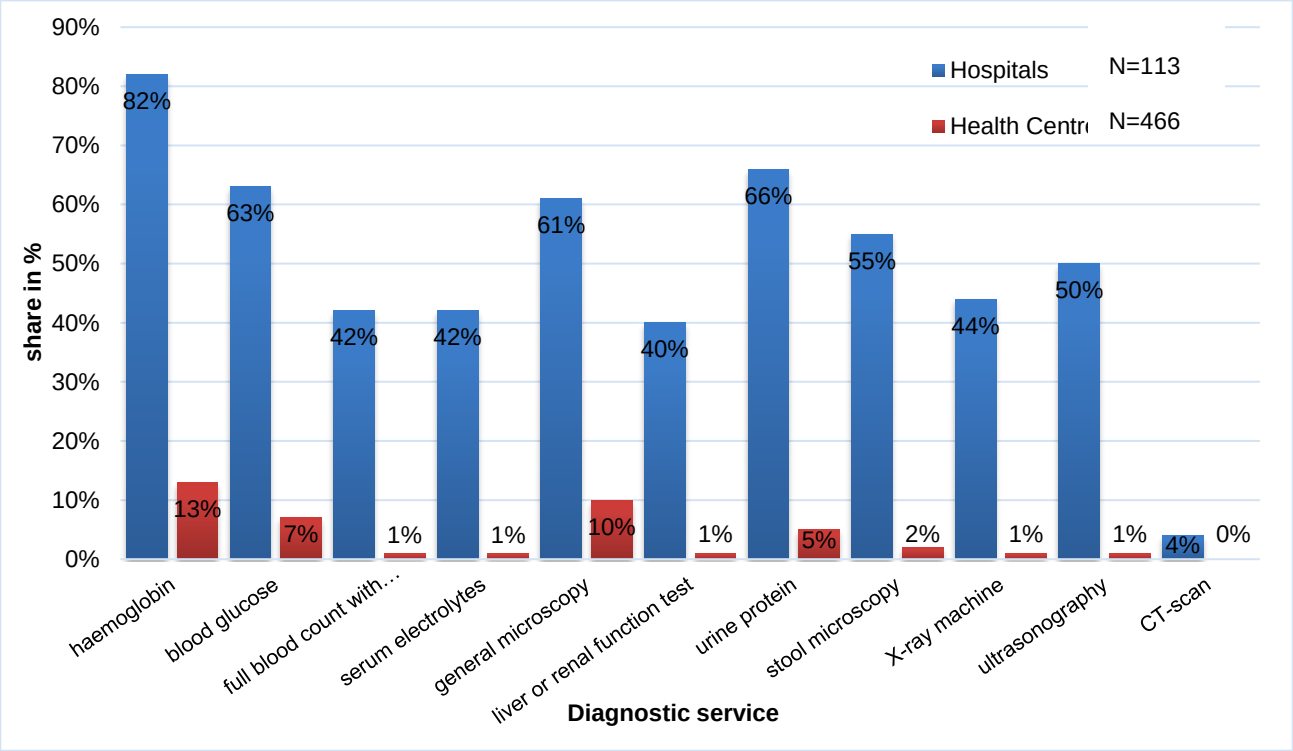

Figure 30: Diagnostic capacity of Malawi´s hospital and health centers. The majority of hospitals offered analysis of haemoglobin (82 %), urine protein (66 %), blood glucose (63 %), general microscopy (61 %), and stool microscopy (55 %). Diagnostic imaging equipment, including X-ray machines, ultrasonography, and CT-scans, were only available in hospitals, while very few health centres offered any kind of laboratory tests (own design; Data: MoH Malawi and ICF International, 2014).

Drugs

As pointed out in the previous chapters, comprehensive availability of drugs is another crucial factor for providing quality health care services. Within the survey and FGDs, the majority perceived not to receive quality health care services due to insufficient medicines. Rather than getting them at a certain facility, patients stated to be directed to private vendors in order to buy them out-of-pocket.

Lacking drugs within formal health care facilities do not just hinder people in Phalombe from receiving quality services but seem to be a nationwide problem. The MSPA evaluated the availability of 14 essential medicines that were proposed by WHO and USAID for assessing general service readiness. Most widely available was the antibiotic Amoxicillin

(81 %), followed by Diazepam (77 %), Paracetamol (68 %), and Ciprofloxazin (54 %). The remaining ten essential medicines were available in less than half of Malawi´s health care facilities (MoH Malawi and ICF International, 2014).

In general, essential medicines were mostly present in hospitals, which is appropriate for some medicines such as Glibenclamide and Atenol, for management of diabetes and hypertension, respectively. However, Paracetamol, for instance, is a painkiller that should be widely accessible across all levels of health care facilities. Still, only 68 % of all facilities, half of the dispensaries, and 9 % of health posts offered this drug in 2014 (MoH Malawi and ICF International, 2014).

Figure 31 shows the share of facilities that held these 14 essential medicines. Generally, these statistics validate people´s perceived lack of drugs within Phalombe´s health care facilities.

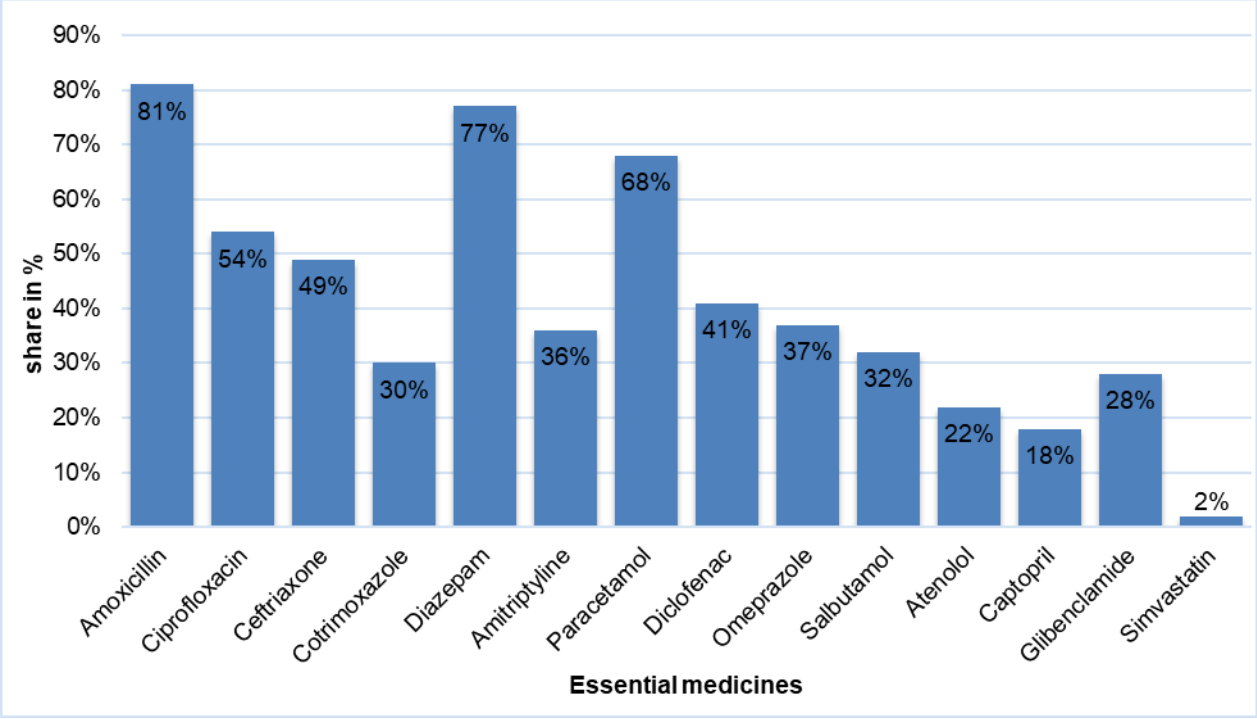

Figure 31: Availability of 14 essential medicines in Malawi´s health facilities. Most widely available was the antibiotic Amoxicillin (81 %), followed by Diazepam (77 %), Paracetamol (68 %), and Ciprofloxazin (54 %). The remaining medicines were available in less than half of Malawi´s facilities (own design; Data: MoH Malawi and ICF International, 2014).

A study based in rural South Africa revealed that public clinics repeatedly ran out of drugs, which caused patients, especially those of highly vulnerably households, to shop around between different facilities in order to get the needed medication (Goudge et al., 2009). Self-treatment and non-consultation were some of the effects of these stock-outs, since patients were not willing to spend resources on transport for a potentially useless trip to a local clinic. While wealthier people had the opportunity to get the needed medication at the private sector, financially vulnerable households were hindered to do so (Goudge et al., 2009).

Abiiro et al. (2014) collected qualitative data in form of FGDs with community residents and interviews with health care providers in two Malawian districts. Within their research, lacking equipment and drug stock-outs dominated all interviews with health workers, as well as two thirds of the FGDs. While health workers attributed shortages to inadequate supplies from the national drug provision system, community members suspected drugs to be badly managed and redirected to private providers on purpose. Health workers from the public sector indicated that they handled drug shortages by postponing treatment or by referring patients to other health facilities or private pharmacies (Abiiro at el., 2014). Similar procedures were indicated within findings of this empirical data collection, as participants described to be sent to private vendors when facilities were out of drugs. Additionally, villagers reported that drugs were poorly managed and sold to private providers by health workers. The hospital´s management and health workers confirmed this practise. However, they attributed drug shortages to insufficient funding, weak logistics, and inadequate infrastructure of the national drug provision system. The interdependency between lacking availability of medicines and their apparent purchase to private vendors will be discussed within the dimension acceptability in chapter 3.7.

As implied by a report of the Global Fund (2017), ineffective tracking of stock data and inadequate storage facilities need to be addressed in order to decrease the practice of drug theft. Additionally, drug shortages due to insufficient funding and infrastructure of the national drug provision system need to be tackled. In order to improve availability of medicines, an increased budget needs to be allocated to drug provision (MoH Malawi, 2011). Guidelines on rational use of medicines need to be build and shared with health professionals and patients. In order to address weak logistics, warehousing, distribution,

and the supply chain, need to be strengthened and secured (MoH Malawi, 2011). This includes creation of capacities for forecasting and quantification of needed medicines. Additionally, drugs that have been dispensed to patients need to be recorded in order to keep track of incoming and distributed stock (MoH Malawi, 2011).

Consequently, some people in Phalombe district turn into non-users of formal health care services, as they are discouraged by the lack of medicines and adequate services. Travelling a long distance in order to reach a facility, where a stock-out of drugs is very likely, demotivates and hinders potential patients to seek services within a formal health care facility (Munthali et al., 2014).

Health infrastructure

Providing integrated outreach services addresses the barriers concerning spatial accessibility and availability, as they tackle the issue of the provider´s location, the patients´ transportation (Goudge et al., 2009; Jacobs et al., 2012), and the issue of the insufficient amount of health care facilities.

Mobile health clinics (MHCs) are customised vehicles that provide prevention and health care services to vulnerable people in urban and rural communities. By delivering services, where people work and live, MHCs overcome barriers of accessing health care (Geoffrey et al., 2014; Hill et al., 2014).

Different studies attempted to reveal their utilisation and effectiveness. By reviewing data from MHCs in the United States, Hill et al. (2014) found these to be effective in reaching vulnerable populations and in improving care of chronic diseases.

According to a study in South Africa, mobile HIV screening reached people that were younger, geographically more remote, and who had earlier stages of the disease compared to clinic-based testing (Bassett et al., 2014). Swaddiwudhipong et al. (1999) showed similar results concerning the use of mobile units for screening programs for cervical cancer in Thailand. In addition to this, MHCs have significantly increased immunisation coverage and decreased parasite prevalence, as well as anaemia among children living in rural areas of Namibia (Aneni et al., 2013).

In order to reduce HIV/AIDS, tuberculosis, and malaria in Malawi´s district Mulanje, the Global AIDS Interfaith Alliance, a non-governmental organisation, launched two MHCs in

2008. A third mobile unit expanded the scope of services in 2010 and included preventive and curative health care services, such as child growth monitoring, basic primary health care, and health education (Geoffrey et al., 2014). Each of the clinics visited five separate sites per week and was staffed with a clinical officer, a nurse, a nurse aide, and a driver. Communities were informed of the MHCs operations through radio, village leader networks, and community-based meetings.

A study of Geoffrey et al. (2014) aimed to reveal the feasibility of service provision and utilisation of expanded services over a period of three years from 2011 until 2013. According to this, every clinic conducted 153 patient visits per day, whereas the majority sought services for diagnosis and management of malaria, respiratory and gastrointestinal conditions, and for HIV screening. Services were accessed more frequently by women than by men, while 40 % of the patients were children under five years. Over the study period, visits for child growth monitoring declined, as the Malawian government introduced outreach clinics in 2012 that aimed to decrease child malnutrition. Additionally, governmental clinics increased reproductive health care services and tuberculosis screening, which led to a declined utilisation of the MHCs over the study period.

Generally, outreach programs cannot replace facility-based health care services. The mobile units can complement governmental facilities by filling gaps and expanding access to health care to communities that are hard to reach (Geoffrey et al., 2014). Still, the range of provided services within outreach is limited (Jacobs et al., 2012).

As presented within empirical findings, Phalombe´s health centers and the HFMH are responsible to carry out outreach programs within the catchment area of their facility. These programs offer services for pregnant women and children under five, such as antenatal care, vaccination, child curative care, and family planning. Serious cases that are detected within these consultations are supposed to be taken into a health care facility for treatment. Yet, these outreach programs do not include services for men or women that are not pregnant. Furthermore, insufficient availability of fuelled ambulances hinders comprehensive provision of health care in these underserved areas.

As reported by the hospital´s management, the HFMH depends on financial support from donors to cover expenses for fuel, the personnel´s allowance, and the equipment to provide outreach services. Once funding faded out, provision of these services would stop.

Performance and effectiveness of outreach clinics have not been addressed in the survey and data collection among villagers. Thus, perceived performance and effectiveness of these clinics have not been investigated. To what extent non-users of facility-based services utilise health care within these outreach clinics did not become clear. Further research would need to investigate their performance and effectiveness within Phalombe district. However, in order to tackle the low density and availability of facilities, outreach or mobile health clinics can provide a basic package of services to those that cannot access services themselves. To fill availability gaps, comprehensive outreach clinics need to screen everyone, including children above the age of five years, men, and women that are not pregnant. Outreach programs also need to ensure availability of vehicles for transporting patients in case of emergency or referral in order to ensure treatment in a health care facility, if necessary (Ensor and Cooper, 2004; Jacobs et al., 2012).
Yet, carrying out outreach programs needs political will, funding, and sufficient resources in form of personnel, fuelled vehicles, medical supply, and drugs.

Concerning referral and health transport systems, the Health Sector Strategic Plan of Malawi´s MoH (2011) acknowledged weaknesses and aimed to strengthen quality of care of referrals. According to the MSPA, only 77 % of Malawi´s health care facilities had access to a functioning ambulance or another vehicle for emergency transport on the day of assessment. Therefore, the facility either had a vehicle that was stationed there or access to a vehicle, which was based at another facility. Readiness of an ambulance included availability of fuel (MoH Malawi and ICF International, 2014).
Yet, this number reflected access to an ambulance on the day of assessment and does not necessarily reveal, whether vehicles were available constantly. It has not been addressed, whether the number of vehicles available covered the facilities´ and patients´ needs in case of referral or emergencies.

Within their criteria-based audit to assess the referral system in Malawi´s district Salima, Kongnyuy et al. (2008) established standards and recommendations for optimal referral of emergencies. These included the availability of ambulances at all times, informing the district hospital in case of referral, and adequate resuscitation of patients before referral. The time between calling an ambulance to reaching the hospital needed to be less than two hours. A clinician in the hospital had to attend the patient within 30 minutes of arrival

and give feedback to health centers on all patients referred (Kongnyuy et al., 2008). Within the next steps of the audit, current practice was measured by a retrospective review and compared with the standards. Recommendations were made and its implementations reviewed after three months (Kongnyuy et al., 2008). Significant improvements were apparent in four out of seven standards. Successful implementation and sustainability were promoted by involving a multidisciplinary team made up of the DHO, the senior management of the district hospital, nurses, midwives, clinical officers, and other health professionals. Implementations included training on emergency care, reorganisation to be able to handle emergencies urgently, and reallocation of resources. However, to what extent the immediate gains from the audit were sustainable long-term is not clear (Kongnyuy et al., 2008).

Within empirical data research, lacking infrastructure and standards in case of referral or emergency became apparent. Complications or deaths of patients due to delay of care were described by health care professionals and community members. As suggested within the audit of Kongnyuy et al. (2008), standards and recommendations for referrals and emergencies need to be established to address these issues in Phalombe. Albeit the authors described significant improvements in four out of seven standards, it has to be kept in mind that their setting of implementation differs from Phalombe district. While Salima district has well-equipped district hospitals, functional ambulances, and short-wave radios available (Kongnyuy et al., 2008), these preconditions are not given in Phalombe district.

Nevertheless, involving multidisciplinary teams and different partakers of the health care system can promote successful implementation and sustainability regarding various reforms. Yet, reorganisations and reallocations of resources need political will and support.

3.6 Accommodation

The dimension accommodation describes how supply resources are organised to accept patients, how patients perceive their appropriateness and to what extent they are able to accommodate to these factors. This includes facilities´ hours of operation, walk-in facilities, the availability of basic amenities, and waiting-time for patients.

Table 17 aggregates the findings of the empirical data on accommodation. Codes and subcodes, which arose from the analysis of the data, divide the findings into sections.

Table 17: Overview of aggregation and analysis of the empirical research data on accommodation (own design, based on Anthonj et al., 2015; Data: empirical research)

Code	Subcode	Quantitative data	Qualitative data		
		Survey: hospital	**FGD: villages**	**FGD: management**	**Interviews: staff**
Infrastructure of facility	Capacities	X	X	X	X
	Basic amenities	X		X	X
Organisational processes	Waiting time	X	X	X	
	Opening hours	X	X		

3.6.1 Findings

<u>Infrastructure of facilities</u>

94.7 % of the survey´s participants perceived the facility as clean and well-kept. Furthermore, 92.0 % stated that water was available in the HFMH, while every participant reported that the hospital had electricity. However, during the period of data collection electricity was not reliably available throughout the whole day. Daily blackouts, which lasted several hours, limited continuous availability of electricity and the water pipe. 21.3 % knew that there was a small market with basic groceries in the area of the hospital. Figure 32 visualises the categorization of statements concerning the dimension accommodation.

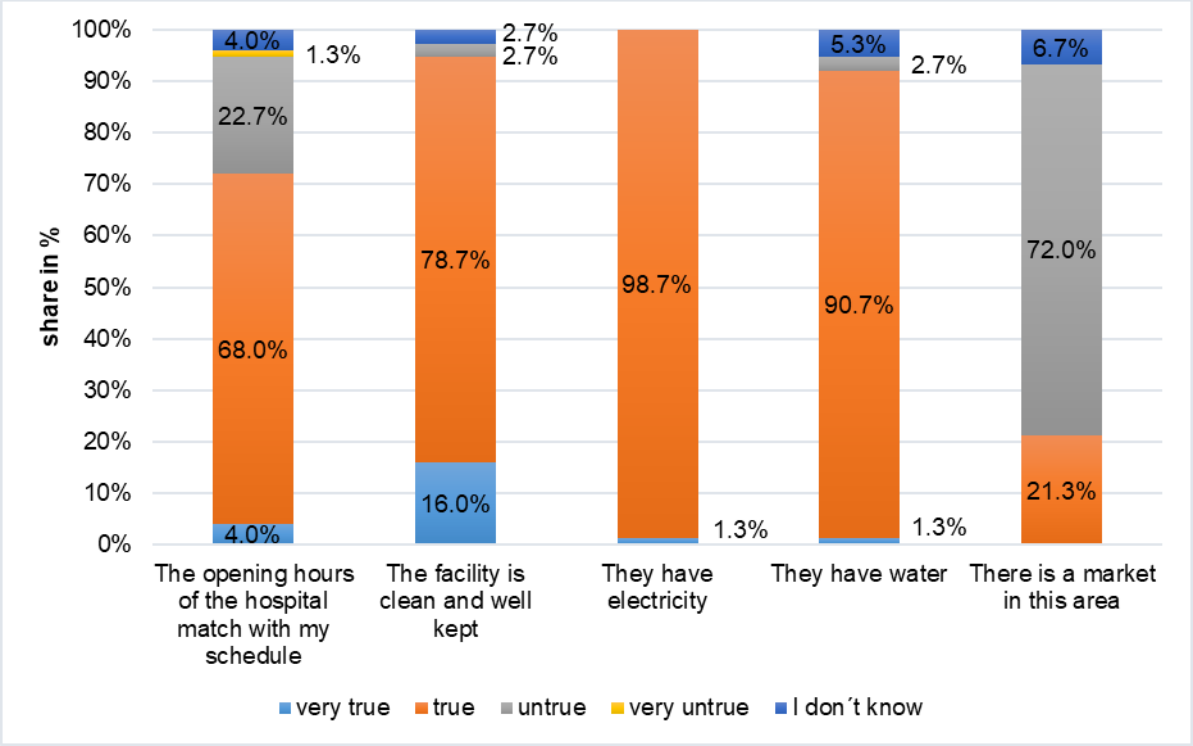

Figure 32: Participants´ categorization of statements concerning accommodation in “very true”, “true”, “untrue” and “very untrue” (own design Data: empirical research)

Contrary to the patients´ perception concerning the availability of electricity and water, the hospital´s management and staff of Phalombe Health Center emphasised the severity of frequent blackouts. Neither the laboratory, nor the radiological unit or the operation theatre of the hospital, were able to provide services without electricity, which was often only available during the night. Although the hospital had a generator that ran on fuel, it was not always possible for the hospital to use it, as fuel was expensive and not constantly available. The district´s health centers did not possess generators and therefore depended completely on electricity.

