

Master in International Health (MIH)

Health-seeking behaviour and decision making processes of people in a low-resource setting

Experiences with free, quality, healthcare in a rural hospital in Sierra Leone.

Bart J. Hugen, MD

Royal Tropical Institute (KIT)
Amsterdam, the Netherlands

Date of submission: May 24, 2010
Number of words: 14,645



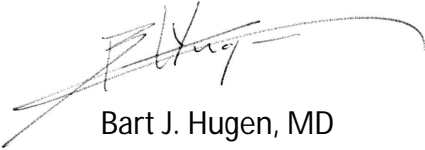
Network for Education
in International Health



Koninklijk Instituut voor de Tropen

Declaration: Where other people's work has been used (either from a printed source, the internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis *Health-seeking behaviour and decision making processes of people in a low-resource setting. Experiences with free, quality, healthcare in a rural hospital in Sierra Leone* is my own work.

A handwritten signature in black ink, appearing to read 'B. Hugen', with a long horizontal flourish extending to the right.

Bart J. Hugen, MD

Total word count: 14,645

Date: May 24, 2010

Table of Contents

- Tables and figures..... iv
- List of abbreviations v
- Abstract..... vi
- 1. Introduction 1
 - 1.1 Background 1
 - 1.2 Sierra Leone 2
 - 1.3 Problem statement..... 4
 - 1.4 Objectives 8
 - 1.4.1 Overall objective 8
 - 1.4.2 Specific objectives 8
- 2. Methods..... 9
 - 2.1 Questionnaires 10
 - 2.1.1 Methodology..... 10
 - 2.1.2 Procedure..... 11
 - 2.2 Semi-structured interviews 12
 - 2.2.1 Methodology..... 12
 - 2.2.2 Procedure..... 13
- 3 Results..... 14
 - 3.1 Questionnaires 14
 - 3.2 Semi-structured interviews 18
 - 3.2.1 Financial 18
 - 3.2.2 Health benefits & risks 21
 - 3.2.3 Networks..... 22
 - 3.2.4 Past experiences 24
- 4 Discussion 26
 - 4.1 General discussion..... 26
 - 4.2 Limitations 29
 - 4.3 Lessons learned 30
 - 4.4 Future research and recommendations 31
- 5 Conclusions 33

Acknowledgements	35
References	36
Annexes.....	38
A1. Table: Complaints mentioned in questionnaire	38
A2. Table: Reasons for coming	38
A3. Example questionnaire	39

Tables and figures

Figure 1: Map of Sierra Leone	2
Figure 2: Attendances at the Magbenteh Community Hospital	5
Figure 3: Willingness to pay more	16
Table 1: Socio-demographic characteristics of questionnaire respondents	14
Table 2: Visited health-facilities before coming to Magbenteh.....	15
Table 3: Themes from semi-structured interviews	18

List of abbreviations

DHMT	District Health Management Team
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
IDA	International Dispensary Association
IQR	Interquartile Range
KIT	Koninklijk Instituut voor de Tropen (Royal Tropical Institute)
LHF	Lion Heart Foundation
MDG	Millennium Development Goal
MSF	Médecins Sans Frontières (Doctors without Borders)
NGO	Non-Governmental Organization
PHC	Primary Health Care
PHU	Peripheral Health Unit
PMM	Prevention of Maternal Mortality
PRSP	Poverty Reduction Strategy Paper
SSLDF	Swiss-Sierra Leone Development Foundation
TFC	Therapeutic Feeding Centre
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
US\$	United States Dollar
WHO	World Health Organization
WTP	Willingness to Pay

Abstract

Author: Bart J. Hugen, MD
Year: 2010
Title: Health-seeking behaviour and decision making processes of people in a low-resource setting. Experiences with free, quality, healthcare in a rural hospital in Sierra Leone.
Research country: Sierra Leone
Involved institution: Royal Tropical Institute (KIT), Amsterdam, the Netherlands

Problem statement: After the abolition of under-5 user fees at the Magbenteh Hospital (a mid-sized rural hospital in the interior of Sierra Leone) an unprecedented increase in outpatient attendances was seen. Data from neighbouring health facilities and literature from other countries show a similar trend. The aim of this study was to learn more about the health-seeking behaviour and the decision making process of people visiting the Magbenteh Hospital with their child.