Figure 33: Water source in the HFMH (Photo: R. Ritter, 2016)

The hospital´s management reported also missing funds from the authorities, which resulted in lacking resources in terms of drugs and fuel for generating electricity. Consequently, patients did not receive needed surgeries or adequate treatment, which caused some of them to not attend the facility.

> *"The patient that needs a procedure is told 'Wait, maybe the power will come back.' or 'Come next week'. Sometimes a patient stays here for one week without being operated due to black-outs. […] It is quite tricky, today we were informed by the DHO that we didn't receive October funding. Everything is a mess. Right now, we don't have electricity. We want to assist patients in the [operation] theatre, we don't have fuel for the generator. We asked the DHO for funds for the fuel. How do they expect us to serve the patients that are laying there? The cases will become more complicated. Sometimes the patients even know that there is no funding. So, they just sit at home. They know, if they go to the hospital, they will be told that there is no drug, no this no that. So, the people just sit at home without going to the hospital.*
> *We only attend emergencies right now, no elective cases. Why? Resources!"*
> *[Management]*

> *"We don´t have a generator, only a solar lamp that is only working during the night. The whole maternity ward doesn't have electricity due to bad construction. It is difficult to do sutures or to deliver a baby without any light. That needs to be improved. Or electricity to use the autoclave. We are using gas for this right now, but we always need gas for that."* *[Staff]*

In addition to blackouts and absent electricity, construction issues were reported to consume a lot of time and hinder a smooth process of service delivery, which contributes

to long waiting hours and processes of service delivery.

> *"I think another issue is the location of some services. The OPD is here, the x-rays are on the other side of the area. The lab and the scanning are as well somewhere else. These long distances are another contributing factor to the long waiting hours. The patients might even get lost on their way, looking for the lab or looking for the x-ray. By the time they come back to the OPD, it might already be lunch hour."* *[Management]*

Issues regarding lacking capacities were reported by participants of the survey, villagers of all FGDs, and of the hospital´s management. Insufficient room and beds in the facilities´ wards, especially in their labour wards, were reported as limiting factors by participants. Due to lacking beds, guardians had to sleep on the floor and pregnant women did not have enough room for delivery. Consequently, women are sometimes forced to deliver their babies outside the wards, as reported by participants from Nalingula and Njumwa.

> *"Phalombe health center is only the head of other health facilities in Phalombe. But it is facing many problems like inadequate equipment and lack of room for patients. They are in process of building some rooms and wards for a long period. The beds and wards are just not enough for the number of patients and guardians." "Guardians sometimes have to sleep outside the ward on the floor."* *[Nalingula, Anna and Lena]*

> *"Pregnant women sometimes have to deliver babies outside the wards. Also, there is a lack of nets in the wards."* *[Njumwa, Marina]*

This perception has been confirmed by staff of the health center and by the hospital´s management. An insufficient number of beds for the high number of patients and lacking sheets due to abrasion or loss, forced patients of the male ward to sleep on the floor.

> *"In male ward, there is a capacity of 37 but we have 43 patients now. So, patients are sleeping on the floor. That cannot be a healthy situation. We don't expect to exceed that capacity because our space doesn't allow that. We can´t do it any other way, we have to assist the patients. They still accept it and come here."* *[Management]*

"We have a problem with beds, too. Beds and sheets are not enough for the patients. If they bring sheets from home, there is always a problem of hygiene."
[Staff]

Being the only hospital in Phalombe was reported to be a big challenge for the HFMH. It acted like a district hospital although it was not designed to be one. According to the management, the government did not agree to treat and fund HFMH as a district hospital, which resulted in capacity problems.

"Phalombe doesn't have a governmental district hospital. If there could be an agreement with the government that Holy Family will be treated as a district hospital… but it is not in their favor.
Since 2006, they are planning to build a hospital. How many years are that now? I think this will not rise. Maybe in 20 years. The design of Holy Family, the capacity of this hospital, the way we are treating patients now is not marching. Because it was not meant to be a district hospital. But we act like a district hospital right now." *[Management]*

Due to lacking capacities to serve more patients, villagers from Mariko reported denied services during maintenance of the facility, as well as on specific days that were dedicated to patients with HIV/AIDS only.

"On Wednesdays, when we take patients with critical conditions to receive treatment, we are told, that this day is only for people who are on ART." […]
"We are facing the problem that we are being sent back home without treatment on Wednesdays. Also, they sent us back home when they are cleaning the hospital wall." *[Mariko, Daniel and Ruth]*

Forty percent of the survey´s participants criticised the standard of health centers as a barrier to health care services, which hindered them to seek services within the previous twelve months. David from Mariko stated within the group discussion that hygiene in health centers and hospital settings needed to be revised.

Organisational processes

Seventy-two percent of the survey´s participants reported that the hospital´s opening hours matched with their own schedule.

34.7 % of the survey´s participants reported to have been hindered to seek health care services within the previous twelve months due to opening hours of health facilities, which did not meet their needs. A lack of time due to other commitments hindered 28.0 % to seek services within the twelve months prior to the assessment.

In addition to this, residents of all three villages reported the same issues as a barrier to access health care services in HFMH and in health centers. Peter from Nalingula stated, that health workers of health care facilities started to attend patients at eight or even at nine o´clock although the facility opens at 7:30 in the morning. Other participants criticised opening times, late arrivals of health personnel, and long waiting time until patients were attended.

Long waiting time for consultation are discussed within the dimensions availability (see chapter 3.5) and acceptability (see chapter 3.7). As stated by villagers, health workers´ reaction time, especially in cases of emergency, was too slow. This resulted in long waiting for patients and in the worsening of their conditions. Participants reported that some patients even died while waiting for consultancy.

> *"The opening time and the time of doctors when they attend the patient´s needs are another problem that needs to be considered." "During lunch time, they close the health center and the hospital early while we still wait in the queue."* *[Njumwa, Melanie and Sylvia]*

> *"Many times, when we get there early in the morning, we wait a very long time without being attended. Sometimes the doctors come at a late hour and tell us that they are not open yet."* *[Mariko, Rita]*

> *"Sometimes patients even die in the queue because of not being attended in time."* *[Nalingula, Sarah]*

3.6.2 Discussion

Infrastructure of facilities

Within health care facilities, especially in hospitals, constant provision of electricity and water is essential to provide qualitative health care services. According to the MSPA, 94 % of Malawi´s health care facilities obtained an improved water source in 2014 (MoH Malawi and ICF International, 2014). This included water that was piped into the facility or piped onto facility grounds. Moreover, the number included water coming from a public tap or standpipe, a tube well or borehole, a protected dug well or spring, rain water, or bottled water within a 500-metres range of the facility. Hospitals (98 %) were more likely to have a water source than other types of facilities (MoH Malawi and ICF International, 2014). Although the great majority of Malawi´s health care facilities had a water source available in 2014, hygiene of this water is uncertain. Within HFMH, water was only available through taps when electricity was accessible. During blackouts, the hospital relied on bottled water, which was collected while electricity was available (see Figure 33). To what extent these water sources were sufficient for the hospital´s needs has not been addressed.

In 2014, 59 % of Malawi´s health care facilities obtained regular electricity (MoH Malawi and ICF International, 2014). This number included facilities, that were connected to a central power grid without an interruption in power supply lasting longer than two hours at a time during normal working hours, within seven days prior to assessment. Additionally, the number included facilities with back-up solar power or functioning generators with fuel available on the day of assessment. Health centers (65 %) and hospitals (79 %) were more likely to have regular electricity available (MoH Malawi and ICF International, 2014). It has to be kept in mind though, that even short blackouts can have a drastic effect on provision of services, especially while taking care of emergencies. As operation theatres, the laboratory, light sources, and some diagnostic equipment require electricity, certain services cannot be offered or have to be interrupted when facilities are off power.

According to the management of the HFMH, the hospital obtained a generator that ran on fuel. However, due to high cost for fuel and lacking financial resources, it was not possible to cover daily blackouts with electricity produced by the generator. Phalombe´s main health center, however, did not obtain a generator at all. Therefore, amenities were mostly

accessible during the night and hindered processes in patient care. As stated by the hospital´s management, patients did not receive needed surgeries or adequate treatment, which caused some of them to not attend the facility.

Still, the great majority of the survey´s participants reported that the hospital had water and electrical supply. Patients could have described a general availability and not a continuous readiness of amenities. On the other hand, patients might have assumed that these amenities were available throughout the whole day without noticing that availability was discontinuous. Readiness of basic amenities has not been addressed within the FGDs among villagers. Thus, it did not become clear to what extent electrical and water supply affected health-seeking behaviour of Phalombe´s inhabitants.

Within the study of Abiiro et al. (2014), community members in two Malawian districts criticised lacking basic resources, such as electricity and water, especially in public facilities. Again, it remained unclear whether it influenced the health-seeking behaviour of the study´s population.

Regarding capacities in Phalombe´s health care facilities, findings of the empirical research indicated insufficient numbers of rooms and beds within the facilities´ wards. Due to lacking beds, patients and their guardians had to sleep on floors. Sometimes, pregnant women did not have enough room for delivery, which forced them to deliver their babies outside the wards. Being the only hospital in Phalombe and acting like a district hospital was reported as a big challenge for HFMH, as it was not designed to be one. According to the management, the government did not agree to treat and fund HFMH as a district hospital, which resulted in capacity problems.

Generally, insufficient accommodation regarding availability of basic amenities and lacking beds in Malawi´s health care facilities hindered provision of adequate services. However, it did not become clear, to what extent inadequate accommodation influenced health-seeking behaviour of Phalombe´s inhabitants and whether it caused potential users of health care services to turn into non-users.

Organisational processes

As presented and discussed within the dimension availability, lacking capacities did not just include rooms and beds but as well human resources. As reported within empirical

research, inadequate resources and capacities caused long waiting hours for patients and even deaths due to extended waiting. Moreover, the management of HFMH reported that construction issues consumed a lot of time and hampered a smooth process of service delivery, which contributed to long waiting hours and processes of service delivery.

Malawi-based qualitative studies confirmed that long waiting times hindered patients to seek services within formal health care facilities (Kumbani et al., 2013; Roberts et al., 2015). Kumbani et al. (2013) explored women´s reasons to deliver at home without skilled attendance despite receiving antenatal care at a Malawian health center. Participants reported concern due to delay in health care provision, as they experienced to be attended and cared for on the day after arrival and not when reaching the facility (Kumbani et al., 2013). Women within the study of Roberts et al. (2015) complained about long waiting time due to slow working of health workers, who took extended lunch breaks or chats with each other.

According to the qualitative research of Abiiro et al. (2014), community members indicated that health care workers often resided far from the facility, which hindered provision of services in a timely fashion. Health staff confirmed these concerns, but attributed lacks in staff and equipment to be responsible for the facility´s overcrowding (Abiiro et al., 2014; Roberts et al., 2015).

Another qualitative study among non-users of Malawian health care services indicated that some providers did not offer their services within the hours of operation, which were required under the regulations of the Malawi Public Service (Munthali et al., 2014). Personnel that did not attend their health care facility in time or that left early was described to contribute to inadequate opening-hours (Munthali et al., 2014; Roberts et al., 2015).

Generally, findings within empirical research indicated frustration concerning long waiting hours and inadequate opening hours of health care facilities. However, these circumstances most likely result from lacking capacities and resources.

3.7 Acceptability

The dimension of acceptability describes the relationship and interaction of patients and suppliers, while examining the patient-provider engagement and providers´ attitudes.

Furthermore, the dimension includes patients´ perceived appropriateness of service provision and trust in providers´ qualifications and competences.

Table 18 aggregates the findings of the empirical data collection regarding acceptability. Codes and subcodes, which arose from the analysis of the data, divide the findings into sections.

Table 18: Overview of aggregation and analysis of the empirical research data on acceptability (own design, based on Anthonj et al., 2015; Data: empirical research)

Code	Subcode	Quantitative data	Qualitative data		
		Survey: hospital	**FGD: villages**	**FGD: management**	**Interviews: staff**
Trust in facility-based services	Competence of personnel	X	X		
	Appropriateness of service provision	X	X		
Patient-provider engagement	Reaction time	X	X	X	
	Equity/ Favouritism	X	X		X
	Respect/ Dialogue	X	X	X	
	Purchase of drugs/ equipment	X	X	X	X
	Burden of stress			X	

3.7.1 Findings

Trust in facility-based services

Concerning service provision in the HFMH, the majority of the survey´s participants reported that they felt welcome and well-cared for in HFMH (92.0 %). While 85.3 % stated that the facility had skilled personnel, 94.6 % declared to have trust in the competence of health care providers. 89.3 % perceived staff in the hospital as friendly.

Figure 34 illustrates the categorisation of statements concerning the dimension acceptability in the hospital.

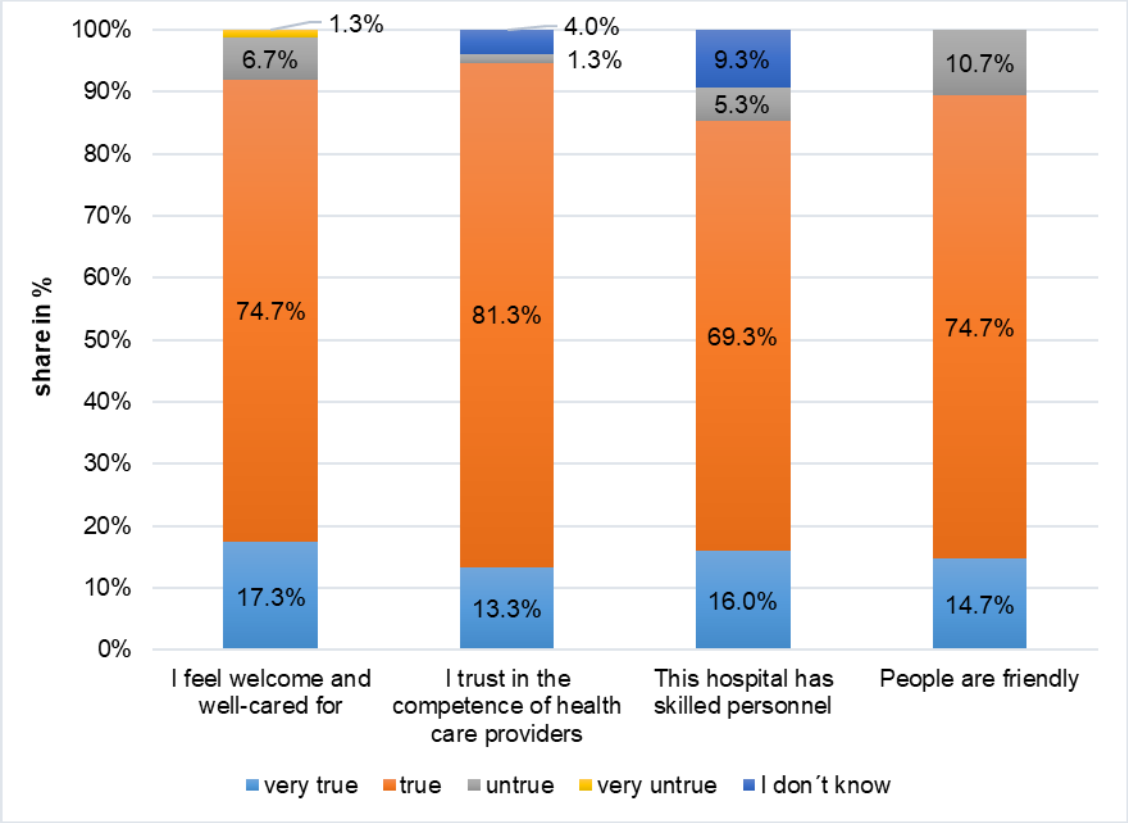

Figure 34: Participants´ categorization of statements concerning acceptability in "very true", "true", "untrue" and "very untrue" (own design; Data: empirical research)

As presented in chapter 3.1, the majority of patients consulted one or a combination of different health care facilities before coming to HFMH (61.3 %) in order to seek services for the same symptoms. Most of the participants within this group (95.7 %) consulted at least a health center beforehand. 10.9 % went to another hospital, and 2.1 % to a maternity facility before coming to HFMH.

Within this group of participants that sought services in other facilities before, the majority (82.6 %) came without a referral letter as they expected to receive better health care services in HFMH than in the facilities they have been to before.

Generally, the majority of patients that came to the HFMH explained that they were not satisfied with health centers and the services they provide. Insufficient quality of health care provision (68.0 %), lacking trust in the competence of health centers (4.5 %), poor attitude of health workers (3.0 %), inappropriate opening hours of health centers (3.0 %), and poor standards of those facilities (1.5 %), were stated as reasons to seek services in HFMH. Figure 35 depicts these reasons.

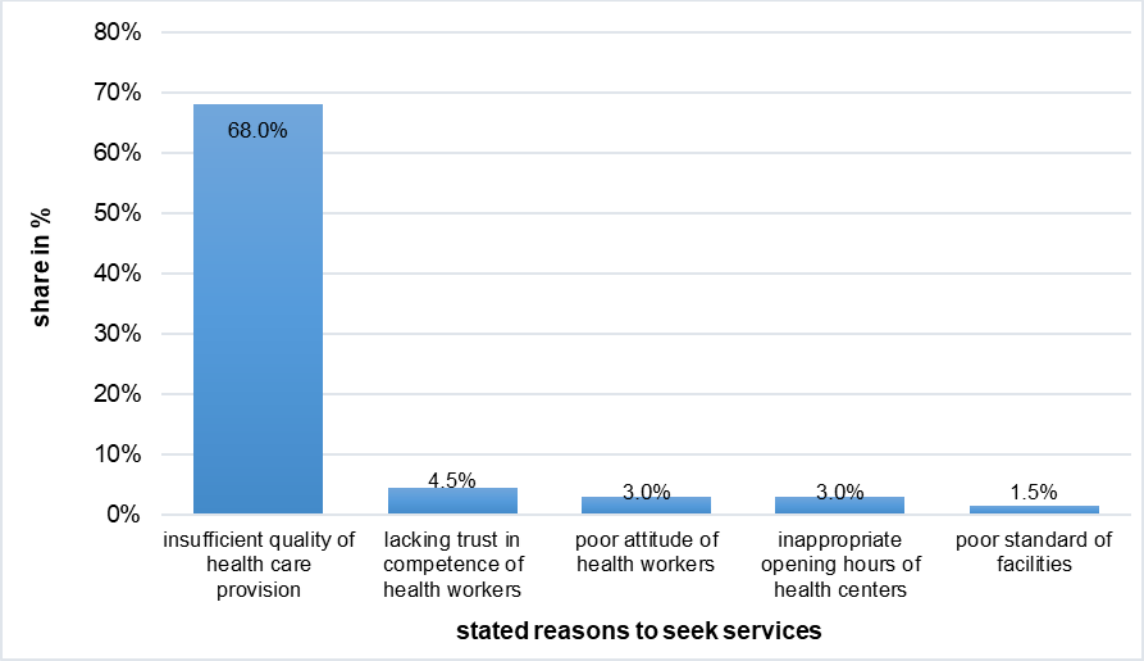

Figure 35: Stated reasons to seek services in HFMH. The majority of the survey´s participants (68 %) stated that they sought services at the hospital due to insufficient quality of health care provision in other facilities (own design; Data: empirical research).

Providers´ attitudes

Sixty-four percent of the survey´s participants categorised poor attitudes of health workers as a barrier, which hindered them to seek health care services within the previous twelve months. Especially in health centers, this perception seemed to be apparent.

Within all three group discussions, villagers described a poor patient-provider interaction due to a *"lack of kindness and respect for patients"* (Nalingula, Anna) and requested respectful behaviour of health workers. Patients did not have the feeling that they were taken seriously and criticised the attitude of health workers towards them. Some workers were described to behave in a rude way and yell at patients. Furthermore, participants of the survey and villagers perceived that health workers randomly prescribed any drug rather than paying attention to patients´ needs and symptoms.

> *"Some of the health workers, especially doctors, yell at patients and throw their health passport back at patients while the patient is still explaining his condition to him."* *[Njumwa, Melanie]*

“It also happens that we are not yet finished to explain our complaints and they just write down what they think and give us treatment, which is sometimes contrary to our condition.”
“[We want them to show] respect to patients.” *[Mariko, David and Jonas]*

Women in Njumwa and Nalingula reported that pregnant women sometimes delivered their babies without the attendance of a health worker, as they were left alone or yelled at. Anna from Nalingula stated that women sometimes delivered their babies outside the wards due to inappropriate behaviour of nurses.

“Pregnant women are facing problems and are sent outside the wards without treatment. This is not respectful to us as women.” *[Mariko, Ruth]*

“Concerning the pregnant women, the health workers shout at them and leave them alone. Sometimes women deliver babies without supervision of the health worker.” *[Njumwa, Rita]*

“Although there is a program about safe motherhood, nurses shout at women and send them out of the delivery room. The women sometimes deliver babies outside the ward.” *[Nalingula, Anna]*

Furthermore, villagers reported that health workers were not found, where they should be present. Their reaction time, especially in cases of emergency, was too slow which resulted in long waiting hours for patients and in the worsening of patients´ conditions. Participants reported that some patients died while waiting for consultancy. Instead of attending patients, participants perceived staff to *“play with phones and laptops”* (Mariko, Margret) or *“sit outside, chatting with their friends without attending patients in the long queue”* (Njumwa, Lydia).
These phenomena were reported by participants of the survey (n=7) and by villagers in all three FGDs. According to Ruth from Mariko, inappropriate behaviour sometimes led sick patients to stay home rather than attending a health care facility.