Methods/results: A mixed-methods approach of quantitative and qualitative data from a small-scale study set in the Magbenteh Hospital was used. Caretakers visiting the under-5 clinic were asked to complete a questionnaire and semi-structured interviews were taken from some of the caretakers admitted with their child at the paediatric ward. Over a period of 3 weeks, 814 people participated in the study by filling out questionnaires and 8 interviews were held.

Conclusion: This study showed that cost was not the main reason for people to come to the hospital, but that many factors, of which good quality of medicine and care was the most important, played an important role in the decision to go to a certain health facility. High cost could very well have been the reason for people not to come previously and so can still be considered as one of the main barriers to accessing healthcare. Word of mouth also contributed to the increase in attendances and can be used as a tool for spreading health-related messages.

Key words: health-seeking behaviour; user fees; quality of care; word of mouth; Sierra Leone

1. Introduction

1.1 *Background*

After graduating as a tropical doctor at the Royal Tropical Institute (KIT) in Amsterdam I worked in many different projects and countries. In all these different circumstances a recurring concern was how to reach people and how to make sure that they were able to attend your health facility. In every case financial aspects and the cost of health care seemed to play a crucial role. The project I worked on most recently was in Sierra Leone, West Africa. For more than two years I worked as the Chief Medical Officer of a mid-sized hospital close to Makeni, the third biggest town in the country (see figure 1 for location). From the moment I arrived in September 2007 I was intrigued by the fact that our hospital provided one of the best levels of care in the country, but nevertheless people from the surrounding areas did not seem to utilise the services fully. This was particularly noticeable for attendances of children aged under five. On average fewer than 5 children in this age-group came to our hospital each day and most of the time the paediatric ward (which has a capacity for 28 children) had only 2 or 3 children admitted, this while Sierra Leone ranked last in the United Nations Human Development Index (HDI) with the highest child mortality in the world. This paradox brought me to the subject of my thesis; to see why people in a low-resource setting, like Sierra Leone, decide to use certain health facilities and not others.

1.2 Sierra Leone

Sierra Leone (figure 1) is a country located in West Africa, bordering Guinea and Liberia. Its population is estimated to be 6.4 million people (July 2009) and it has a geographical area of 71,740 square kilometres (1), which is around 1.7 times the size of the Netherlands.

Sierra Leone has a bloody recent history with a civil war lasting from 1991 to 2002. During this war tens of thousands of people were killed and many more were displaced. Since the end of this civil war Sierra Leone has been politically stable and at the end of 2007 democratic elections were held which led to the election of a new president. Despite this political stability, the nation remains very poor and there is still a heavy dependence on international donors for many new investments, especially in the health sector. With an estimated GDP per capita of US\$ 900 (2008) and a large inequality in income distribution, Sierra Leone rates among the fifteen poorest countries in the world (1). The UNDP Human Development Index ranked Sierra Leone last in 2005 (published 2007) and in 2007 (published 2009) the country ranked 180 only followed by Afghanistan and Niger (2).