“Many times, when we get there early in the morning, we wait a very long time without being attended. Sometimes the doctors come at a late hour and tell us that they are not open yet.”
“It´s exactly what is happening. Sometimes when we approach to the doctor,

they just say we are troublesome and should keep waiting. Also, babies faint and die in the queue sometimes." *[Mariko, Rita and Daniel]*

"Sometimes patients even die in the queue because of not being attended in time." *[Nalingula, Sarah]*

"Sometimes, due to the behaviour of health workers, we just stay at home although we are in severe pain." *[Mariko, Ruth]*

The hospital´s management stated that shouting at patients was not an issue in HFMH but occurred in governmental facilities. According to them, a lot of patients stopped attending governmental facilities but seek treatment at the HFMH.

"Maybe here in Holy Family, shouting at patients is not an issue. But in governmental facilities, it is an issue. A lot of the patients run away from the governmental facilities and come here, because they are treated well." *[Management]*

The hospital´s management acknowledged long waiting hours and confirmed that patients needed to be taken care of right after entering the facility. While villagers perceived that long waiting occurred due to poor attitudes of health personnel, management stated that staff´s workload contributed to poor behaviour towards patients. The necessity to see and treat a lot of patients increased the employees´ stress level, which some of them took out on their patients. However, according to the management, this problem could be solved if more staff was employed in health care facilities.

While describing hardships due to lacking resources, an employee of the hospital pointed out the importance of a good working environment. According to him, insufficient diagnostic equipment and resources diminished the working conditions and led to frustration among employees.

"People are supposed to be taken care of immediately when they arrive at the health institution. Those issues of attitude, of shortage of health worker, or long waiting hours should be worked on. […] To me, one of the contributing factors is the workload. Because you see some health worker is seeing a lot of patients alone. So, it also is a contributing factor to have bad attitude towards the patients. We know we cannot have an adequate number but at least a certain

number of staff [could help]." *[Management]*

"So, there should be enough investigative mechanisms, enough resources to work comfortably. You need a good working-environment, you cannot just work all frustrated." *[Staff]*

As some employees obtained more than one position in the hospital, long waiting hours were frequent, especially when health workers needed to leave a consultancy to attend another procedure. Rather than explaining patients, what was happening and why they needed to exit the room, health workers used to leave their patient without further explanation. In this context, management approved the importance of clearing up the situation and explaining the ongoing process to patients. Therefore, lacking staff enhanced waiting periods, while miscommunication increased patients´ perception of being left alone and treated disrespectfully.

"Sometimes we don't explain the patient what is happening. We just leave the room and say 'I am coming' not even explain. We have that problem as health workers. It is important to explain the patients the issue, why we leave and when we come back. But we don't do that, we just leave it like that. […] We need to explain them what is going on. Long waiting hours is one of the challenges." *[Management]*

Regarding provider´s attitude, perceived inequity and injustice became matter of debate within data collection. Rather than treating all patients equally, participants of the survey and all FGDs reported that health workers treated rich people, their friends, and relatives first. Emergencies and other patients had to wait in line for consultation, while their conditions worsened. Consequently, good relations to health personnel was perceived to be a necessity to receive quality health care services and medication within a shorter waiting period. This attitude of health workers caused a feeling of injustice and rejection among patients.

"We are surprised that when we visit the hospital, some doctors or nurses don´t attend us but their friends and relatives first. We as villagers keep on waiting in the line. Sometimes patients even faint while they wait in the queue." *[Nalingula, Anna]*

“One problem that we face is about not being attended in time. Most of the times, health workers attend people that they know first. Especially when they are rich.” *[Njumwa, Marina]*

“Sometimes they tell us that the drugs that we need are not present at that moment. But their friends with the same complaints receive exactly those drugs, which they told us weren’t there.”
“Indeed. Some patients faint on the queue because they are not being attended while others just go inside and receive better treatment because they are rich or friends with the staff.” *[Mariko, Ruth and Daniel]*

An employee of the HFMH verified this perception of favouring friends or relatives. He described it as a privilege of health workers that relatives did not have to line up like other patients have to. The employee also acknowledged that receiving a referral letter sometimes depended on the patient´s relationship to a health worker. Yet, the health worker recognised the ethical issues of favouritism and committed the problem behind it. Within a different context, the employee indicated that a lot of health workers did not have empathy with poor people, which could be one explanation for bad attitudes that were perceived and described by villagers.

“To get referred is a real problem. I agree. There are a lot of issues behind that. You have to be friends with the clinician or friends with the nurse. Those things, which are ethically not supposed to be like that. […]
What I know, in each and every institution. If you are a relative of the health personnel and you are sick, then they don’t line up the way other patients do. That is their privilege of working in the hospital. They take care of their relative or their child first, escort them back home and afterwards continue working. It might be just a perception and it might be true, hard to say. […] Lots of the health workers do not have empathy with the poor.” *[Staff]*

Furthermore, Kathrin from Nalingula reported within the FGD that villagers struggled to express voice and that they did not know, where to go to with certain problems concerning provision of health care services. She perceived that people´s voices were ignored when trying to address their issues to health workers or to other responsible authorities. Instead of being listened to, they were sent away.

> *“There is nowhere to go. In addition to that, we have been meeting about this problem [of inadequate treatment and room for patients] on Monday when the health center opened. But they just shout at us and said that we have only come to go to the market and not to receive treatment.” [Nalingula, Kathrin]*

Purchase of equipment and drugs by health personnel became matter of discussion within quantitative and qualitative data collection. According to participants of the survey and FGDs, health workers sold drugs and equipment to private vendors. Therefore, patients were directed to the private sector in order to buy their medication out-of-pocket, whenever prescribed drugs were not available at the particular health facility.

> *“Health workers sell medicine of health centers to vendors, which sell them for higher prices than villagers can´t afford. That is a big challenge because there are no drugs left to treat patients.” [survey, participant no. 32]*

> *“Better drugs are sold to private sectors. The drugs are sent from a distributor to different hospitals. But after two days, no drugs are found in the health centers due to this attitude of the health workers.” [Nalingula, Kathrin]*

The hospital´s management confirmed hidden purchases of drugs from health care facilities to private vendors. However, they defined it as the communities´ responsibility to report these purchases to authorities. Rather than reporting this practice, some villagers even hid vendors to let them selling drugs. On the one hand, management stated that some villagers even benefited from these vendors, as they still bought their drugs from them. On the other hand, management acknowledged that fear to report these purchases could prevent communities to approach authorities.

> *“It is not a rumor. It has happened several times. There are many caught cases here in Phalombe district. Even selling the drugs to Mozambique. […] If anyone from a hospital or a health center is selling drugs, the community is supposed to report. Whether through the village head or through the police. Because it means that it is like theft. So, one of the issues that the Malawian government is facing, the reason why drugs are missing in the health facilities, is that drugs are being sold instead of assisting the patients. The communities are the ones who see the people that sell the drugs. They are the ones to report it to the authorities. […] Things are happening hidden. Maybe the communities even see it but they are afraid to report it. They also benefit from the procedure.*

Although they say that the drugs are sold for a higher price, they go and buy drugs from these vendors. So sometimes they are even the ones that are hiding the vendors to keep selling the drugs. So, it is not a rumor, it is an issue."
[Management]

An employee described these hidden purchases as common practice. However, patients tend to associate lacking drugs in facilities directly with theft by health workers. He reported to have had the same belief before entering the health care system as a professional. According to him, not all drugs were missing due to theft, which needed to be addressed by civil education.

"Before I got myself into the health system, I was thinking the same thing, when I was living out there in the villages. Of course, that problem is there, especially in health centers. They are selling drugs to private vendors. They call them village doctors, people who have not been going to school. That's really common practice.
But it is not that all the drugs have been taken away. […] Because what many people have in their minds right now is, that when they go the hospital and don't find the drugs, the drugs must have been stolen. […] So, I think there should be civil education that they remove that mindset that drugs are stolen and not the health facilities." *[Staff]*

3.7.1 Discussion

Trust in facility-based services

According to Gilson (2007), patients´ trust in providers is influenced by perceived technical competence, availability of drugs and equipment, and competences of an institution. These judgements are influenced by previous experiences of health care services, perceived appropriateness of care, and past experiences of getting better or worse after consultation (Gilson, 2007). However, findings within the dimension availability suggest that readiness of equipment, drugs, and appropriate services were perceived to be insufficient within health care facilities in Phalombe district.

As presented above, 68.0 % of the survey´s participants had to pay for consultation in the private hospital themselves, while another 81.3 % reported that the HFMH was not the closest health care facility to their homes. Moreover, the majority of the survey´s

participants consulted one or a combination of different health care providers before coming to the private hospital in order to seek services for the same symptoms (61.3 %). This depicted hopping between different facilities occurred due to perceived insufficient quality of health care provision in health centers, lacking trust in their competences, and poor attitudes of health workers.

In comparison to that, the great majority of the survey´s participants (94.6 %) declared to trust in the competence of the hospital´s health care provision. This might explain the willingness of patients to pay the occurring fee and travel the extra distance to receive services of perceived higher quality. Consequently, deficient acceptability and satisfaction regarding service provision in governmental facilities became apparent as barriers to health care services.

It has to be kept in mind though, that participants of the survey have already overcome barriers to health care by entering the hospital. Whether they were economically better-off than non-users of health care and to what extent they can afford to pay higher fees for quality services, has not been investigated. Nevertheless, participants of the survey seem to have had the choice to seek free services of perceived lower quality in Phalombe´s health centers or to pay for alleged better quality in the private hospital.

People that cannot access services at the hospital due to financial vulnerability or further barriers have the option to seek services of perceived lower quality in health centers or to turn into non-users of facility-based health care services. As reported by participants of the study´s FGDs, lacking trust, deficient acceptability, and bad attitudes of health personnel influenced their health-seeking behaviour and caused some of them to not seek services at health care facility, although feeling sick. Further research needs to focus on non-users of health care services in order to reveal the quantity of people that does not seek treatment in governmental facilities due to a lack of trust and acceptability.

In order to enhance faith in health care service delivery, community participation becomes a critical factor. According to Ensor and Cooper (2004), communities should be fully involved and consulted on potential interventions before investments are made, to ensure that implementations are socially acceptable. Community participation can help to reduce power gaps between the health system and the population they serve (Rasanathan et al., 2011), while socially excluded people can be reached by involving them in designing, implementing, and assessing interventions (Ekman et al., 2008).

Within their MSPA, Malawi´s MoH acknowledged that communities were more likely to contribute to improve service delivery, when they felt involved in management of health care facilities (MoH Malawi and ICF International, 2014). The MSPA evaluated the share of health care facilities that integrated communities in their management in 2014. Only 15 % of all facilities had conducted management meetings with community participation at least once every six months (MoH Malawi and ICF International, 2014). Health centers (21 %) and hospitals (27 %) were more likely to involve communities in their management meetings than other types of facilities. Yet, the share of health centers and hospitals that integrated communities was very low.

In order to address context- and community-specific hardships, health care professionals need to reveal demand-side barriers and to collaborate with communities, as suggested by Ekman et al. (2008). When a delivering mother or another patient dies due to late recognition of emergency, district health officials and personnel from the referral facility could visit the village of the patient in order to emphasise the importance of quick recognition and referral of emergencies (Ekman et al., 2008). By meeting the family and the village officer, health officials can detect factors that hindered the dead patient to seek services in time. As these hindering factors most likely affect more people within a community, barriers of this certain social group can be revealed and tackled. Besides, officials can provide adequate information that create awareness or suggest solutions to overcome certain barriers (Ekman et al., 2008). However, low capacities of human and financial resources are a limiting factor to realise visits of officials and health personnel.

Haines et al. (2007) emphasised the importance of community health workers to foster the acceptability for health care facilities. In Malawi, the cadre of community health workers is represented by HSAs. The authors indicated that active involvement and empowerment of communities through their community health workers can increase people´s trust in formal health care. This might influence health beliefs that have a negative effect on their health-seeking behaviour and their health status (Haines et al., 2007).

As already discussed within the dimension availability, community-based programs and community health workers can play a central role to extend availability of basic health care services to underserved populations in Malawi. To carry out their tasks successfully,

programmes for community health workers need careful planning, funding, active governmental leadership, and support within their community. Regular supervision and training need to be guaranteed (WHO, 2007).

In order to ensure effectiveness and acceptability for community health workers, the communication and relationship with facility-based health workers need to be fostered. Many health workers tend to perceive community workers as assistants with limited training (Haines et al., 2007). Due to mistrust and lacking respect between community health workers and facility-based health personnel, communication worsens and valuable information concerning people´s needs, beliefs, and expectations, which is held by HSAs, is lost to the formal health care system (Haines et al., 2007).

Additionally, it is not common that HSAs receive feedback from health care facilities regarding the consultation, treatment, and health status of referred patients (Kok et al., 2016). Therefore, communication between the facility-based sector and HSAs needs to be fostered in order to assure quality purposes and facilitate adequate performance of HSAs (Kok et al., 2016).

The study of Kok et al. (2016) aimed to gain insight into the relationships between HSAs, the communities, and the health sector in hard-to-reach settings within two Malawian districts. According to their research, support from the community and the health care sector were found to be essential for strengthening performance of and trust in HSAs (Kok et al., 2016).

As the recruitment of HSAs is usually not based on residence in the area of service, not all HSAs live within their catchment area. This results in negative feedback of the community. Being originated from the served catchment area was found to enhance confidentiality and trust, while fostering relationships with community members (Kok et al., 2016).

From the side of the communities, traditional leaders can enhance the communities´ trust in HSAs by conducting community-based meetings and spreading health education messages. Traditional leaders within the communities reported to sanction people for unhealthy behaviour, but it did not become clear whether this was a hindering or facilitating factor for the performance of HSAs (Kok et al., 2016).

Volunteers such as village health committees, HIV support groups, and traditional birth attendants supported HSAs by facilitating trusting relationships between HSAs and the

communities and by dealing with expectations of community members that could not be met by HSAs. However, lacking training and incentives for unpaid volunteers were reported to hinder volunteer support, as mistrust between volunteers and HSAs regarding financial incentives were one of the results (Kok et al., 2016).

Moreover, HSAs reported that lacking supplies, training, and supervision had a negative impact on their performance. Not being able to meet people´s expectations due to lacking supplies and an inadequate referral system decreased communities´ trust and faith in HSAs (Kok et al., 2016). Hence, the embedment of HSAs in the community and their ability to reach out to groups with limited access to health care services can be diminished by lacking resources.

So far, studies have been limited to relatively short-term studies in selected populations. More research is needed in order to describe key factors that sustain performance and positive health outcomes over years and decades (Haines et al., 2007). To what extent communities were involved in management meetings in Phalombe´s health care facilities was not investigated. Additionally, acceptability regarding HSAs, their perceived performance, utilisation, and effectiveness have not been addressed within data collection. Further research needs to target users and non-users of formal health care services in Phalombe and reveal effectiveness and acceptability of HSAs within communities. Expectations of communities and strategies that could be adopted to facilitate trustful relationships in hard-to-reach-areas in Phalombe need to be revealed.

However, as already discussed within the dimension availability, community health workers cannot replace the need for adequate facility-based services and acceptable patient-provider interaction. Trust in health care provision within formal facilities needs to be fostered by providing sufficient resources, trained staff, and adequate attitudes. Still, community health workers can reduce inequities at community level and build a bridge to facility-based health care services. To raise their acceptability within communities and facilities, training, supervision, and provision of sufficient supplies, are necessary.

Patient-provider engagement – communication

Problematic patient-provider interactions and a lack of clear diagnosis can lead to inappropriate and inadequate treatment action or even to no action at all (Goudge et al.,

2009). According to a research in rural South Africa, productive interactions enable individuals to understand health problems, to convince patients of the efficiency of treatments, and to take appropriate actions. Highly vulnerable households become able to justify their need for financial support to their social networks. By gaining experience of their disease, patients and their families became a valuable community resource in assisting other patients (Goudge et al., 2009).

According to Gilson (2007), health care professionals exercised power through their communication practices, manners, and language they use to explain health problems to patients. As this mismatch between patient´s and provider´s beliefs created barriers concerning trust and acceptability, it is important for providers to promote ethical practices. This requires the development of organisational environments that encourage ethical behaviour (Gilson, 2007).

Gilson (2007) presented problems regarding patient and provider engagement, which included poor communication practices of health workers, patient´s inability to exercise voice in medical care consultations, and stereotyping of patients. She emphasised the importance of lay understandings concerning health care and healing systems and its influence over the decision whether and where to seek services. Additionally, the perceived technical competence of providers and the availability of drugs and equipment influenced patient´s trust and choice (Gilson, 2007). Behaviour and communication of health workers, as well as the level of comfort, influence the degree of trust between patients and health care providers (Gopichandran and Chetlapalli, 2015). This includes clear explanations about illnesses and treatments as well as giving patients time to express themselves and their reason for consultation. Especially in a setting with a low level of awareness of health and low access to services, trust in health workers is largely influenced by respect and assurance of treatment (Gopichandran and Chetlapalli, 2015).

As indicated within empirical research, miscommunication and misunderstandings lead to issues regarding the patient-provider relationship and acceptability. Patients attributed long waiting hours to bad attitudes and slow reaction time of health workers. The hospital´s management, however, described staff shortages as the main reason for long waiting hours. As some employees obtained more than one position in the hospital, they had to leave consultancies regularly in order to attend other procedures. According to the

management, this usually happened without further explanation to patients. Therefore, lacking staff enhanced waiting periods, while limited communication increased patients´ perception of being left alone and treated disrespectfully. No matter whether lacking staff or provider´s work ethics have the bigger effect on patients´ waiting hours, effective communication needs to clarify situations and processes in order to create acceptability for long waiting hours.

By examining interpersonal and organisational dimensions of patients´ satisfaction with health care, Westaway et al. (2003) identified determining factors of the interpersonal dimension: “providers who let me talk”, “providers who listen to me”, “considerate providers”, “supportive”, “friendly”, “encouraging”, and “helpful providers”.
A study carried out by Kambala et al. (2015) in health care facilities in Malawi implies that the quality of health services was rated higher when professionals give explanations on examination procedures and purposes of medications in order to make patients understand the importance of procedures. Encouragement to ask questions during consultations, privacy, and confidentiality issues enhanced patients´ perceived quality of care (Kambala et al., 2015). Training to improve the communication skills of health personnel needs to be carried out in order to strengthen patients´ acceptability and to emphasise the importance of a trustful patient-provider interaction (Gilson, 2007).

Still, patient-provider trust is not only determined by the professional´s communication practices and their attitudes towards patients. Also, the patients´ own abilities and willingness to enter the dialogue with health providers needs to be tackled (Gilson, 2007). Addressing these barriers means neither to simply improve provider´s listening skills nor to ensure patient´s education. According to Gilson (2007), health care provision needs to be responsive to patients´ circumstances and environment. Multifaceted interventions are required, where changes regarding management practices and organisational culture play a central role, while power imbalances are reduced (Gilson, 2007).

Patient-provider engagement – respect, equity, and favouritism

Various independent studies collected qualitative data in different settings in Malawi. These studies included community residents (Abiiro et al., 2014), non-users of formal health services (Munthali et al., 2014), mothers that delivered their babies at home

(Kumbani et al., 2013), and health care in facilities of the tertiary level of health care (Roberts et al., 2015). Findings of these studies regarding barriers within the dimension of acceptability were similar to the findings of the empirical data collection.

Within the research of Abiiro et al. (2014), community members in two Malawian districts reported poor attitudes and behaviour of public health care providers, as well as poor quality of services. Patients complained about rudeness, discrimination, and not being listened to as main negative attitudes towards them. Furthermore, favouritism of staff´s friends or relatives and inappropriate treatment led to poor provider-patient interaction. Consequently, some community members avoided to seek health care services, especially at public facilities (Abiiro et al., 2014; Munthali et al., 2014).

Roberts et al. (2015) focused on mothers, who delivered in facilities of the tertiary level of health care. Another qualitative study in Malawi explored women´s reasons to deliver at home without skilled attendance despite receiving antenatal care at a formal health care facility (Kumbani et al., 2013). Within both studies, participants reported poor quality of care as they have been treated rude, disrespectful, and been shouted at.

Expectant mothers reported a misuse of provider´s authority in form of mean remarks regarding their pregnancies, an inappropriate tone of their voice, and in some cases even slaps (Roberts et al. 2015). As they rely on health care professionals, mothers stated to feel helpless and feared to speak up. Rejection of health care was reported to be the result of this patient-provider relationship (Roberts et al. 2015).

One woman within the study of Kumbani et al. (2013) reported about a specific incidence with a facility-based health worker. As she was concerned about health professionals´ behaviour during labour in that particular facility, she expressed her fears towards a health worker. The health worker replied that women were beaten, when they cried or when they were ‘*troublesome*’ while giving birth (Kumbani et al., 2013).

The study of Munthali et al. (2014) confirmed bad attitudes of health workers, which discouraged patients to seek services. Few participants of higher ages reported that some health workers blamed them for stock-outs of drugs in facilities, as medicines were mainly for young people. Furthermore, participants reported that health workers prescribed them the same drugs with the same dosage for different illnesses, disregarding patients´ health status and symptoms (Munthali et al., 2014).

However, none of the public health workers, who were interviewed within the study of Abiiro et al. (2014), supported these statements on poor attitude. Instead, they reported to provide best possible care within the circumstances they work in. Yet, their colleagues in private facilities confirmed villagers´ perceptions and the existence of differences between provider-patient interaction in private and public facilities (Abiiro et al., 2014). Interviewed health workers of the study of Roberts et al. (2015) admitted mistreatments and shouting at patients. According to these health workers, this inadequate behaviour occurred due to staff shortages and high burden of stress. Findings of a study of Chimwaza et al. (2014) confirmed that health personnel in Malawi perceived a huge workload due to staff shortages. Low quality of care due to lacking resources, as well as occurring deaths and poor management of the facilities, reinforced perceived low circumstances (Chimwaza et al., 2014).

These findings within the literature are in line with statements of the management of the HFMH. According to them, inappropriate behaviour of health workers towards patients arose due to staff shortages and high workload. Furthermore, an employee of the hospital pointed out that the working environment within facilities was diminished due to insufficient resources, which could lead to frustration among employees.

The study of Bradley et al. (2015) examined the impact of staff shortages within a qualitative study in 25 out of Malawi´s 28 districts. A high level of stress, the responsibility for large numbers of patients, and no one to share workload or decision-making with, exceeded health workers´ capacities (Bradley at el., 2015). Within the study, staff criticised that they had to work under high pressure in order to attend too many patients and to manage too many emergency cases at once. This resulted in incomplete care or even in deaths. Some employees reported to being pressured into taking extra shifts to cover staff shortages. Demoralisation, demotivation, and exhaustion were reported to be the result (Bradley et al., 2015).

According to Chimwaza et al. (2014), these demotivating factors need to be addressed by improved management practices, opportunities for upgrading and promotion, and the mobilisation of resources in order to fill gaps in staff, equipment, and drugs. Bradley et al. (2015) suggested that staff should be included in redesigning shifts and in the decision-making processes of a facility´s management. This would demonstrate support for health

workers, address the difficult situation they face, and generate a degree of autonomy. Allowing more choice, additional flexibility, and free time, can improve recruitment and retention, while addressing health workers´ motivation and satisfaction (Bradley et al., 2015).

Generally, results of empirical and literature research indicated unbalanced power constellations between patients and providers, as patients rely on professionals´ services but do not have possibilities to express their wishes and needs. Moreover, health workers´ attitudes influenced patients´ experiences with the health care system. Thus, they have an essential role in influencing patients´ health-seeking behaviour. As reported by the study´s participants and found within literature research, potential users give up on the health care system due to unproductive interactions between providers and patients (Goudge et al., 2009).

In order to tackle acceptability and trust barriers, Gilson (2007) suggested that the socialised nature of health care, and the mismatch between providers´ and clients´ health beliefs need to be recognised and addressed. Instead of blaming patients for poor health-seeking behaviour, health professionals need to understand the beliefs and motivations of potential patients. Service delivery needs to be tailored to the public´s perceptions and needs, while circumstances of socially disadvantaged groups need particular attention (Gilson, 2007). Furthermore, demotivating factors for health care workers need to be addressed in order to improve their satisfaction and attitudes towards patients.

Patient-provider engagement – purchase of drugs

Sales of drugs and equipment by health workers have been matter of discussion within the survey, all FGDs among villagers, and within the interviews with health professionals. Providers and community members described these purchases as common practice in Malawi´s public health care facilities.

In 2017, the Global Fund published an investigation report regarding sales of drugs and equipment. After receiving reports that drugs had been side-tracked from public facilities to private vendors and clinics, the Global Fund inspected this theft in collaboration with Malawian authorities and other donor organisations, such as USAID (The Global Fund, 2017). According to their findings, 35 % of the private clinics from their sampled institutions

sold donor-funded anti-malaria drugs. The highest price paid for these medications was US$11, which indicated a high financial incentive to steal and sell them (The Global Fund, 2017).

As a result of this investigation, an anti-corruption campaign was launched in 2016, which promoted a reporting hotline of these drug thefts. Within the first year, 114 reports were received. Between August 2016 and April 2017, Malawi´s police acted against 62 individuals, who were suspected of stealing or selling medicines from the public health sector. Sixteen of those suspects were public health workers, who were subsequently accused for theft of medicines (The Global Fund, 2017).

According to The Global Fund (2017), the issue of stolen drugs being sold in the private sector is widespread and complex. Facilitators for the thefts included non-reconciliation of stock data between deliveries, stock cards, and stock counts. Inadequate storage facilities as well as ineffective systems and processes to account for commodities are vulnerabilities that enable this practice (The Global Fund, 2017).

Even though the management of HFMH confirmed the practice of hidden purchase, they defined it as the communities´ responsibility to report them to authorities. According to them, some villagers even hid vendors to let them sell stolen drugs rather than reporting this practice. Neglecting the fact that patients sometimes perceived private vendors as their only option to receive the needed drugs, the management stated that villagers benefited from these vendors, as they proceeded to buy drugs from them. Conversely, management acknowledged that fear to report these purchases could prevent communities to approach authorities.

However, villagers associated lacking drugs in health care facilities directly with theft by health workers. Within their Health Sector Strategic Plan, Malawi´s MoH (2011) and health professionals in the empirical research attributed drug shortages not only to pilferage but furthermore to insufficient funding, weak logistics, and inadequate infrastructure of the national drug provision system (MoH Malawi, 2011). In order to improve patients´ acceptability and trust in health care providers, communities need to be made aware of the multifactorial causes for lacking drugs within health care facilities. Moreover, community members need to be empowered and protected in order to report cases of hidden purchases to the authorities.

To what extent drug theft, shortages, and insufficient infrastructure were responsible for lacking drugs in health care facilities remains unclear. Interdependencies of these different factors appear to be likely. Yet, strengthening drug provision in Malawi´s health care facilities and preventing theft and purchase of medicals require political will and financial resources.

Patient-provider engagement – client feedback and result-based financing

In order to increase satisfaction among health care users, it is critical to provide health care services that meet people´s expectations and needs. Client feedback on health service delivery provides an opportunity for a facility´s management to monitor satisfaction and undertake necessary actions (MoH Malawi and ICF International, 2014). Generally, in 2014 only 8 % of all health care facilities in Malawi had a feedback system in place. This system includes suggestion boxes, client survey forms, official meetings with community leaders, or informal discussions with clients. Hospitals (19 %) were more likely than other types of facilities to collect and review client opinion, and to provide feedback (MoH Malawi and ICF International, 2014). Still, the number of facilities that undertake client feedback is very low.

As a result of client feedback systems, performance of employees and the health care facility in general can be evaluated, while satisfaction among patients can be monitored. On the one hand, this practice could empower individual patients and communities to express voice and help health professionals to understand their needs. Thus, patients are not just consumers but proactive participants in designing and creating health care services according to their needs, while decreasing power imbalances. On the other hand, management could set financial incentives for their employees according to their evaluated performance. Consequently, health care workers would be motivated to deliver health care services of good quality and quantity, while attitudes and communication between providers and patients could be monitored, goals could be set, and performance could be re-evaluated.

Still, the salary of health workers cannot depend predominantly on these evaluations and client feedback systems. Whether potential frustration and negative feedback of patients results mainly due to systemic shortcomings or due to inacceptable attitudes of health

workers, might be hard to differentiate. Appropriate attitudes and positive client feedback could result in a bonus and increase employees´ wages, rather than decreasing them in case of negative evaluations. By addressing health workers´ motivation and improving the patient-provider relationship, trust in health care services and in the competence of providers can be enhanced. Consequently, productive interactions may result, which enable people to take appropriate actions regarding their own health. Involving individuals and local communities in these implementations, can evolve local accountability and foster improvements (Ekman et al., 2008; Pathmanathan et al., 2003).
Implementation of feedback systems can be one step to foster respectful and appropriate communication. However, this practice needs political will for implementation, as it requires resources in form of time and personnel.

Another result-based financing scheme rewards health worker for delivery of certain outcomes, in order to improve health outcomes in quantity and quality (Musgrove, 2011). By directing financial incentives to service providers on top of their mostly low salary, health workers become motivated to deliver health services of good quality and quantity, which benefits the patient (Musgrove, 2011). In order to assure compliance of health care suppliers and their receival of incentives, provision of services would have to follow explicit protocols or targets within a system of inspection and verification of results. The incentives must be defined in a way that everybody can tell, whether the generated outcome was achieved or not (Musgrove, 2011). However, depending on the type of service, it can be very complicated to follow up with and judge these results, especially concerning the quality of outcomes.

According to Musgrove (2011), one way of paying for results is to pay providers for immunisation of children. Those results are beneficial concerning vaccine efficiency, including disease incidence, mortality, and morbidity. More complicated is payment for outputs that are following a specific protocol, in which extra payment arises with any additional step within the procedure. Payment for prenatal care and delivery, for example, can be higher when the mother´s first consultation arises within the first half of a pregnancy, when receiving a certain number of consultations, when delivering the baby in a facility, and when the baby has an adequate birth weight (Musgrove, 2011). Additionally, delivering promotive and preventive services, such as birth control, can arise further

reimbursements.

It can be argued that an incentive for supplier-induced demand occurs since the recruitment of potential patients is reinforced. However, within this setting it is desired to reinforce people´s health-seeking behaviour and their entry into the health care system (Musgrove, 2011).

In 2013, result-based financing for neonatal and maternal health was introduced across four districts in Malawi in order to improve the quality of facility-based health care services (Brenner et al., 2017). This initiative combined financial rewards for the district health management and maternal care providers upon meeting predefined performance goals. While incentives for facilities were mostly tied to clinical and general service management, incentives for the district health management tackled equipment maintenance and drug supply across the district´s facilities. 30 % of received payments were reinvested for further improvements at district and facility level, whereas the rest was directly shared as bonuses among health personnel (Brenner et al., 2017).

Within evaluation of this scheme, Brenner et al. (2017) found an overall positive impact on equipment maintenance and drug stocks, resulting from the incentives through the scheme. Involving the district level in the scheme, not only improved supply management at the facilities, but possibly produced additional benefits to control health care facilities (Brenner et al., 2017). Therefore, directing incentives to different stakeholders can affect health service quality positively.

Statistically significant positive effects were found for a few drugs and for most of the essential equipment items that are related to routine obstetric care and vital sign recording (Brenner et al., 2017). However, effects on clinical performance were various and only few items related to emergency equipment showed a significant positive effect. Some drugs remained unchanged or even declined. This either indicates increased usage or worsening of central drug shortages. A detailed investigation might provide further understanding. Although less apparent, findings of the study may indicate the potential of result-based financing to improve routine care standards and clinical guidelines (Brenner et al., 2017).

Generalised evidence on the effect of result-based financing schemes remain limited (Brenner at el., 2017). Different schemes focus on the clinical aspect of quality or service

utilisation, but do not take structural aspects into account. As shown by a three-year performance-based financing scheme in Tanzania, health workers at facility level reported higher levels of motivation (Canavan and Swai, 2008). Yet, incentives to improve quality of health care services were not able to overcome systemic shortcomings and inadequate supply chain structures. Resources and staff training were an essential component of a performance-based financing system, which requires further financial and technical support (Canavan and Swai, 2008).

3.8 Limitations and constraints

This study, the approach to the research topic, and its evaluation were limited by various factors. Generally, the researcher intended to meet ethical requirements within the whole investigation process and tried to apply the ten imperatives of field research developed by Girtler (2011). Giving recommendations on good behaviour during field research, these imperatives include the adaption to the lives and rules of research subjects, openness and friendliness towards them, as well as knowledge regarding the people´s cultural background and geography (Girtler, 2011; Anthonj, 2012). Moreover, Girtler (2011) suggests self-criticism of the investigator and personal interest in the research subjects rather than observing them just as providers of data. During field research, the investigator should evaluate different participants and situations without judging observations made, while contributing to a trustful atmosphere and maintaining a good physical condition (Anthonj, 2012; Girtler, 2011).

However, due to the investigator´s different cultural background, limitations might have arisen, while attempting to fulfil Girtler´s imperatives (2011). Despite extensive preparation prior to the data collection onsite, the researcher was still different and foreign (Anthonj, 2012). Therefore, cultural aspects and context-specific contents regarding access to health care services might not have been identified. Furthermore, not speaking the common language Chichewa might have caused a loss of information or misinterpretation during the research and translation process.

As pointed out in chapter 2.4.2, the questionnaire-based interviews were conducted in Chichewa, while the questionnaire was drafted and the answers were noted in English. Before data collection, the questionnaire was translated by a teacher of a secondary school. In order to reduce language distortions to a minimum, the translation has been

cross-checked by the study assistant.

Further potential translation bias was rooted in the FGDs among villagers, which were held in Chichewa and translated into English by the study assistant. As a simultaneous translation of the discussion was not practicable and hindered the flow of the discussions, the researcher had to give the discussions into the assistant´s hands and trust in his competence. By extensive briefing and training of the research partner prior to the data collection, this potential limitation was reduced as much as possible. Yet, translations of the discussions might have caused a loss of context-specific expressions and verbalizations.

The semi-structured interviews with health care workers and the group discussion with the hospital´s management were conducted in English by the researcher. Therefore, no translation bias occurred. Within the interviews, health professionals had the chance to touch upon topics and problems without the restriction to predefined responses. This helped to gain in-depth information, personal experiences, and a deeper understanding of the first identified findings of the survey and the FGDs among villagers. Yet, the interviewees did not speak in their common language, which might have been restricting when trying to describe cultural-specific terminologies.

Regarding the approach to investigate the research topic, the framework for this study (see chapter 2.3) implied a concept of access to health care services. The researcher had a pre-existing theory before the start of the field research based on literature. According to Girtler (2011), qualitative social research requires the willingness and openness to change pre-existing conceptions regarding a research topic. Rather than just testing theories by operationalising existing hypotheses, the investigator needs to be open for new perspectives and depict social realities impartially (Girtler, 2011).

These requirements have just been met with constraints. While the questionnaire-based survey was used as an operational instrument to test the pre-existing theory, qualitative data collection aimed to draw a wide-ranging picture and to gain a better understanding of the realities of individual actors and groups within Phalombe´s communities. The standardised questionnaires reduced the complexity of contexts by using closed questions and pre-defined answers. The qualitative approach aimed to reveal interdependencies and reconstruct causalities (Kühn, 2018).

Despite Girtler´s suggestions to be ready to change pre-existing perspectives within

qualitative research (2011), the field research of this study has not contributed to develop new theories regarding the concept of access. Empirical quantitative and qualitative data was ordered, categorised, and coded deductively according to the six dimensions arising from the framework. Being focused on the study´s framework and its implied dimensions might have been limiting factors to gain new theories. Rather than adjusting the framework of this study, the qualitative approach explained the results of the survey and verified pre-existing knowledge from the literature. Yet, access and barriers to health care services, and the six dimensions of access have been investigated widely within various studies in different settings. Therefore, the investigator found it reasonable to apply this pre-existing knowledge to her research in Phalombe district.

Further limitations of the study arose due to its sample sizes. The questionnaire-based survey included 75 participants, which is a limited number to find clusters and interdependencies between the results of the questionnaire and the demographic data of the participants. As described in the framework for this study, facilitators need to overweigh individual barriers to enable utilisation. Therefore, only certain groups of people seek for and receive health care services within formal facilities. Moreover, the majority of patients that sought treatment in the hospital had to cover occurring expenses themselves. Thus, the share of people that was able to access services within the hospital was even lower compared to governmental facilities.

People that needed health care services but were either not well-informed or not able to access the private facility due to other barriers, were not included in the survey. Consequently, perceived barriers of this vulnerable group could not be gathered to provide quantitative data. However, by targeting patients of the HFMH, the researcher aimed to disclose barriers, which hindered them to get treated in a governmental facility. Revealing their facilitators and enabling factors for seeking health care were crucial preconditions to formulate strategies to improve access and utilisation.

As described within chapter 2.4.3, the FGDs were conducted in three villages and included six to eight participants each, while the village headmen picked the participants of the discussions. This procedure is contradictory to the principle of simple random sampling as the headmen might have picked participants regarding their opinion or his sympathy for them. All villagers belonged to the rural poor population, posing another potential

research limitation to the study. Furthermore, FGDs as data collection tools bear constraints. By carrying out FGDs among villagers, the investigator tried to disclose people´s attitudes and opinions within a setting, where personal experiences are shared and communicated on a regular basis (Flick, 2016). However, as discussions took place within a group, where participants lived with each other, the willingness to talk about private experiences and own opinions might have been limited. Especially shy participants might have felt hindered to take part in the discussions and talk openly.

One FGD with the hospital´s management and two in-depth interviews among health care workers appear to be a low number to provide sufficient information regarding health professionals´ views and challenges. Again, the selection of interviewees was contradictory to random sampling procedures, as the investigator selected staff based on personal impressions concerning their willingness to share information. Thus, the subjective choice of the participants for qualitative data collection might have influenced the outcomes of the study.

Yet, by choosing a mix of different data collection tools and including various stakeholders, different perspectives and views could be gathered. Despite the relatively small sample sizes and the inconsistent sampling procedures within the individual data collection methods, a wide-ranging picture was gained. This provided a better understanding about the realities of individual actors and groups within Phalombe´s communities and health professionals. Still, subjective interpretations and conscious or unconscious assumptions, arising from the cultural background and norms of the researcher (Anthonj, 2012), might have influenced the processes of data collection, analysis, and evaluation. Additionally, interview situations and discussions might have induced participants to try to fulfil the investigator´s assumed expectations (Anthonj, 2012). When interpreting qualitative data, it has to be considered that views and opinions are related to the discussion´s context and are not necessarily generalisable or representative on the overall situation of people in Phalombe district or whole Malawi (Lamnek, 2010). By triangulating the findings of the different data collection tools with each other and the literature, this limitation has been reduced to a minimum. As findings were generally consistent within the different group discussions, interviews, and the literature, they appear to be characteristic for a larger number of rural communities in Malawi.

4. Conclusions

Providing comprehensive access to quality health care services is one important step towards reaching the United Nations´ SDGs (UN, 2015). This research aimed to create understanding of perceived barriers to health care services in Malawi´s rural district Phalombe. In order to overcome these hardships, objectives of the study included the identification of people´s vulnerabilities, reasons, and enabling factors for the visit of a health care facility.

Although the barriers of the six dimensions: awareness, spatial accessibility, affordability, availability, accommodation, and acceptability, have been presented and discussed separately, they are strongly interrelated and interwoven. It cannot be stated to what extent barriers of one dimension overweighed the others. In fact, people´s health-seeking behaviour and access depend on their individual vulnerability context and on the balance of barriers within all of the dimensions. Yet, severe hardships in just one dimension can prevent treatment-seeking and result into non-utilisation.

Findings of the studies indicated that lacking awareness regarding people´s own health status, wrong information about health-related topics, and cultural beliefs, are hampering factors to access formal health care services. Remoteness and a lack of public transportation become an issue when it comes to health-seeking processes, especially for old and vulnerable people. The more remote an area is, the bigger are the hardships concerning spatial accessibility and the financial burden to find transport to a health care facility. Additional barriers are related to the financial vulnerability of the population. Expenses for services within private facilities or the informal sector pose major problems for the economically underprivileged majority. However, findings indicate that even consumers in low-income households are willing to pay fees for services of higher quality, rather than using subsidised public care that is less or not effective.

Regarding the availability of resources, lacking personnel, insufficient diagnostic equipment, and missing drugs, were just few of the reported issues. In cases of emergency, a malfunctioning referral system and insufficient numbers of ambulances hinder adequate service provision. Furthermore, basic amenities are widely missing to carry out certain procedures, while lacking beds and limited capacities hinder the accommodation of patients. Due to these limited resources, community members are

lacking trust in facility-based health care and turn into non-users of formal services. Moreover, poor communication skills, spiteful language, and poor attitudes of health personnel, may poison the patient-provider engagement.

Within the findings and discussion of this research, several interventions were introduced. Community-based programs, such as comprehensive outreach clinics and community health workers, were found to be helpful to address various issues. Generally, community health workers can have an impact on human capital, as they empower and mobilise communities and raise education and awareness. By building a bridge to health care facilities, community health workers can increase people´s acceptability towards facility-based health care.

Additionally, community-based interventions can help to reduce inequities, by delivering preventive and basic curative services to underserved populations. Hardships occurring due to low densities of health care facilities, lacking means, and high cost for transportation, can be tackled if people are able to receive basic health care, where they live and work. Existing outreach programs need to be broadened and provide services to patients of all ages and sexes, instead of treating just pregnant women and children under five years.

Regarding the organisation of health care facilities, community participation in the management can reduce power gaps and increase trust in facility-based services. Rather than being a passive consumer, community members can turn into active stakeholders and shape service delivery. Yet, this requires patients´ ability and willingness to enter the dialogue with health care providers, in order to balance current power constellations. Despite the potential of community-based programs in increasing access to health care, they cannot replace, but only complement, facility-based services. Even more, resources in terms of manpower, equipment, supplies, and supervision are required to carry out community-oriented health care. Due to limited economic development of Phalombe district and whole Malawi, overcoming these resource-related gaps is a complex issue.

Further interventions need to tackle the management of health personnel. The concept of result-based financing of professionals bears the potential to build quality standards for services, while decreasing incentives for drug theft and addressing staff´s motivation.

Generally, implementing opportunities for promotion and including staff into the decision-

making processes of facilities can tackle dissatisfaction regarding their working environment and have a positive effect on their behaviour towards patients. Appropriate numbers of staff reduce workloads and stress levels, which have a positive effect on working environments and attitudes. Acceptable staffing numbers can also increase service provision, raise patients´ trust regarding service adequacy, and decrease long waiting times.