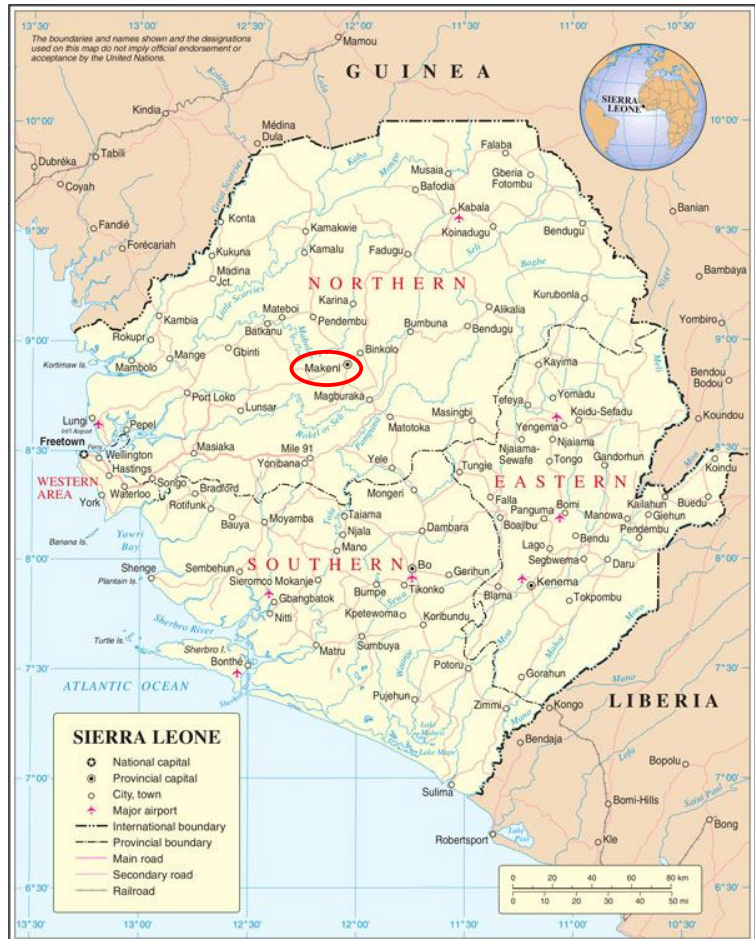


Figure 1: Map of Sierra Leone (source: mapsorama.com)

Since Sierra Leone has to cope with so many problems, improving the health sector is not always a top priority. In the Second Poverty Reduction Strategy Paper (PRSP II) 2008 – 2012 recently published, health ranks as the fourth priority behind energy, transportation and agriculture. Nevertheless Sierra Leone has some of the worst health indicators in the world. With an average life expectancy at birth of 47.4 years there are only seven countries in the world that rate worse (3). Sierra Leone is the only country in the list of ten countries with the lowest life expectancy which only has a moderate HIV prevalence (1.7%) and is not suffering from ongoing conflict.

Among all the different health indicators worldwide Sierra Leone rates among the worst in both maternal as well as in under-5 mortality. Yearly 2,100 maternal deaths occur for each 100,000 live births, which means that 1 in 8 woman die during delivery (4). Up to the 2007-

figures, Sierra Leone consistently ranked first with the highest under-5 mortality worldwide, but in the most recent figures of 2008 (released by UNICEF in November 2009) the country made an improvement from 262 to 194 deaths per 1,000 live births and the overall number of under-5 deaths dropped from 70,000 to 43,000 per year (5). Despite this improvement Sierra Leone is still not on track to reach the 2015 Millennium Development Goals (MDG's) number 4 and 5, in which the under-5 mortality rate should be as low as 95 per 1,000 live births and maternal mortality 600 per 100,000 live births.

Before the start of the civil war a cost-recovery system was in place throughout the country, which was abandoned during the war. After the war the government tried to re-implement this system, but because of exemption mechanisms for vulnerable groups more than 60% of the population did not fall under this system. In 2006 the government created a Revised Health Service Cost Recovery Policy Guideline in which the aim was to recover 100% of the cost of medicine and to charge flat rates for other services (6). Some exemptions were still possible and antenatal care and under-5 cases would be charged a minimal fee. It is unclear if this policy was ever implemented. Recently president Ernest Bai Koroma of Sierra Leone announced as of April 2010 the abolition of user fees for pregnant and breastfeeding mothers and for children under 5 years (7). Since 2005 Sierra Leone has had a decentralised health system in which district councils receive block grants from the Central Government and the district councils then determine the health-expenditure policies in their district, most of the time through the District Health Management Teams (DHMT's). The government expenditure on health in 2006 was around US\$ 4 per capita, while the total expenditure on health per capita was a mere 12 US dollars (8).