In order to secure the readiness of resources and encourage patients to seek formal health care, shortages need to be tackled. By allocating more budget to equipment and drug provision, by addressing weak logistics, and by fighting theft of drugs and equipment, the lack of resources could be decreased. Standards for referrals and emergencies have to be formulated to ensure service provision in a timely manner.

Generally, interventions that aim to strengthen the supply-side of access to health care services need to be implemented at district level, to establish the most suitable geographical and structural situation for accessing services. To strengthen district planning and management skills, support in form of training and supervision by national governments and international donors is needed (Ekman et al., 2008). The MoH is responsible for collecting national data to identify vulnerable groups, while primary health care services should be featured in terms of budgetary allocation. Furthermore, district health planners will have to adopt a systematic implementation of interventions, including data collection, monitoring of activities, evaluation, and research (Ekman et al., 2008).

However, the interventions presented do not tackle all aspects of barriers within each dimension and tend to be successful in specific contexts only. Although being presented individually, their combination, their particular configuration, and their execution, determine the level of success (Jacobs et al., 2012; Peters et al., 2008). Further studies need to evaluate factors, which influence effectiveness and efficiency of the presented interventions and identify the combination that produces the optimum result.

Overcoming access-related gaps within the public health sector is a complex issue, as many of the barriers and supply-side gaps root in the low economic development of the districts and the country (Abiiro et al., 2014; Evans et al., 2012). Managing these access-related hardships in rural Malawi requires economic empowerment, increased international involvement, and mechanisms of allocating further budget for the health care

sector (Abiiro et al., 2014). Yet, addressing several vulnerabilities and barriers is beyond the scope of the health care sector. Improving outcomes for the most vulnerable will require equity as a core principle. Thus, a broad approach to primary health care services, education, legal and social protection, women´s empowerment, water and sanitation, transport, and communication, are essential (Ekman et al., 2008).

This research was conducted in only one rural district in Malawi and sampled participants of very few communities and facilities. As perceived barriers and gaps in health systems are to a large extent context-specific (Abiiro et al., 2014), findings cannot automatically be generalised to other contexts and populations. Yet, it can be assumed that a lot of the study´s findings can be transferred to other rural areas of Malawi and Sub-Saharan Africa, where similar health system characteristics exist.

In order to improve access to health care services, it is crucial to put more effort into further research. Even though several research gaps still remain, this research contributed to an improved understanding of vulnerabilities, perceived access, and barriers to health care services in rural regions in Malawi.

5. Abstract

Background

In its Vision 2020, the Malawi Sustainable Development Network Programme (SDNP) acknowledges that lacking access to quality health care services is one of the most serious problems of Malawi´s health sector. In order to achieve better health, SDNP aims to provide comprehensive access to health care services at each level of the delivery system. Identifying barriers and facilitators, which influence sick people´s decision-making processes for seeking health care, can be a first step to improve access to these services. On that basis, also the health status of a population can be tackled.

One rural area that struggles with the provision of access to health care is the district Phalombe in Malawi´s Southern Region. Being the only district hospital in Phalombe, the private Holy Family Mission Hospital (HFMH) represents the only referral facility for the primary level of the district, while being responsible for its 355,300 inhabitants. Due to limited services and a high burden of disease, the access and use of the health care system seem to be a big issue in the rural district Phalombe.

In Sub-Saharan African countries, barriers have been found to include lacking information regarding when, how, and where to use health care services (awareness), high expenditures for services (affordability), lack of transport means, and high costs of transportation to get to the facilities (accessibility). Insufficient hours of operation and facility structures (accommodation), patients´ perceived inappropriateness of service provision (acceptability), lacking availability of quality services, understaffed health facilities, inadequate equipment, and insufficient drugs (availability) are further known barriers for accessing health care services.

Objectives

So far, little research focussed on the level of access in Phalombe district or rural Malawi as such. The researcher assumes that people in settings like Phalombe can face hardships regarding access to health care services, when falling ill and deciding to seek health care. This research shall create an understanding of the degree of access, vulnerabilities, barriers to health care services, and health-seeking behaviour in rural regions in Malawi by reporting perspectives of health personnel and community members,

who are rarely given the chance to contribute towards health policy. In order to overcome hardships, this study aimed to reveal the patients´ level of information regarding service provision in their district, as well as strategies and enabling factors for the visit of a health care facility.

The results of this study can contribute to reaching the SDGs of the United Nations and Malawi´s Ministry of Health (MoH) in order to increase access to health care and raise the level of the populations´ health status.

Material and Methods

Empirical research was carried out in Phalombe from October to November 2016. A mixed-methods approach was applied in order to examine the degree of access as well as patients´ perceptions and health-seeking behaviour:

- Quantitative research: Questionnaire-based interviews were carried out among patients and accompanying people of the HFMH. The study population consisted of 75 participants that were selected by random sampling.
- Qualitative research: To gain a better understanding of the population´s health seeking behaviour, focus group discussions (FGD) were conducted in three villages of Phalombe district. Each session had six to eight participants.

  Two semi-structured interviews with health care workers and an FGD with the hospital´s management provided insight from the point of view of health care professionals.

Data was analysed according to the six dimensions of access and to possible correlations of travelled distances, the means of transport, and expenditures for transportation. Moreover, the utilisation of health care services, facility-related factors, and decision-influencing aspects were analysed. Findings of the questionnaires, the FGDs, and of the in-depth interviews were ordered, categorised, and coded deductively.

Results

Severe hardships regarding the dimensions awareness, spatial accessibility, affordability, availability, accommodation, and acceptability were revealed. Cultural misbeliefs and

practices, lacking awareness concerning the individual´s health status, and the level of information regarding health care services prevented people to seek health care services (awareness). Communities faced barriers to access health care within formal facilities due to long distances to facilities, lacking means of transport, and high cost for transportation (accessibility). Direct and indirect costs of consultation and treatment were found to be too high for many community members, who often depended on social networks to cover occurring costs (affordability). However, findings indicate that even consumers in low-income households are willing to pay fees for services of higher quality, rather than using subsidised public care that is less or not effective.

Moreover, lacking resources in health facilities such as health personnel, drugs, equipment, and services, as well as inadequate health infrastructure regarding the referral system, emergency transports, and outreach programs were described to impact the decision-making process (availability). Low capacities for admission, lacking basic amenities, long waiting hours, and insufficient opening hours were described as a hindering factor to receive services (accommodation). Poor-patient provider engagement and limited trust in the competencies of personnel and formal facilities turned some community members into non-users of formal health care (acceptability).

Discussion and Conclusions

In order to tackle identified barriers of accessing health care services within Phalombe, people´s vulnerabilities and gaps of the supply-side need to be addressed. Interventions, which were found to be helpful to diminish various hardships, include community-based programs, such as comprehensive outreach clinics and community health workers to empower communities and to raise education and awareness. Community-based interventions can help to reduce inequities by delivering preventive and basic curative services to underserved populations. Barriers due to low densities of facilities and lacking transportation can be tackled when people receive basic health care, where they live and work. Furthermore, community participation in the management of health care facilities can reduce power gaps and increase trust in facility-based services. However, community-based programs cannot replace, but only complement facility-based services.

Further interventions need to tackle the management of health personnel. Sufficient numbers of staff reduce workloads and stress levels, bearing a positive effect on working environments and attitudes. Appropriate staffing numbers can also increase service provision, patients´ trust regarding service adequacy, and decrease long waiting times. Implementing opportunities for promotion and including staff into the decision-making processes of facilities can tackle dissatisfaction regarding working environments, while posing a positive effect on their motivation and behaviour towards patients. To secure the readiness of resources and encourage patients to seek formal health care, shortages need to be tackled. Standards for referrals and emergencies have to be formulated to ensure service provision in a timely manner. Generally, further studies need to evaluate factors, which influence effectiveness and efficiency of the presented interventions and identify the combination that produces the optimum result.

However, overcoming access-related gaps within the health care sector is a complex issue as many of the supply-side gaps are rooted in the limited economic development of the districts and the country. Managing these access-related hardships in rural Malawi, requires economic empowerment, increased international involvement, and higher budget allocation for the health care sector. Yet, addressing several vulnerabilities is beyond the scope of the health care sector. To improve outcomes for the most vulnerable, equity needs to become a core principle. Therefore, a broad approach to primary health care, women´s empowerment, legal and social protection, water and sanitation, and education are essential.

6. Figures

7. Tables

8. References

Abel-Smith B, Rawal P. Can the poor afford "free" health services? A case study of Tanzania. Health Policy Plan 1992; 7: 329–341

Abiiro GA, Mbera GB, Allegri M. Gaps in Universal Health Coverage in Malawi. A Qualitative Study in Rural Communities. BMC Health Serv Res 2014; 14. Available at: https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-14-234 (last access: 26.05.2020)

Aday LA, Andersen R. A framework for the study of access to medical care. Health Serv Res 1974; 9: 208–220

Aday LA, Andersen R, Fleming GV. Health care in the US. Equitable for whom? Beverly Hills, USA: SAGE Publications, 1980

African Community Access Programme, 2011: Performance Review of Design Standards and Technical Specifications for Low Volume Sealed Roads in Malawi. Available at: http://www.research4cap.org/Library/Pinard-Malawi-2011-LVR+Design+Standards+Review-AFCAPmal016-v111015.pdf (last access: 26.01.2017)

Agha S. The determinants of infant mortality in Pakistan. Soc Sci Med 2000; 51: 199–208

Akin JS, Guilkey DK, Hutchinson PL, McIntosh MT. Price elasticities of demand for curative health care with control for sample selectivity on endogenous illness. An analysis for Sri Lanka. Health Econ 1998; 7: 509–531

Alberti H, Boudriga N, Nabli M. Primary Care Management of Diabetes in a Low/Middle Income Country. A Multi-Method, Qualitative Study of Barriers and Facilitators to Care. BMC Fam Pract 2007; 8. Available at: https://bmcfampract.biomedcentral.com/articles/10.1186/1471-2296-8-63 (last access: 26.05.2020)

Alderman H, Lavy V. Household responses to public health services. cost and quality tradeoffs. The World Bank research observer 1996; 11: 3–22. Available at: http://documents.worldbank.org/curated/en/698511468337284309/pdf/765510JRN0WBRO00Box374378B00PUBLIC0.pdf (last access: 26.05.2020)

Aneni E, de Beer IH, Hanson L, Rijnen B, Brenan AT, Feeley FG. Mobile primary healthcare services and health outcomes of children in rural Namibia. Rural and Remote Health 2013; 13. Available at: https://www.rrh.org.au/journal/article/2380 (last access: 26.04.2020)

Anthonj C. Impact of flooding on people living with HIV in Ohangwena region, Namibia. Diploma thesis. Rheinische Friedrich-Wilhelms-Universität Bonn, Geographisches Institut; 2012

Anthonj C, Nkongolo OT, Schmitz P, Hango JN, Kistemann T. The impact of flooding on people living with HIV. A case study from the Ohangwena Region, Namibia. Global Health Action 2015; 8. Available at: https://www.researchgate.net/publication/275645516_The_impact_of_flooding_on_people_living_with_HIV_A_case_study_from_the_Ohangwena_Region_Namibia (last access: 26.05.2020)

Arcury TA, Preisser JS, Gesler WM, Powers JM. Access to Transportation and Health Care Utilization in a Rural Region. J. Rural Health 2005; 21: 31–38

Ayeni B, Rushton G, McNulty ML. Improving the geographical accessibility of health care in rural areas: a Nigerian case study. Soc Sci Med 1987; 25: 1083–1094

Bang AT, Bang RA, Baitule SB, Reddy MH, Deshmukh MD. Effect of home-based neonatal care and management of sepsis on neonatal mortality. field trial in rural India. Lancet 1999; 354: 1955–1961

Bassett IV, Regan S, Luthuli P, Mbonambi H, Bearnot B, Pendleton A, Robine M, Mukuvisi D, Thulare H, Walensky RP, Freedberg KA, Losina E, Mhlongo B. Linkage to care following community-based mobile HIV testing compared with clinic-based testing in Umlazi Township, Durban, South Africa. HIV Med 2014; 15: 367–372

Bundesamt für Kartographie und Geodäsie (BKG), 2019: Bundesamt für Kartographie und Geodäsie. Available at: www.bkg.bund.de (last access: 23.12.2019)

Black M, Ebener S, Aguilar PN, Vidaurre M, El Morjani Z, 2004. Using GIS to Measure Physical Accessibility to Health Care. Available at: https://www.researchgate.net/publication/228728167_Using_GIS_to_measure_physical_accessibility_to_health_care (last access: 26.04.2020)

Bortz J, Döring N. Forschungsmethoden und Evaluation für Human- und Sozialwissenschaftler. Heidelberg: Springer, 2006

Bradley S, Kamwendo F, Chipeta E, Chimwaza W, Pinho H, McAuliffe E. Too few staff, too many patients. A qualitative study of the impact on obstetric care providers and on quality of care in Malawi. BMC Pregnancy Childbirth 2015; 15. Available at: https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-015-0492-5 (last access: 26.05.2020)

Brems C, Johnson ME, Warner TD, Weiss LR. Barriers to healthcare as reported by rural and urban interprofessional providers. J Interprof Care 2006; 20: 105–118

Brenner S, Wilhelm D, Lohmann J, Kambala C, Chinkhumba J. Implementation research to improve quality of maternal and newborn health care, Malawi. Bull World Health Organ 2017; 95: 491–502

Buor D. Analysing the primacy of distance in the utilization of health services in the Ahafo-Ano South district, Ghana. Int J Health Plann Manage 2003; 18: 293–311

Butsch C. Zugang zu Gesundheitsdienstleistungen. Barrieren und Anreize in Pune, Indien. Stuttgart: Franz Steiner, 2011

Canavan A, Swai G, 2008: Payment for Performance (P4P) Evaluation. 2008 Tanzania Country Report for Cordaid. Available at: http://www.bibalex.org/Search4Dev/files/305432/135295.pdf (last access: 26.05.2020)

Chimwaza W, Chipeta E, Ngwira A, Kamwendo F, Taulo F, Bradley S, McAuliffe E. What makes staff consider leaving the health service in Malawi? Human Resources for Health 2014; 12. Available at: https://human-resources-health.biomedcentral.com/articles/10.1186/1478-4491-12-17 (last access: 26.05.2020)

Citypopulation, 2016: Population Statistics for Countries, Administrative Areas, Cities and Agglomerations – Interactive Maps and Charts. Available at: http://www.citypopulation.de/Malawi.html (last access: 26.04.2016)

Commonwealth Local Government Forum (CLGF), 2017: The local government system in Malawi. Available at: http://www.clgf.org.uk/default/assets/File/Country_profiles/Malawi.pdf (last access: 24.01.2017)

Daniels N. Just Health Care. Studies in Philosophy and Health Policy. Cambridge: Cambridge University Press, 1985

Denzin NK. The research act. A theoretical introduction to sociological methods. New York: McGraw-Hill, 1978

Department for International Development (DFID), 1999: Sustainable Livelihoods Guidance Sheets. Available at: https://www.livelihoodscentre.org/documents/114097690/114438878/Sustainable+livelihoods+guidance+sheets.pdf/594e5ea6-99a9-2a4e-f288-cbb4ae4bea8b?t=1569512091877 (last access: 28.05.2020)

Department of Disaster Management Affairs Malawi, 2015: Floods. Available at: http://reliefweb.int/sites/reliefweb.int/files/resources/Malawi%20Floods-DoDMA-UNRCO%20Situation%20Report_n7-06Feb2015.pdf (last access: 01.02.2017)

Dhillon RS, Bonds MH, Fraden M, Ndahio D, Ruxin J. The impact of reducing financial barriers on utilisation of a primary health care facility in Rwanda. Glob Public Health 2012; 7: 71–86

Donabedian A. Models for Organizing the Delivery of Personal Health Care Services and Criteria for Evaluating Them. Milbank Q 1972; 50: 103–154

Eide AH, Mannan H, Khogali M, van Rooy G, Swartz L, Munthali A, Hem KG, MacLachlan M, Dyrstad K. Perceived Barriers for Accessing Health Services among Individuals with Disability in Four African Countries. PLoS ONE 2015; 10. Available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0125915 (last access: 26.04.2020)

Ekman B, Pathmanathan I, Liljestrand J. Integrating health interventions for women, newborn babies, and children. a framework for action. Lancet 2008; 372: 990–1000

Embassy of the Republic of Malawi in the United States, 2017: Tourism. Available at: http://www.malawiembassy-dc.org/page/culture (last access: 26.04.2020)

Ensor T, Cooper S. Overcoming barriers to health service access. influencing the demand side. Health Policy Plan 2004; 19: 69–79

Evans DB, Marten R, Etienne C. Universal Health Coverage Is a Development Issue. Lancet 2012; 380: 864–865

Field KS, Briggs DJ. Socio-economic and locational determinants of accessibility and utilization of primary health-care. Health Soc Care Community 2001; 9: 294–308

Fisher E, Lazarus R, Asgary R. Attitudes and Perceptions Towards Access and Use of the Formal Healthcare Sector in Northern Malawi. Journal of Health Care for the Poor and Underserved 2017; 28: 1104–1115. Available at: http://muse.jhu.edu/article/666601#b10 (last access: 26.05.2020)

Flick U. Qualitative Sozialforschung. Reinbek bei Hamburg: Rowohlt Taschenbuch Verlag, 2016

Gage AJ. Barriers to the utilization of maternal health care in rural Mali. Soc Sci Med 2007; 65: 1666–1682

Gama EM, McPake B, Newlands D, 2013: The implication of contracting out health care services. Available at: http://mpra.ub.uni-muenchen.de/52980/ (last access: 26.04.2020)

Geoffroy E, Harries AD, Bissell K, Schell E, Bvumbwe A, Tayler-Smith K, Kizito W. Bringing care to the community. expanding access to health care in rural Malawi through mobile health clinics. Public Health Action 2014; 4: 252–258

Ginzelburg E. Regionalization & Health Policy. Washington D.C.: U.S. Government Printing Office, 1977

Gilson L. Acceptability, trust and equity. in: McIntyre D, Mooney G, eds. The Economics of Health Equity. Cambridge: Cambridge University Press, 2007: 124–148

Girtler R. Methoden der Feldforschung. Wien – Köln - Weimar: Böhlau, 2011

Glassman A, Duran D, Fleisher L, Singer D, Sturke R, Angeles G, Charles J, Emrey B, Gleason J, Mwebsa W, Saldana K, Yarrow K, Koblinsky M. Impact of Conditional Cash Transfers on Maternal and Newborn Health. J Health Popul Nutr 2013; 31: 48–66

Gopichandran V, Chetlapalli SK. Trust in the physician–patient relationship in developing healthcare settings. a quantitative exploration. Indian Journal of Medical Ethics 2015; 12: 141–148. Available at: http://ijme.in/articles/trust-in-the-physician-patient-relationship-in-developing-healthcare-settings-a-quantitative-exploration/?galley=pdf (last access: 26.05.2020)

Goudge J, Gilson L, Russell S, Gumede T, Mills A. Affordability, availability and acceptability barriers to health care for the chronically ill. Longitudinal case studies from South Africa 2009; 9: 75. Available at: https://doi.org/10.1186/1472-6963-9-75 (last access: 26.04.2020)

Government of Malawi and Christian Health Association of Malawi, 2016: Service Level Agreement Guidelines 2016. Available at: http://www.gunneweg-imprint-consultants.nl/wp-content/uploads/2016/09/SLA-Guideline-2016-Final.pdf (last access: 30.01.2017)

Gulliford M, Figueroa-Munoz J, Morgan M, Hughes D, Gibson B, Beech R, Hudson M. What does 'access to health care' mean? J Health Serv Res Policy 2002; 7: 186–188

Haines A, Sanders D, Lehmann U, Rowe AK, Lawn JE, Jan S, Walker DG, Bhutta Z. Achieving child survival goals. Potential contribution of community health workers. Lancet 2007; 369: 2121–2131

HealthyPeople.gov, 2016: Access to Health Services. Available at: https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services (last access: 04.07.2016)

Hill CF, Powers BW, Jain SH, Bennet J, Vavasis A, Oriol NE. Mobile Health Clinics in the Era of Reform. Am J Manag Care 2014; 20: 261–264

Hjortsberg C. Why do the sick not utilise health care? The case of Zambia. Health Econ 2003; 12: 755–770

Institute of Medicine (IoM). Access to Health Care in America. Washington D.C.: The National Academies Press, 1993

Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing Access Barriers to Health Services. An Analytical Framework for Selecting Appropriate Interventions in Low-Income Asian Countries. Health Policy Plan 2012; 27: 288–300

Jacobs B, Price N. The Impact of the Introduction of User Fees at a District Hospital in Cambodia. Health Policy Plan 2004; 19: 310–321

Johnson PM, 2005: A Glossary of Political Economy Terms. Available at: http://www.auburn.edu/~johnspm/gloss/merit_good (last access: 04.07.2016)

Kambala C, Lohmann J, Mazalale J, Brenner S, de Allegri M, Muula AS, Sarker M. How do Malawian women rate the quality of maternal and newborn care? Experiences and perceptions of women in the central and southern regions. BMC Pregnancy Childbirth 2015; 15. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4537589/ (last access: 27.05.2020)

Khan AA, Bhardwaj SM. Access to health care. A conceptual framework and its relevance to health care planning. Eval. Health Prof 1994; 17: 60–76

Kiwanuka SN, Ekipara EK, Peterson S, Okui O, Rahman MH, Peters D, Paryio GW. Access to and utilisation of health services for the poor in Uganda. A systematic review of available evidence. Trans R Soc Trop Med Hyg 2008; 102: 1067–1074

Knowledge for Health (K4Health) Project, 2013: Malawi's Health Surveillance Agent Program. Available at: https://www.k4health.org/toolkits/country-experiences-chw-programs/malawis-health-surveillance-agent-program (last access: 24.10.2017)

Kok MC, Namakhoma I, Nyirenda L, Chikaphupha K, Broerse JEW, Dieleman M, Taegtmeyer M, Theobald S. Health surveillance assistants as intermediates between the community and health sector in Malawi. exploring how relationships influence performance. BMC Health Serv Res 2016; 16. Available at: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-016-1402-x (last access: 26.05.2020)

Kongnyuy EJ, Mlava G, van den Broek N. Criteria-based audit to improve a district referral system in Malawi. A pilot study. BMC Health Serv Res 2008; 8. Available at: https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-8-190 (last access: 27.05.2020)

Kühn T, Koschel KV. Gruppendiskussionen. Ein Praxis-Handbuch. Wiesbaden: Springer VS, 2018

Kumbani L, Bjune G, Chirwa E, Malata A, Odland JO. Why some women fail to give birth at health facilities. A qualitative study of women´s perception of perinatal care from rural Southern Malawi. Reprod Health 2013; 10. Available at: https://doi.org/10.1186/1742-4755-10-9 (last access: 26.04.2020)

Lagarde M, Palmer N. The impact of user fees on access to health services in low- and middle-income countries. Cochrane Database of Systematic Reviews 2011. Available at: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD009094/full#CD009094-sec1-0004 (last access: 27.05.2020)

Lamnek S. Qualitative Sozialforschung. Weinheim - Basel: Beltz Verlag, 2010

Lewis C. Improved access through regionalization. in: Ginzelburg E, ed. Regionalization & Health Policy. Washington D.C.: U.S. Government Printing Office, 1977: 71–84

Lishner D, Richardson M, Levine P, Patrick D. Access to primary health care among persons with disabilities in rural areas. A summary of the literature. J Rural Health 1996; 12: 45–53

MacKinney AC, Coburn AF, Lundblad JF, McBride TD, Mueller KJ, Watson SD. Access to Rural Health Care. A Literature Review and New Synthesis. RUPRI Health Panel 2014. Available at: http://www.rupri.org/wp-content/uploads/Access-to-Rural-Health-Care-A-Literature-Review-and-New-Synthesis.-RUPRI-Health-Panel.-August-2014-1.pdf (last access: 26.04.2020)

Malawi Ministry of Natural Resources, Energy and Environment, 2006: Climate of Malawi. Available at: http://www.metmalawi.com/climate/climate.php (last access: 23.01.2017)

Malawi Sustainable Development Network Programme, 2003: Malawi Vision 2020. Chapter 7 - Human resource development and management. Available at: http://www.sdnp.org.mw/malawi/vision-2020/chapter-7.htm#7.2.1 improving Health (last access: 28.05.2020)

MalawiMed e.V., 2016: Das Krankenhaus. Available at: http://www.malawimed.org/ (last access: 22.03.2016)

Mamdani M, Bangser M. Poor People's Experiences of Health Services in Tanzania. A Literature Review. Reprod. Health Matters 2004; 12: 138–153

Marie Stopes International, 2012: Vice President of Malawi praises Banja la Mtsogolo. Available at: https://mariestopes.org/news/vice-president-malawi-praises-banja-la-mtsogolo (last access: 21.04.2016)

MASDAP, Malawi Spatial Data Platform, 2019: A public platform for GIS Data to support development in Malawi. Available at: http://www.masdap.mw/ (last access: 23.12.2019)

Mayring P. Einführung in die qualitative Sozialforschung. Eine Anleitung zu qualitativem Denken. Weinheim: Beltz Verlag, 2016

McIntyre D, Mooney G. The Economics of Health Equity. Cambridge: Cambridge University Press, 2007

Ministry of Health Malawi, 2011: Malawi Health Sector Strategic Plan 2011 - 2016. Available at: http://www.nationalplanningcycles.org/sites/default/files/country_docs/Malawi/2_malawi_hssp_2011_-2016_final_document_1.pdf (last access: 23.04.2016)

Ministry of Health Malawi and Clinton Health Access Initiative, 2011: Health Workforce Optimization Analysis. Available at: https://www.k4health.org/sites/default/files/Malawi%20HRH%20Optimization%20Analysis%20Report.pdf (last access: 25.09.2017)

Ministry of Health Malawi and ICF International, 2014: Malawi Service Provision Assessment (MSPA) 2013-14. Available at: https://dhsprogram.com/pubs/pdf/SPA20/SPA20[Oct-7-2015].pdf (last access: 26.05.2020)

Munthali AC, Mannan H, MacLachlan M, Swartz L, Makupe CM, Chilimampunga C. Non-use of Formal Health Services in Malawi. Perceptions from Non-users. Malawi Med J 2014; 26: 126–132

Musgrove P, 2011: Financial and Other Rewards for Good Performance or Results. Available at: https://www.rbfhealth.org/sites/rbf/files/RBFglossarylongrevised_0.pdf (last access: 27.05.2020)

Nabyonga J, Desmet M, Karamagi H, Kadama PY, Omaswa FG, Walker O. Abolition of Cost-Sharing Is Pro-Poor. Evidence from Uganda. Health Policy Plan 2005; 20: 100–108

National Statistical Office Malawi, 2012: Integrated Household Survey 2010-2011. Household Socio-Economic Characteristics Report. Available at: http://www.nsomalawi.mw/images/stories/data_on_line/economics/ihs/IHS3/IHS3_Report.pdf (last access: 26.05.2020)

National Statistical Office Malawi, 2015: Statistical Yearbook. Available at: http://www.nsomalawi.mw/images/stories/data_on_line/general/yearbook/2015%20Statistical%20Yearbook.pdf (last access: 26.05.2020)

National Statistical Office Malawi and ICF Macro, 2011: Malawi Demographic and Health Survey 2010. Available at: https://dhsprogram.com/pubs/pdf/FR247/FR247.pdf (last access: 26.05.2020)

Natural Earth, 2019: Free vector and raster map data at 1:10m, 1:50m, and 1:110m scales. Available at: https://www.naturalearthdata.com (last access: 23.12.2019)

Noor AM, Alegana VA, Gething PW, Snow RW. A spatial national health facility database for public health sector planning in Kenya in 2008. Int J Health Geogr 2009; 8. Available at: https://ij-healthgeographics.biomedcentral.com/articles/10.1186/1476-072X-8-13 (last access: 26.05.2020)

Obrist B, Iteba N, Lengeler C, Makemba A, Mshana C, Nathan R, Alba S, Dillip A. Access to Health Care in Contexts of Livelihood Insecurity. A Framework for Analysis and Action. PLoS Med 2007; 4. Available at: https://doi.org/10.1371/journal.pmed.0040308 (last access: 26.05.2020)

Pathmanathan I, Liljestrand J, Martins JM, 2003: Investing in Maternal Health. Learning from Malaysia and Sri Lanka. Available at: http://documents.worldbank.org/curated/en/367761468760748311/pdf/259010REPLACEM10082135362401PUBLIC1.pdf (last access: 27.05.2020)

Pegurri E, Fox-Rushby JA, Walker D. The effects and costs of expanding the coverage of immunisation services in developing countries. systematic literature review. Vaccine 2005; 23: 1624–1635

Penchansky R, Thomas JW. The Concept of Access. Definition and Relationship to Consumer Satisfaction. Med Care 1981; 19: 127–140

Peters DH, Garg A, Bloom G, Walker DG, Brieger WR, Rahman MH. Poverty and Access to Health Care in Developing Countries. Ann N Y Acad Sci 2008; 1136. Available at: https://nyaspubs.onlinelibrary.wiley.com/doi/full/10.1196/annals.1425.011 (last access: 26.05.2020)

Pokhrel S, Allegri M, Gbangou A, Sauerborn R. Illness reporting and demand for medical care in rural Burkina Faso. Soc Sci Med 2010; 70: 1693–1700

Public Health Institute of Malawi, 2016: Institute Profile. Available at: http://www.ianphi.org/membercountries/memberinformation/malawi.html (last access: 21.03.2016)

Rasanathan K, Montesinos EV, Matheson D, Etienne C, Evans T. Primary health care and the social determinants of health. essential and complementary approaches for reducing inequities in health. J. Epidemiol. Community Health 2011; 65: 656–660

RCMRD GeoPortal, 2019: RCMRD GeoPortal. Available at: http://geoportal.rcmrd.org/ (last access: 23.12.2019)

Roads Authority Malawi, 2014: Road Network. Available at: http://www.ra.org.mw/?page_id=21 (last access: 26.05.2020)

Roberts J, Sealy D, Marshak HH, Manda-Taylor L, Gleason P, Mataya R. The Patient-Provider Relationship and Antenatal Care Uptake at Two Referral Hospitals in Malawi. A Qualitative Study. Malawi Med J 2015; 27: 145–150

Rosato M, Malamba F, Kunyenge B, Phiri T, Mwansambo C, Kazembe P, Costello A, Lewycka S. Strategies developed and implemented by women's groups to improve mother and infant health and reduce mortality in rural Malawi. Int. Health 2012; 4: 176–184

Sahn DE, Younger SD, Genicot G. The Demand for Health Care Services in Rural Tanzania. Oxford Bulletin of Economics & Statistics 2003; 65: 241–260

Sazawal S, Black RE. Effect of pneumonia case management on mortality in neonates, infants, and preschool children: a meta-analysis of community-based trials. Lancet 2003; 3: 547–556

Schwartz JB, Akin JS, Popkin BM. Price and Income Elasticities of Demand for Modern Health Care. The Case of Infant Delivery in the Philippines. World Bank Econ Rev 1988; 2: 49–76

Sekabaraga C, Diop F, Soucat A. Can Innovative Health Financing Policies Increase Access to MDG-related Services? Evidence from Rwanda. Health Policy Plan 2011; 26: 52–62

Smith S, Deveridge A, Berman J, Negin J, Mwambene N, Chingaipe E, Puchalski R, Lisa M, Martiniuk A. Task-shifting and prioritization. A situational analysis examining the role and experiences of community health workers in Malawi. Hum Resour Health 2014; 12. Available at: https://human-resources-health.biomedcentral.com/articles/10.1186/1478-4491-12-24 (last access: 27.05.2020)

Srivastava D, McGuire A. Patient access to health care and medicines across low-income countries. Soc Sci Med 2015; 133: 21–27

Swaddiwudhipong W, Chaovakiratipong C, Nguntra P, Mahasakpan P, Tatip Y, Boonmak C. A Mobile Unit. An Effective Service for Cervical Cancer Screening Among Rural Thai Women. Int J Epidemiol 1999; 28: 35-39

Tanser F, Gijsbertsen B, Herbst K. Modelling and Understanding Primary Health Care Accessibility and Utilization in Rural South Africa. An Exploration Using a Geographical Information System. Soc Sci Med 2006; 63: 691–705

The Global Fund, 2017: Investigation of Drug Theft in Malawi. Available at: https://www.theglobalfund.org/en/oig/updates/2017-08-17-investigation-of-drug-theft-in-malawi/ (last access: 20.04.2018)

Trania JF, Browne J, Kett M, Bah O, Morlai T, Bailey N, Groceb N. Access to Health Care, Reproductive Health and Disability. A Large Scale Survey in Sierra Leone. Soc Sci Med 2011; 73: 1477–1489

Ueberschär N, 2015: Spatial disparities in health center utilization in Huye District (Rwanda). Available at: https://edoc.hu-berlin.de/handle/18452/17948 (last access: 28.05.2020)

United Nations (UN), 2015: Transforming our world. Available at: https://sustainabledevelopment.un.org/post2015/transformingourworld (last access: 26.05.2020)

United Nations Development Program (UNDP), 2015: Human Development Report 2015. Available at: http://hdr.undp.org/en/countries/profiles/MWI (last access: 18.03.2016)

Westaway MS, Rheeder P, van Zyl DG, Seager JR. Interpersonal and organizational dimensions of patient satisfaction. The moderating effects of health status. Int J Qual Health Care 2003; 15: 337–344

Wilson A, Lissauer D, Thangaratinam S, Khan KS, MacArthur C, Coomarasamy A. A comparison of clinical officers with medical doctors on outcomes of caesarean section in the developing world. Meta-analysis of controlled studies. BMJ 2011; 342. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3272986/ (last access: 27.05.2020)

World Bank, 2016: Countries. Malawi. Available at: http://data.worldbank.org/country/malawi (last access: 25.01.2017)

World Bank, 2017: DataBank. Malawi. Available at: http://databank.worldbank.org/data/reports.aspx?source=2&country=MWI (last access: 31.01.2017)

World Bank Malawi Office, 2016. Malawi Economic Monitor. Emerging Stronger. Available at: http://documents.worldbank.org/curated/en/994621478685605311/pdf/109965-REVISED-PUBLIC-Malawi-Economic-Monitor-4-final-published-Nov-10-2016.pdf (last access: 27.05.2020)

World Health Organization (WHO), 2007: Community health workers: What do we know about them? The state of the evidence on programmes, activities, costs and impact on health outcomes of using community health workers. Available at: http://www.who.int/hrh/documents/community_health_workers_brief.pdf (last access: 27.05.2020)

World Health Organization (WHO), 2010: Monitoring the building blocks of health systems. A handbook of indicators and their measurement strategies. Available at: https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf (last access: 27.05.2020)

World Health Organization (WHO), 2014: Country cooperation strategy at a glance. Available at: http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_mwi_en.pdf (last access: 21.04.2016)

World Health Organization (WHO), 2015: World Health Statistcs 2015. Available at: http://apps.who.int/iris/bitstream/10665/170250/1/9789240694439_eng.pdf?ua=1&ua=1 (last access: 26.05.2020)

World Health Organization (WHO), 2016: Key Country Indicators. Available at: http://apps.who.int/gho/data/node.cco.latest?lang=en (last access: 23.01.2017)

World Health Organization (WHO) - Regional Office for Africa, 2009: WHO country cooperation strategy 2008-2013. Available at: http://www.who.int/countryfocus/cooperation_strategy/ccs_mwi_en.pdf (last access: 19.04.2016)

World Health Organization (WHO) - Regional Office for Africa, 2017: Country Profiles - Malawi. Available at: http://www.aho.afro.who.int/profiles_information/index.php/Malawi:Introduction_to_Country_Context (last access: 23.01.2017)

9. Appendix

9.1 Appendix A: Informed consent of participants

English

This research is done on behalf of a German medical student in the field of Public Health. It aims to create an understanding of the perceived barriers to health care services and to improve the accessibility of health care for the population. Therefore, I want to ask you some questions about your personal experience in the utilization of this hospital.

Your participation in this survey is voluntary but highly appreciated. You can choose not to answer any individual question or all of the questions. Refusing the participation or the answer of single questions will not affect you in any way. If you want to participate, please answer the questions sincerely. The participation does not result in any payment.

Whatever information you provide will be stored anonymously and will only be used for this study. All data will be kept strictly confidential and will not be given or shown to anybody.

At this time, do you want to ask me anything about the survey?

I have had the study explained to me. I have understood all that has been read / explained and had my questions answered satisfactorily. I understand that I can change my mind at any stage and it will not affect me in any way.

- ☐ Yes (please tick) I agree to take part in the study.
- ☐ Yes (please tick) I agree to the audio-recording of the interview.

Participant's signature or finger print_____ Date_____

Where the participant cannot read, a witness may observe consent process and sign below if needed.

_____ Date_____

What if you have questions about the study?

If you have any questions about the study, the dissemination of results, or if you have any issues concerning anything related to the study, you should contact the researcher,

Regina Ritter at +49176 624 615 32; s4reritt@uni-bonn.de

What if you have questions about your or your child´s rights as a research subject?

If you have questions about your our your child´s rights as a research participant, you should contact the head of Secretariat for the National Health Sciences Research Committee,

Dr. Damson Kathyola at 088-8-344-443

Chichewa

Kafukufukuyu ndiokhudza umoyo wa anthu ndipo akupangidwa mmalo mwa ophunzira wazachipatala wa ku German.
Cholinga cha kafukufukuyu ndikufuna kudziwa mavuto amene anthu amakumana nawo pamene akafuna kupeza chithandizo cha kuchipatala. Zotsatira zakafukufukuyu zizathandiza kupeza njira zothandizira anthu kupeza chithandizo mosavuta.
Chonco, ndikufuna ndikufunseni mafunso okhuza zimene mukudziwa kapena zimene mwakumanapo nazo pakagwiritsidwe nthcito ka chipatala chino.
Muli ndi ufulu kutenga nawo mbali mukafufukuyu ndipo mukuloredwa kuyankha mafunso amene mungakwinitse. Dziwani kuti simudzalandira cholowa china chilichonse pakutenga nawo mbali mukafufukuyu.
Mayankho anu adzasungidwa mwachisinsi ndikugwiritsdwa ntchio mukafukufuku ndi zolinga zakafukufuku yekhayu basi.

Muli ndi mafunso ena aliwonse akhudza kafukufukuyu?

Ndamvetseta cholinga chakafukufukuyi ndipo ndakhutira ndimayankho amafunso amaene ndinafunsa. Ndamvesetsa kuti ndikhonza kusintha maganizo kapena mayankho anga ndipo izi sizindisokoneza mwanjira ina iliyonse.

- Eya (Chongani) Ndikuvomereza kutenga nawo mbali mukafukufukuyu
- Eya (Chongani) Ndikuvomereza kuti mayankho anga ajambulidwe.

Poyenera kusayinira kapena kudinda ndi chala._____ Date_____

Pamene munthu wavomera kutenga gawo mukafukufukuyu koma sangathe kuwerenga payekha, mpoyenera pakhale mboni imene iwonerere ndikusayinira kapena kudinda ndi chala mmusimu.

_____ Date_____

<u>Kodi muli ndifunso liri lonse?</u>

Chonde ngati muli ndifunso pakafukufukuyu, kufalitsa kwa zotsatira zake, kapena chilichonse chokhudzana ndi kafukufukuyu, muli oloredwa kufunsa kwa wopangitsa kafukufukuyu.

Regina Ritter at +49176 624 615 32; s4reritt@uni-bonn.de

<u>Kodi muli ndifunso pa za ufulu wanu kapena ufulu wamwana wanu potenga nawo mbali mukafukufukuyu?</u>

Chonde ngati muli ndifunso lokhudza ufulu wanu kapena ufulu wamwana wanu potenga nawo mbali mukufukufukuyu, muli oloredwa kufunsa zambiri za izi kwa mkulu wa bungwe la National Health Sciences Research Committee,

Dr. Damson Kathyola at 088-8-344-443

9.2 Appendix B: Questionnaire - Data Collection Tool

English

Questions to your person

1. Sex — □ male □ female
2. Age — _____
3. Are you visiting the hospital as a patient or are you accompanying another person? — □ I am the patient □ I am accompanying a friend/ a relative □ I am accompanying my child
4. Which district/ village are you from? — _____
5. How many people live in your household? How many of them are children under 15? — _____
6. What is your profession? — □ Farmer □ sales and services □ public worker □ private sector □ student □ other
7. Did you attend school? — □ I attended some years of primary school □ I finished primary school □ I attended some years of secondary school □ I finished secondary school □ I am a student at a university □ I studied some years at a university □ I finished university
8. Ability to read; Please read the following sentence loudly: — □ yes □ no

   "I am taking part in a survey about access and perceived barriers to health care services."

Information about the visit of the hospital

9. How did you come here? — □ by foot □ by taxi □ by bike □ other _____
10. How many kilometers is it from your home to the hospital? — _____
11. How long did it take you to get here? (in minutes) — □ walkimg time: _____ □ waiting for (public) transportation: _____ □ travelling time: _____ □ else _____
12. How much did it cost you to get here (one way)? — _____
13. Is it possible for you to use the same path during the dry and the rainy season? — □ yes □ no

    13a) How would you get here during the rainy/ dry season?

    _____

14. Is the Holy Family Mission Hospital the closest health care facility to your home?

□ yes □ no

14a) What kind of facility is closer?

_____

14b) How much closer is it?

_____

14c) Why didn´t you go there?

_____

15. Which other facilities do you know for seeking health care?

_____

What kind of facilities are that?

_____

Where are they located?

_____

How do you rank this hospital compared to these other health facilities you know?

_____

16. What is the reason for your visit?

□ acute symptoms, urgent help needed

□ regular treatment □ else _____

□ I do not want to answer

16a When did the symptoms start?

_____

17. Did you see a traditional healer because of the same illness?

□ yes □ no

18. Did you go to another health facility because of the same illness?

□ yes □ no

18a) What kind? □ another hospital □ health center

□ maternity facility □ health post

□ dispensary □ other

18b) How many times? _____

18c) Why did you chose to come to this hospital?

_____

19. Did you come to this hospital before?

□ yes □ no, it is my first time

19a) Why? 19d) Why not?

_____ _____

19b) When?

_____

19c) How many times?

_____

20. How much will you have to pay for the treatment in the hospital?

_____

21. How much will you have to pay for medicine?

_____

22. Who will cover these costs?

□ my insurance □ funding □ myself

□ the government □ other □ I dont know

23. In the last 12 months, how many times has the access of health care services and medical care been a problem for you when you felt the urge to seek treatment?

□ never □ only few times

□ often □ (almost) every time

23a Why?

- □ could not afford the cost of the visit
- □ the journey to the hospital is dangerous
- □ could not afford the cost of transportation
- □ could not afford the cost of the visit
- □ lack of time due to other commitments
- □ did not know where to go
- □ no adequate services available
- □ because of faith/ belief
- □ inadequate drugs/ equipment
- □ standard of the health facility
- □ poor attitude of health worker
- □ disability
- □ I thought I was not sick enough
- □ opening hours did not meet my needs
- □ other _____

23b What was different this time? Which factors enabled you to seek treatment in the hospital today? _____

24. How true are the following statements?	very true	true	untrue	very untrue	I don´t know
This is the only health facility I know	□	□	□	□	□
This is the nearest health facility	□	□	□	□	□
This is the facility with the best access by public transport	□	□	□	□	□
This is the health facility which I can access the quickest way	□	□	□	□	□
This is the health facility which I can access the most comfortable way	□	□	□	□	□
This is the health facility which I can access the most affordable way	□	□	□	□	□
This health facility offers the service that I need	□	□	□	□	□
This hospital has skilled personnel	□	□	□	□	□
The hospital´s supply meets my needs	□	□	□	□	□
I know about the good service here	□	□	□	□	□
The opening hours of the hospital match with my schedule	□	□	□	□	□
The facility is clean and well kept	□	□	□	□	□
I feel welcome and well-cared for	□	□	□	□	□
I trust in the competence of the health care providers	□	□	□	□	□
I have been here before	□	□	□	□	□
People are friendly	□	□	□	□	□
It was recommended	□	□	□	□	□
They have electricity	□	□	□	□	□
They have water	□	□	□	□	□
There is a market in this area	□	□	□	□	□
Other reason: _____	□	□	□	□	□

Chichewa

Questions to your person

1. Mwamuna/mkazi — □ Mwamuna □ mkazi
2. Zaka zakubadwa — _____
3. Kodi mwabwera ngati odwala kapena mwaperekeza odwala? — □ ndikudwala □ ndaperekeza wachibale/nzanga □ ndaperekeza mwana wanga
4. Mwachokera boma ndinso mudzi uti? — _____
5. Mulipo angati pa banja panu? Ndiangati amene sanakwanitse zaka 15 — _____
6. Mumagwira ntchito yanji? — □ mlimi □ ndimapanga geni □ ndimagwira ntchito m'boma □ ndimagwira ntchito ndi mabungwe (osati aboma) □ mwana wasukulu □ zina
7. munapita patali bwanji ndi maphunziro? — □ sindinamalize maphunziro a pulaimale □ ndinamaliza maphunziro a pulaimale □ Sindinamalize maphunziro a sekondale □ ndinamaliza maphunziro a sekondale □ ndikanali ku sukulu ya ukachenjede □ ndinapangako zaka zingapo maphunzro a sukulu ya ukachenjede □ ndinamaliza maphunziro sukulu ya ukachenjede
8. mungandiwerengere izi mokweza: — □ eya □ ayi

Zambiri zokhudza chifukwa chobwerera kuchipatala kuno

9. Mwayenda bwanji kudzafika kuno? — □ wapansi □ ndinatenga taxi □ njinga ya kapalasa □ zina _____
10. Ndimtunda wotalika makilomita angati kuchoka kunyumba kwanu kudzafika kuchipatala kuno? — _____ kms
11. Mwatenga nthawi yaitali bwanji kudzafika kuno? (mphindi) — □ kuyenda kuchoka kunyumba _____ mins □ kudikila transipoti pasiteji_____ mins □ kuchoka pasiteji kufika kuno _____ mins □ zina _____ mins
12. Zatenga ndalama zochulaka bwanji kuti mufike kuno (makwacha)? _KM_____
13. Kodi njirayi mumayigwiritsa ntchito pa nthawi ya dzinja kapena chilimwe? — □ eya □ ayi

    13a) Mumayenda bwanji kudzafika kuno ikakhala nyengo ya mvula?

    _____

14. Kodi chipatala chino cha Holy Family Mission ndichomwe chakuyandikilani?

□ eya □ ayi

14a) Kodi chipatala chimwene chili pafupi ndicha mtundu wanji?

_____

14b) Kufupika kwake ndikotani?

_____

14c) Simupite kumeneko chifukwa chani?

_____

15. Mumadziwa malo ena komwe mungathandizike pa zaumoyo wanu?

_____

Ndi malo/zipatala zamtundu wanji?

_____

Malo amenewa ali kuti?

_____

Mungafanizile bwanji chipatala chino ndi malo enawo?

_____

16. Kodi kwenikweni mwabwera kudzatani kuchipatala kuno?

□ ndili ndizizindikilo za matenda, chithandizo chikufunika nsanga
□ ndimabwerabwera kudzalandila thandizo □ zina _____
□ sindiyankha funso limeli

16a Kodi zizindikilo zayamba liti?

_____

17. Munapita kwa a dotolo a mankhwala a chikuda kukalandila thandizo pa matenda omwewa

□ eya □ ayi

18. Munapita kuchipatala china kukalandila thandizo lamatenda omwewa

□ eya □ ayi

18a) munapita ku chipatala chamtundu wanji?

□ Chipatala china □ health center
□ Kumatenite □ health post (chipatala chaching'ono)
□ dispensary □ zina

18b) mumapitapitako mowilikiza bwanji? _____

18c) mwasankha kubwera kuno chifukwa chani?

_____

19. Kodi munabwerako kuchipatala kuno?

□ eya □ ayi

19a) chifukwa? 19d) Simunabwereko chifukwa chani?

_____ _____

19b) munabweranso liti?

_____

19c) mabwera kokwana kangati?

_____

20. Kodi mukuyembekezela kulipira ndalama zingati pa chithandizo muchipatalachi?

_____

21. Makhwala okha mulipila ndalama zingati?

_____

22. Ndalama zimenezi zichokera kuti?

□ health insurance (bungwe lopereka chitetezo chaumoyo) □ ndinapeza thandizo □ ndekha
□ boma □ zina □ sindikudziwa

23. Kodi muchaka chapitachi, (kapena miyezi 12 yapitayi) thandizo la zaumoyo ndi lamankhwala lakhala likupezeka kwainu motani?

□ Silinapezekeko □ limapezekekako
□ limapezeka □ ndilopezeka nthawi zonse

23a Zifukwa zake?

- □ kusowa mayendedwe
- □ njira kapena mayendedwe yobwera kuno ndioopsa
- □ sindinakakwanitsa kulipira transipoti
- □ sindikanakwanitsa kulipiila kuchipatala kuno
- □ kusowa nthawi kamba kotanganidwa ndi zina
- □ sindimadziwa koti ndipite
- □ kuchepa kwa thandizo mdera lino
- □ chifukwa cha zikhulupiro zopemphera/ zikhulupiriro zamakolo
- □ kuchepa kwamankhwala kapena zipangizo mudzipatala
- □ kusakhuitsidwa ndi malo olandilira thandizowo
- □ makhalidwe oipa aogwira ntchito mudzipatala
- □ chifukwa cha chilema
- □ ndimaganiza kuti simadwala kwambiri mpaka kupita kuchipatala
- □ nthawi yotsegulira inali yondivuta
- □ zina _____

23b Pano chasintha ndi chani? Ndizifukwa ziti zomwe zapangitsa kuti mubwere kuchipatala pano? _____

24. **Kodi izi ndi zooona motani kwainu?**	Zoona kwambiri	Zoona	sizooona	Sizoona kwambiri	Sindikudziwa
Ichi ndi chipatala chomwe ndikuchidziwa basi	□	□	□	□	□
Chipatalachi chili pafupi ndiine kwambiri	□	□	□	□	□
Chipatalachi ndi chofikika ndi mayende onse	□	□	□	□	□
Chipatalachi ndichoti ndimafikako munthawi yochepa kwambiri	□	□	□	□	□
Chipatalachi ndimafikako mosavutikila konse	□	□	□	□	□
Chipatalachi ndimafikako pamtengo wochipitsitsa	□	□	□	□	□
Chipatalachi chimapereka thandizo lomwe ndimalisowa	□	□	□	□	□
Chipatalachi kuli anthu odziwa ntchito yawo	□	□	□	□	□
Zinthu zimene zili kuchipatala kuno ndizotha kukwaniritsa zofuna zanga	□	□	□	□	□
Ndimadziwa zathandizo labwino kuno	□	□	□	□	□
Nthawi yotsegula chipatala kuno imagwirizana ndizochitika zina zanga patsiku	□	□	□	□	□
Chipatalachi ndi chaukhondo komanso chosamalidwa bwino	□	□	□	□	□
Ndimamva kulandilidwa ndi kusamalidwa bwino ndikafika kuchipatala kuno	□	□	□	□	□
Ndimakhulupilira kuthekera ndi ukadaulo waogwira nthchito zaumoyo muchipatalachi	□	□	□	□	□
Ndinabwerako kuno nthawi ina	□	□	□	□	□
Anthu ake ndi ansangala	□	□	□	□	□
Wina anandiuza zaubwino wakuno	□	□	□	□	□
Ali ndi magetsi	□	□	□	□	□
Ali ndi madzi aukhondo	□	□	□	□	□
Pali malo ogulitsira malonda	□	□	□	□	□
Zifukwa zina: _____	□	□	□	□	□

9.3 Appendix C: Focus Group Discussion - Data Collection Tool

Introduction

This research is done on behalf of a German medical student in the field of Public Health.

It aims to create an understanding of the perceived barriers to health care services and to improve the accessibility of health care for the population. Therefore, we want to ask you some questions about your personal experience in the utilization of health care services.

Your participation in this survey is voluntary but highly appreciated. You can choose not to answer any individual question or all of the questions. Refusing the participation or the answer of single questions will not affect you in any way.

Whatever information you provide will be stored anonymously and will only be used for this study.

Procedure

We will lead the discussion by asking you questions and we are going to record it in order to have references when we analyse the data. Therefore, it is very important that only one person is talking. Before the next person can start to give her comment, Nego will translate the previous comment in English.
Feel free to say your opinion without asking yourself what your neighbour or one of us might think. We are here to exchange our opinions and to have fun.

Introduction of the group

Before we start the discussion, we would like to get to know you. We would like to know your names, your age, your profession and the number of children you have.

Questions

Today we will discuss a topic that affects all of you, your families and your whole community. The access to health care services in Phalombe as well as in whole Malawi are an issue for a lot of people, especially if they live far from the facility. Therefore, we want to find out, what issues you have to face and how these problems could be solved.

- Which facilities do you know to receive health care services?
- Where do you go first to seek health care?
- How do you get there? How much does it cost you to get there?
- Which main problems do you face when you get sick and feel the urge to seek health care?
- What services would help you to overcome the barriers? What has to be changed/ achieved to improve your access?

9.4 Appendix D: Focus Group Discussions – Transcriptions

FIRST VILLAGE: Nalingula

Distance to the next health center: 3 km; Holy Family Mission Hospital: 8 km

Participants:
1. Ben, male,61
2. Peter, male, 16
3. Leo, male, 26
4. Anna, female, 59
5. Lena, female, 24
6. Sarah, female, 20
7. Kathrin, female, 56

Interviewer: Which facilities do you know to receive health care?

All: Phalombe Health Centre, Holy Family Mission Hospital

I: Where do you go first to seek health care? Mr Ben.

Ben and Peter: Phalombe Health center

I: How do you get there? Mr Ben.

Ben: If I have a bike to use, I take the bike.

Peter: By foot

I: Ok fine, what about you Mr Leo

Leo: By foot

I: And you Lena how do you get there?

Lena: From this village to Phalombe Health centre we use the bike and if the Doctor observe that condition is severe they refer the patient to Holy Family Mission Hospital by ambulance.

I: How much does it cost to get there? Mrs Kathrin?

Kathrin: There are two ways; we approach some people who have cars, if they are kind enough they take us to Phalombe health centre for free and also to Holy if we have referral. If an ambulance is present, we use it from Phalombe health center to Holy Family Mission Hospital.

I: Is an ambulance present at the hospital all the time?

Anna: Not all the time

I: What do you do if the ambulance is not present?

Lena They tell us to find our own transport to take our patient to Holy Family Mission Hospital

All: Yes for sure

I: Which main problems do you face when you get sick and feel the urge to seek health care?

Anna: We are surprised that when we visit the hospital, it some doctors or nurses don't attend us but their friends and relatives first. We as villagers keep on waiting in the line. Sometimes patients even faint while they wait in the queue.

Sarah: Sometimes patients even die in the queue because of not being attended in time.

I: What about you Lena?

Lena: Doctors come late to work

I: What time do doctors or nurses come to the work since time for opening is 7:30 am? Mr Peter?

Peter: Sometimes 8 o'clock or 9 am

Lena: Also, when we visit the hospital with our babies, it takes long time to be attended

I: Mr Leo?

Leo: Sometimes they just stay in their office and chat. When we call them, they say they are busy.

I: What about you Kathrin?

Kathrin: They only attend us when our babies faint on the queue

I: Have you ever asked them why?

Kathrin: Yes, they just say we are busy. Also, when we come at night, we have to ask the security guards to call the doctor for emergency. The doctors just say "I am coming". But they only come when other staff members make a call to them.

I: Do you think that you receive quality health care in health centres? Do you receive the health care that you need? Mr Ben?

Ben: No, they say that they don't have enough drugs.

I: What about you Peter?

Peter: Sometimes they tell us to find money to buy drugs from the private pharmacy.

I: Mr Leo…

Leo: As my friend has already said, many times, when the doctor prescribes Aspirin and Penicillin on the health passport, the pharmacies in the facilities only can give us Aspirin and tell us to buy Penicillin at the private sector.

Anna: They just give us any drugs and tell us to came back again if there is no change.

Lena: They just give us LA after an investigation and tell us to come if there is no change. If they see that the condition has worsened, they refer patients to Holy.

Sarah: Maybe if the baby is coughing, they just give us 3 tablets of antibiotics. And at the third visit they say we are troublesome an refer us to Holy.

I: Mrs Kathrin anything to say?

Kathrin: The problem I observed is about referrals to Zomba central hospital. It happens

sometimes that patients die on the way to Zomba. Better drugs are sold to private sectors. The drugs are sent from a distributor to different hospitals but after 2 days no drugs are found in the health centres due to this attitude of the health workers.

I: Any additions?

Kathrin: If the HIV patients visit the hospital for treatment, they are sent back although the patient has already used up his/her ART.

I: Is the hospital giving to you what you need?

Anna: Although there is a programme about safe motherhood, nurses shout at women and send them out of the delivery room. The women sometimes deliver babies outside the ward.

I: What services would help you to overcome these barriers? What has to be changed to improve your access? Mr Ben?

Ben: A while ago, I went with my child to the health centre. A certain doctor told his friend to take over the case. So, they just passed the case to each other. One of the doctors was a friend of mine and made a call to a doctor from Holy Family who came and did the procedure.

I: So, you think that the doctors at the Phalombe health centre don´t know what to do?

Ben: No, they do know what to do.

I: Anything to add?

Peter: About a toothache patient I accompanied, he was sent to Migowi health centre although the doctor of Migowi´s health center was in Phalombe health centre that day. When we asked him about the reason why we should be going to Migowi although the doctor is here, they just shout at us.

Anna: Lack of kindness and respect to patient.

I: What are the most severe barriers to health care?

All: Not afford to pay a transport and the visit. And lacking room for guardians.

Anna: I can say that Phalombe health centre is only the head of other health facilities in Phalombe. But it is facing many problems like inadequate equipment and lack of room for patients. They are in process of building some rooms and wards for a long period.

I: So, we can sum up that they need to build a new one?

Anna: I don’t know. The beds and wards are just not enough for the number of patients and guardians.

Peter: Doctors are not giving us enough treatment.

Lena: Guardians sometimes have to sleep outside the ward on the floor.

Kathrin: There is nowhere to go. In addition to that, we have been meeting about this problem on Monday when the health centre opened. But they just shout at us and said that we have only come to go to the market and not to receive treatment.

I: What do you do if you don't get the treatment you need?

Lena: We are told that the drugs which are prescribed are not available in that particular health centre. So, they direct us to the private sector to buy them there. This is a big problem for us. We are not aware of the agreement between health workers and the private sector.

Anna: I remember a few years ago, someone sued a certain association at the hospital for the reason of selling drugs to private vendors. But in the end, the particular health workers denied, that they have worked on that day.

I: Mr Leo?

Leo: As already mentioned, we do not have bikes for transporting patients. Apart from the ambulances to go to Holy Family from Phalombe health centre after referral, we don´t have transport.

SECOND VILLAGE: Njumwa

Distance to next health centre: 4.5 km; Holy Family Mission Hospital; 9,5 km

Participants:
1. Mary, female, 36
2. Susie, female, 35
3. Marina, female, 34
4. Lydia, female, 21
5. Rita, female, 46
6. Linda, female, 32
7. Sarah, female, 22
8. Melanie, female, 32

Interviewer: Which facilities do you know to receive health care? We start with you Rita.

Rita: Phalombe health centre, Migowi health centre, Holy family mission hospital and ' Mpasa.

I: Where do you go first to seek health care?

Susie: Phalombe Health centre.

I: What about you Mary?

Mary: Phalombe.

I: And you Marina?

Marina: We go to Phalombe health centre.

I: So, we can conclude to say that you all go to Phalombe?

All: Yes.

I: How do you get there? We start with Susie.

Susie: We get there by foot and sometimes by taxi bike.

I: And you Mary?

Mary: By foot or taxi bike.

I: What about Marina?

Marina: Bike

I: And you Lydia?

Lydia: Either by foot or bike depending on whether you have money or not.

I: Which means when you have found a bike-taxi you pay for it?

Linda: Yes, we pay.

I: Transport by bike is an issue then?

Lydia: Yes, we walk most of the time.

I: And you Rita?

Rita: We also walk by foot.

I: You mean you walk from here to Phalombe health centre and then to Holy Family Mission Hospital by foot?

Sylvia: Depending on the severity of the condition, we don't care about the distance. We just walk.

Linda: It happens sometimes that we are told at the health centres that the ambulance is gone. So, we walk to Holy Family Mission Hospital.

I: How much does it cost you to get there?

3 participants: It costs 500 Kwacha to Phalombe health centre.

I: From here at Njumwa to Phalombe costs 500 Kwacha?

All: Yes!

Lydia: And we can say that from Njumwa to Phalombe health centre and then to Holy Family Mission Hospital it costs 800 Kwacha.

Mary: Nowadays things are so expensive it can cost 1,000 Kwacha.

Sylvia: Also, when we get from here to Holy, it cost 1,000 Kwacha, depending on the number of people.

I: Transport seems to be an issue then. When you go to Holy Family, do you just go there as private patients or by referral?

Mary: By referral.

Sylvia: If we visit Holy without a referral, we have to pay on our own. We pay a lot of money for seeing a doctor and treatment there.

Linda: Yes, and also private patient, they pay for bed and treatment.

I: Which main problems do you face when you get sick and feel the urge to seek health care?

Rita: Opening time during the morning.

I: Only that?

3 participants: They open later than they should.

Sylvia: Sometimes we come to the hospital or health centre at 4 am but the doctor starts to attend patients at 9 o'clock. And during lunch time, they close the health centre and the hospital early while we still wait in the queue.

Melanie: They open at the time that they want.

Linda: Sometimes we get there with patients in severe conditions but some patients are not attended in time and they faint in the queue.

I: What about you Susie, what problems you face when you seek health care services?

Susie: Concerning the pregnant women, the health workers shout at them and leave them alone. Sometimes women deliver babies without supervision of the health worker.

Ruth: One problem that we face is about not being attended in time. Most of the times, health workers attend people that they know first. Especially when they are rich.

I: What about you, Lydia?

Lydia: Health workers often just sit outside, chatting with their friends without attending patients in the long queue.

I: And you Linda.

Linda: Sometimes patients are directed to the private sector to buy their drugs there

Melanie: Some of the health workers, especially doctors, yell at patients and throw their health passport back at patient while the patient is still explaining his condition to him.

Sylvia: Doctors also give treatment contrary to patient's condition. There is no adequate equipment, a lack of full investigation to find out, what the patient is suffering of. Sufficient treatment is only given to rich people. Furthermore, we face a problem about deaths of patients due to inadequate treatment or care at health centres.

I: Anything to add?

Marina: Pregnant women sometimes have to deliver babies outside the wards. Also, there is a lack of nets in the wards.

Sylvia: Waiting time to be attended is a problem to me as well.

I: What services would help you to overcome the barriers? What has to be changed to improve your access?

Sylvia: Beds in labour ward and room for the patients.

I: Anything else?

Melanie: The opening time and the time of doctors when they attend the patient´s needs are another problem that needs to be considered.

Linda: And room for guardians as well as enough equipment.

Mary: At HTC (HIV Test Counselling), enough equipment to test HIV is needed. Patients are sometimes sent back by the nurse. They are told that they only test pregnant women.

THIRD VILLAGE: Mariko

Distance to next health centre: 2km, Holy Family Mission Hospital: 11km

Participants:
1. David, male, 49
2. Daniel, male, 51
3. Jonas, male, 30
4. Ruth, female, 40
5. Rita, female, 31
6. Margret, female, 25

Interviewer: Which facilities do you know to receive health care?

David: Migowi and Phalombe Health Center.

I: And you, Daniel?

Daniel: Phalombe.

I: Only that?

Daniel: Yes.

I: What about you Jonas?

Jonas: As my friends already said, the two closest facilities are Phalombe and Migowi.

I: Where do you go first to seek health care?

All: Migowi.

I: How do you get there?

Rita: By bike but sometimes by taxi bike if present.

I: And you Jonas?

Jonas: By foot or bike if the patient is not in severe pain.

I: So, we can conclude to say you get there by foot and bike. Don’t you get there by minibus?

David: I have already said that we get there sometime by minibus.

I: What about you Ruth?

Ruth: Yeah, we really use that only.

I: Oh, I thought you said by taxi bike only ok.

All: Not taxi bike only but also by foot and minibus.

I: How much does it cost you to get there? Either taxi bike or minibus

4 participants: We pay 150 Kwacha.

2 participants: Yes, sometimes it costs 200 Kwacha.

I: Which main problems do you face when you get sick and feel the urge to seek health care?

Rita: Many times, when we get there early in the morning, we wait a very long time without being attended. Sometimes the doctors come at a late hour and tell us that they are not open yet.

Daniel: It's exactly what is happening. Sometimes, when we approach to the doctor, they just say we are troublesome and should keep waiting. Also, babies faint and die on the queue sometimes.

Margret: Truly, it happens! Sometime we are getting to the hospital early in the morning and are given drugs contrary to our diseases. Sometime maybe 3 tablets of Aspirin. They tell us to buy other drugs from private sector.

I: What about you Ruth?

Ruth: Sometimes there are conditions that start at midnight. So, when we go to the health centers, the security guards tell us that the doctor is gone. But this is often just a lie. As a result, patients die and we go back home with sad news. Furthermore, when we get at the hospital at 10 o'clock they say that we go there only to play around and not for getting treatment. They just leave for early lunch without attending us.

David: Another problem that we face is that doctors arrive late to work, just attend 20 patients and then leave for lunch. It also happens that we are not yet finished to explain our complains and they just write down what they think and give us treatment, which is sometimes contrary to our condition.

Daniel: That is exactly what is happening. They just write down, whatever is in their head. Then they just throw a health passport at us and give us 3 tablets of Aspirin.

Ruth: Sometimes they tell us that the drugs that we need are not present at that moment. But their friends with the same complains receive exactly those drugs, which they told us were not there.

I: So, we can say they attend their friends first?

Daniel: Truly. Some patients faint on the queue because they are not being attended

while others just go inside and receive better treatment because they are rich or friends with the staff. Your visit is a great decision. (laughs)

I: What about equipment?

3 participants: They don't have enough equipment at the Migowi health center, yet.

Jonas: Only equipment for malaria and HIV tests.

I: So, how can you describe the attitude of the health workers?

Ruth: They just play with their phones, laptops and friends without attending patients in time.

I: What services would help you to overcome the barriers? What has to be changed to improve your access?

Jonas: Respect to patients. They need to attend emergencies first and give enough treatment to the patient.

I: What about you Ruth?

Ruth: What I observed here in Malawi, I only met three doctors from different health facilities, who really work with their whole life. They are kind enough to help patients. Others attend rich people first, leaving us aside. Sometimes, due to the attend of health workers, we just stay at home although we are in severe pain.

I: What about room for patients?

Margret: Not enough.

Daniel: Also, not enough room for guardians.

Rita: Pregnant women who are waiting for delivery don't have enough room either

Ruth: From this village to Migowi health centre and to Phalombe health center, the distances are equal. So, think it's better to have a dispensary here.

I: David, anything to say?

David: Also, hygiene in hospital setting and opening hours need to be revised.

Daniel: On Wednesdays, when we take patients with critical conditions to receive treatment we are told, that this day is only for people who are on ART.

I: Any additions?

Ruth: We are facing the problem that we are being sent back home without treatment on Wednesdays. Also, they sent us back home when they are cleaning the hospital wall.

Margret: They just walk around, not attending patients. We need to be treated as human beings.

I: Anything left?

Ruth: Previously, a certain nurse was just breastfeeding her baby, not attending us. We want them to respect patients.

Margret: We want them to attend patients in time not playing with phones and laptops.

I: Any addition before we leave?

Jonas: About treatment, it happens when we go to governmental hospitals that there is not enough treatment.

Ruth: Health workers are selling drugs.

Rita: Pregnant women are facing problems and are sent outside the wards without treatment. This is not respectful to us as women.

I: Have you ever gone somewhere to sue facilities for these problems you are facing?

David: Sometime we go to health officers but there is no change.

9.5 Appendix E: In-depth interviews - Data Collection Tool

- What do you think are the main factors that hinder people in Phalombe or rural Malawi in general to seek health care services?
- What do you think needs to be changed to improve access?
- What do you think are the major changes that the health care facilities, the government, or even health workers can do in order to improve access?
- What do you think, people need to do themselves in order to enable themselves to access health care services?
- During my research, several participants told me that health workers take equipment and drugs from the facilities and sell them to private vendors. Do you think that is common practice?
- What do you think about the referral system?

9.6 Appendix F: In-depth interviews - Transcriptions

In-depth interview, 01.11.2016

With
Clinical Officer of Holy Family Hospital;
33 years, male
working in the hospital for 12 years

Interviewer: What do you think, what are the main factors that hinder people in Phalombe or in rural Malawi to seek health care?

Clinician: The hindering factors? There should be a lot. One: Ignorance of the patience themselves, of their own health. If they suffer from illnesses, they are supposed to go to the hospital. But there are beliefs in the villages, that if they suffer from this or that, they should go to traditional healers. That this illness should not be treated in a hospital, that it is supposed to be treated traditionally. I think this is ignorance in their own health.

Two: Inadequate health facilities. You find that some people live very far from health facilities. So, if someone falls sick, it is hard for them to travel to the hospital or for someone else to carry the patient´s body. So, they prefer to stay home rather than going to the facility today.

And the other thing is a lack of adequate health services in terms of resources and even manpower. When they go the health facilities and the health workers tell them “you´re suffering from this and that and the proper drug for this disease is not available”, these patients just go back home.

Or they find that the clinicians or the nurses are not around because they have been going to a workshop. Yeah, so I think those are the main problems. I think that really hinders the people from accessing health services in the rural Malawi.

I: What do you think, what needs to be changed in order to improve access. Short-term, mid-term or long-term? What do you think are the major changes that a hospital can do? That a health center can do? Or even that health workers can do?

C: I think a short-term change could be, what we are already doing, going to the outreach clinics. To the areas that are far from the health facilities. But unfortunately, the outreach clinics that we do are only for children under 5,

pregnant women, immunizations, and malnutrition.

But there are others in the villages as well that are sick and cannot access health care services because of the reasons that I have already given to you. So, there should be a comprehensive outreach clinic to screen everyone that is sick. That is just a short-term one.

One problem though, health workers would not do it pro bono or not during their working hours. They require an extra allowance to do so. Lots of the health workers do not have empathy with poor people and would not do it without extra payment. Therefore, this outreach clinics requires funding for the allowances and the transport.

When this is being done, the government should make sure that all the resources are always available at the health facilities. But that one needs political will, I think. Because that is a national-wide problem. The problem of resources and even drugs. Even the issue of inadequate health-personnel is a national-wide thing. Because currently, the government has stopped to employ health-personnel. So, there are people that are qualified that are just staying at home, not being employed. Because the government doesn´t have enough money to put the people on payroll. This is a very big problem, I don´t know how it can be solved.

I: During my research, several participants told me that either in health centers as well as in hospitals, health workers take equipment and drugs and sell them to private vendors. Do you think this is common practice?

C: Before I got myself into the health system, I was thinking the same thing, when I was living out there in the villages. Of course, that problem is there, especially in health centers. They are selling drugs to private vendors. They call them village doctors, people who have not been going to school. That's really common practice. But it is not that all the drugs have been taken away. And right now, what the government has done about that issue, that problem has at least been reduced a little bit after the initiative of the government. In terms of screening, the way they order drugs from stores and here. Because those people have been previously caught and arrested. That problem has at least been solved.

I: I have heard, that if people get arrested, they come free the very next day and just go back to work.

C: No no, they don´t go back to work. That must have been a misinformation or misunderstanding. The one that I know, that have been caught, they are not in prisons. But they are not working, they are in interdiction. Being investigated. Of course, the investigation takes long. Medical council of Malawi has to come in, if it

is a clinician. And do the investigations. Nurses council of Malawi has to come in, if it is a nurse. Doing the investigations, going to the area. And then they communicate with the police who did the investigation. So, it takes time for them to come to a conclusion.

The people that are caught, are not put right back to work. They are put into interdiction, the ones that I know were caught. But when it comes to the vendors, who got arrested, you find that next day they are again selling those drugs.

I: So, what do you think, what services or what changes could a hospital or health center do to improve access to the people here in Malawi?

C: I think there should be massive civil education to tell the people that the only place to go, when they are sick, is a hospital, not the traditional doctors. Cause most of the times when the people go there for a month or two, their condition when they come here is worse and more complicated. That should be the first thing to do. And then maybe, ensure them again, that this problem of drugs being stolen is not always the case.

Cause what many people have in their minds right now is, that when they go the hospital and don't find the drugs, the drugs must have been stolen. The patients have just been given Paracetamol and off they go. When you go to the health centers, you find that the antibiotics are there. So, people can access. So, I think there should be civil education that they remove that mindset that drugs are stolen and not the health facilities. There should be massive civil education.

I: What if people just can´t find transportation to get to the hospital? If they can´t pay the treatment? Cause the people I was talking to were very frustrated with the health centers. And the referral system. They told me, that everything takes too long. That is very big problem for them. At some point, when they find the money to get here, they do come to the hospital. But a lot of the times, they can´t find transportation or the money to pay the treatment.

C: That is a bit hard to address. It is hard for them to find transport to come to the hospital. But there is one thing that we did with this outreach clinic. There was an organization, I forgot the name, they gave out bike ambulances to almost each and every village. So, when someone is critically ill and there is a lack of transport and ambulances, the relative had to go to the village headman and ask for the bicycle ambulance. The bicycle had a troy with a mattress on top where the patient could be carried on and taken to the hospital. Unfortunately, most of the bicycle ambulances are broken now, no longer working. When we gave the bikes out, we agreed that there should be committees within the villages and people

should be contributing very low money per month in order to maintain the bicycles. But the villagers were always saying “No, there has been a drought, we cannot pay to maintain the bicycles. We are using the money for food”. Now that´s the problem. When people discovered that issue with lacking transport, they were starting to give out those bicycle ambulances to help those people to use the bicycle ambulances for transport.

I: When was that?

C: I think we did it last year, I think February. When we called out all the villages in our catchment area. There are 32 villages in our catchment areas. But unfortunately, there are only a few villages left, where the bicycle ambulance is still working. The others are just not working anymore. They are failing to repair them. Some have broken tires, others don´t have rings.

I am just talking about the catchment areas. You know, Phalombe is big. Our catchment area has a population of about 20.000.

I: I thought whole Phalombe is your catchment area?

C: No no, Holy Family admits people form whole Phalombe. But for Holy Family, the catchment area that we work on, is from the Phalombe bridge up to Thuchila bridge. That´s why we only concentrate on this area.

I: But where do the other people go? Outside of the catchment area?

C: They go to the nearest health center. Phalombe has 11 or 12 health centers. Each and every health center has a catchment area. So, people go to their closest health center. And if that particular health center is not capable of managing the case, they refer the patient to Phalombe Health Center, from where they get referred to Holy Family Hospital.

I: Lots of the patients that I filled out the questionnaire with, they went to the health center in their area and didn´t get referred, didn´t receive any care, no medications. Nothing happened. The health centers didn’t act. They didn’t have treatments there and didn’t refer them to the hospital. So, the patients had to pay the treatment and the transport to come to the hospital themselves. Although they went to the health center in their area. For the participants, the health centers seem to be one big issue. And the referral system from the health center to here when they can´t manage the case.

C: The problem about the referring system. When people are referred, they have to pass the hospital and go to the Phalombe health center because it is the main health center. So, the guys from Phalombe Health Center have to screen the patient again and judge whether the patient is sick enough to be referred to Holy

Family. Sometimes, they are treated right there at the Phalombe Health Center and are sent back home. But you are right, to get referred is a real problem. I agree. There are a lot of issues behind that. You have to be friends with the clinician or friends with the nurse. Those things, which are ethically not supposed to be like that.

I: Some patients even told me that if you´re not part of the health workers family or clan, you don´t get treated or only treated very many hours later.

C: That might be true. But It might just be a perception as well. But what I know, in each and every institution. If you are a relative of the health personnel and you are sick, then they don't line up the way other patients do. That is their privilege of working in the hospital. They take care of their relative or their child first, escort them back home and afterwards continue working. It might be just a perception and it might be true, hard to say.

I: Is there anything else about the health care systems or about access. Any recommendations you can give to the government, the staff in the facilities, the management. Just anything to solve the problems or improve the situation?

C: I think when it comes to the health care system, there is a lot to be done. Because for us to work effectively, we need all the necessary resources to be available. Sometimes we just don't have the resources, we only improvise, which is not good for our safety, for the patients´ safety, for the quality of care that we are supposed to give. For example, here we have limited investigative mechanisms. So, we can´t do further investigations and just treat based on assumptions, based on signs and symptoms.

So, there should be enough investigative mechanisms, enough resources to work comfortably. You need a good working-environment, you cannot just work all frustrated. Lot of things need to be done. Long-term and short term. You can´t tell them to purchase an MRI tomorrow, that´s a dream.

I: And concerning access for people? Not just the diagnostic equipment, not the quality of the treatment. But to enable people to seek health care services?

C: I think I have never been happy with the referral system there. Cause you find sometimes cases, where someone around this area is very sick, sometimes even a convulsing kid. But if these people can´t pay the treatment here, they have to pass here to go to Phalombe Health Center to get referred, and then come back here. Which is a waste of a lot of time. Some people even die on the way because they have to pass the hospital to go to the health center first.

So, I think I would be happy, if there was this provision, that those people, who are very sick, could just come here instead of going to the health center first to get the

referral letter. I think that would be saving a lot of life.

This system was already there previously. Very sick patients coming directly and getting the referral letter later. But it has been abused. That´s why it was been abolished again. But all in all, I´m not happy with the referral system. You find people that are referred from the health center in the early morning that reach the hospital late at night. And they need an operation. That is very sad. Just bad. I wish people could just come directly, without passing the hospital and then stopping at the health center. That would at least improve the referral system.

In-depth interview, 02.11.2016

With
Nurse of Phalombe Health Center
59 years, female
working in the health center for 15 years

Interviewer: What do you think, what are the main factors that hinder people in Phalombe or rural Malawi in general to seek health care services?

Nurse: These people come from very far away to the health centers. And most people, they don't come straight to the hospital, when they are sick. Some come here first before they go to the hospital. Others come earlier and go directly to the hospital. Others buy drugs at the drug store for treating fever or whatsoever before they go to the hospitals. Others have fears to go to the hospital at all.

We have very many patients. So, there are not many barriers that hinder the people at all to go to the hospitals and health centers.

I: What about the transport when some people don't have a health center close to their house?

N: Transport is something very difficult. Some come on the bicycle, some come by foot to the facility. Because Malawi is a very poor country.

I: Some people that are not in the catchment area of this health center, they go to the health center close to their house.

N: Some go to the nearest health center in their area, where they feel comfortable. But others do feel more comfortable and come here to have good treatment. That´s why our Outpatients department is so full every day.

I: I filled questionnaires with patients of the Holy Family Hospital. And lots of people were telling us that the supplies and drugs in the health centers are not sufficient, especially in the other health centers. That's the reason why they either go directly to the hospital and pay as private patients or they come to a health center and try to be referred. But they told me that the referral system is nor working very well. So, what do you think about the referral system?

N: So usually, the cases that are referred to Holy Family from here are very serious cases. People that need ultrasound scanning or x-ray. Others are referred for inpatient care because we don't have rooms to keep them here. But most of them, who are not very sick, are treated here as outpatients. Because the money that is given to Holy Family Hospital is not enough money to refer all the patients there. It

is only 8 Mio. as far as I know, which is not enough. They are supposed to get more, 15 Mio. upwards. Those people are also getting problems because most of the drugs, they have to pay from their own money. It is true. Many people that come here, don't have the money to go to Holy, so they come straight here to be admitted or treated. It is true, transport and money for treatment is a problem. Others don't have guardians, so they come as outpatients and go home. They don't have the money to go to Holy. So, the serious cases are referred from here to Holy Family. That´s why their hospital is full all the time because people are referred from here. And from 10 health center that are surrounded here.

I: From the 10 health centers, they come here and then to Holy.

N: Yes.

I: This takes quite a while sometimes. From there to here, from here to there.

N: It is true. But they do work together. The collaboration is good, I think. Because the health centers do refer and the ambulance that is paid from the government goes off and collects all those people and does come with them to this health center. They usually call, when there is a patient. So, the ambulance goes there and collects them, whether it is for maternity or OPD, whenever there is a serious case. They bring them here and if we can´t manage the case, we refer the patient to Holy Family.

I: What do you think, what needs to be changed to improve access for the people that have issues with transport, with affording health care or with the quality of health care?

N: Most of all, we need enough fuel. Sometimes the ambulance is unable to go and collect the patients, because there is no fuel. The funding money is all used up. So, there is only one ambulance that can go and travel to collect the patients from the other health centers. The furthest health center is in Lambaso, close to the border to Mozambique. Sometimes, the people hire the ambulance from the mission, which is expensive.

I: What about people that are not able to go to a health center? Due to transport, not having bikes, not able to pay for transport. Or if they just don´t find the treatment here that they need. What do you think can be done for those people in order to improve access?

N: There are some village clinics, where drugs are given to people. Like Health Surveillances. They do rent a house and give out drugs to the community, whenever people are sick. They do get the drugs there, before they come to the hospital.

I: What services could the hospital or health center offer to improve access for the

people? Is there anything that the facilities, the government or any stakeholder can do in order to improve access?

N: What can be done for those people that run the village clinics is to have analgesics, to have malaria treatment, to have malaria checkpoints. Malaria is a difficult disease in Malawi that kills many children and even adults. To have some antibiotics for the people with bad cough or any infection. So, you can start the treatment before going to the big hospital.

I: To stock up other health centers with more drugs and equipment.

N: Yeah, those village clinics are supplied with drugs from here, from this health center. To make sure that they can give the drugs out to the people who are in need.

I: Some patients told me that in those small health centers, the health workers take the drugs and sell them to private vendors instead of giving them out to the patients. Do you know anything about that?

N: It happened back in the days. But nowadays, they are very strict. People were jailed in court. So, it is not as bad as back in the days anymore. It can happen secretly without others knowing. But of course, it is not allowed, because the drugs are for the patients. Once it is noticed, the health workers are taken in court and jail. The government became stricter about this problem. It is not as bad anymore as it was back in the days.

I: What do you think can people do themselves in order to enable themselves to seek health care? What could even staff or the government do?

N: It needs to be made sure that the supplies are always there in all of the health centers. And that there are always enough, not to be out of stuck. Because once the drugs are out of stock, the patients and the community suffer. Some even die. And the community members need to be motivated that once they get sick, they go to get treatment at the health centers. Sometimes the people wait too long to get treatment and even die on their way to the facility. Not having the knowledge or even fear to go to the health center or the hospital is still there. Education is a big problem in Malawi. Some people are educated, some people in the villages don’t go to school at all.

I: What do you think about the referral system? Is there any change that needs to happen?

N: For now, there is a strict way that patients always have to come here and then to Holy Family, not from Holy Family to here. It is impossible. Is it going on well because once they’ve been referred, they are being treated at Holy. And the main

responsibility we have here, is to see, which ones have to be referred in the right time. When patients arrive here from other health centers, we make sure, those patients that have to be referred, go straight to Holy Family. If we can manage the case here, we treat the patient here.

I: You don’t have inpatients here?

N: We do have. But not many. Just in the holding room at times. And some in maternity for women with preeclampsia. We treat people with sepsis or babies that are unable to breastfeed here. But if someone needs oxygen, we refer them to Holy Family.

I: Apart from the equipment, is there anything that you think that needs to be improved? Anything that you would suggest to the government, the management of health facilities or to health workers?

N: As of now, electricity. We don´t have a generator, only a solar lamp that is only working during the night. The whole maternity ward doesn’t have electricity due to bad construction. It is difficult to do sutures or to deliver a baby without any light. That needs to be improved. Or electricity to use the autoclave. We are using gas for this right now, but we always need gas for that.

We have a problem with beds, too. Beds and sheets are not enough for the patients. If they bring sheets from home, there is always a problem of hygiene. We do have some sheets but at times, they get missing, spilled with blood or just don’t look well anymore. Some patients are just careless.

10. Acknowledgement

I want to thank all those, who supported me in planning, conducting, and writing my thesis.

My appreciation is addressed to Prof. Thomas Kistemann and Dr. Carmen Anthonj, who supervised and supported my research in every step that I took. Thank you for your advice in the whole process of this thesis, for sharing your knowledge, for your encouragement, and for helping me in planning my data collection.

Thanks to all the people in Phalombe who welcomed me, shared their experience with me, and made me feel home during my stay in Phalombe. I truly hope that this study will contribute to improve their situation. Thanks to all the staff of the Holy Family Mission Hospital Phalombe for letting me conduct the data within your facility.
I would like to thank Mr. Nego Nkhwalingwa for being such a great study assistant, for sharing your local knowledge with me, for your friendliness, and for the great job you did. This data collection would not have worked as smoothly without you!

Furthermore, I would like to thank the Ethikkommission an der Medizinischen Fakultät der Universität Bonn and the National Health Science Research Committee of Malawi, who approved to conduct this research.

And I want to thank Emanuele Marano for reading and correcting this thesis, for your valuable input, and for supporting my ups and downs during this time.