Each of the 13 districts has at least one district hospital and a certain number of Peripheral Health Units (PHU's). Bombali district, where the Magbenteh Community Hospital is located, has an estimated population of 320,995 (2004), 84 PHU's and 5 hospitals, of which one functions as the general referral hospital for the Northern Provinces. Despite the relatively high number of health facilities in this district one of the main problems, like everywhere in the country, is the shortage of skilled health personnel. Sierra Leone has on average less than 1 physician per 10,000 population (globally the average is 13 and in the African region 2), around 5 nursing and midwifery staff per 10,000 population (global 28, Africa 11) and 4 hospital beds per 10,000 population (global 25, Africa 10) (8). The shortage of health personnel is one of the many reasons why people do not attend official healthcare facilities. The utilization rate for healthcare facilities is estimated to be 0.5 contacts per person per year. In other words only half the population makes use of any official healthcare facility in a year.

1.3 Problem statement

The Magbenteh Community Hospital is a relatively new hospital in the interior of Sierra Leone. It was officially opened in January 2006, but operations started in October 2004. The hospital was built, and is run, by a local Non-Governmental Organization (NGO), called the *Swiss-Sierra Leone Development Foundation (SSLDF)* and is financially and logistically supported through an international NGO, called the *Lion Heart Foundation (LHF)*. The hospital is one of the bigger and better equipped health facilities in Sierra Leone. It has a 95 bed capacity divided over 4 different wards (male, female, maternity and paediatrics) and a *Therapeutic Feeding Centre (TFC)* with a capacity of more than 100 beds. Located directly on the highway from Freetown to Makeni, the hospital is readily accessible. There is very limited material and/or financial support from the Government of Sierra Leone and the hospital largely depends on external donor funds. In addition there is a system of partial cost-recovery in place in which patients are required to pay a certain amount for treatment and admission. This approach was revised in the beginning of 2008 when a system was set up with fixed prices for consultations and medication and an all-inclusive fee depending on the diagnosis for any admission. At that same time a clear policy was set up under which all under-fives received free health-care. This policy was slightly adjusted shortly after with the introduction of a small registration fee of 1,000 Leones (US\$ 0.30) to reduce the “frivolous” use of health services. The average local running cost of the hospital in 2009 was around US\$ 35,000 per month (excluding major investments, overhead costs of the supporting NGO and expatriate salaries). A little less than one third of these running costs (\pm US\$ 10,000/month) are recovered through patient user fees.

Since the start of operations at the end of 2004, reliable statistical data was kept which gives a good insight into the functioning of the hospital. Figure 2 gives an overview of outpatient attendances in the last 5 years, divided by patients under five (red line) and over five years of age (blue line). In the figure it can be seen that throughout the first years (2005 to 2007) patient numbers were stable with an average total of outpatient consultations of 5,000 to 6,000 annually. From 2008 onwards a considerable increase in the total number of patients was observed, with a total number of outpatient consultations of more than 12,000 in 2008 and more than 20,000 in 2009, an increase of respectively 110 and 245% in comparison to 2007. This increase was primarily due to an increase in the number of under-fives (red line). During the period 2005 to 2007 the proportion of under-fives was less than 15% of the total number of patients while this percentage rose to over 60% in 2009. In absolute numbers this meant a 600% increase from around 750 under-fives in 2007 to almost 5,500 in 2008 and with more than 12,000 out-patient consultations under the age of five years in 2009 a staggering 1,500% increase over two years. In comparison the number of adult patients rose in that same period with respectively 37 and 57%. During the busiest month so far (July 2009) almost as many under-fives were seen as were seen in the whole of 2005, 2006 and 2007 combined (1,599 versus 1,820). The reason for the drop in patient numbers after July 2009 is not completely clear, but part of it could be explained because of the seasonal

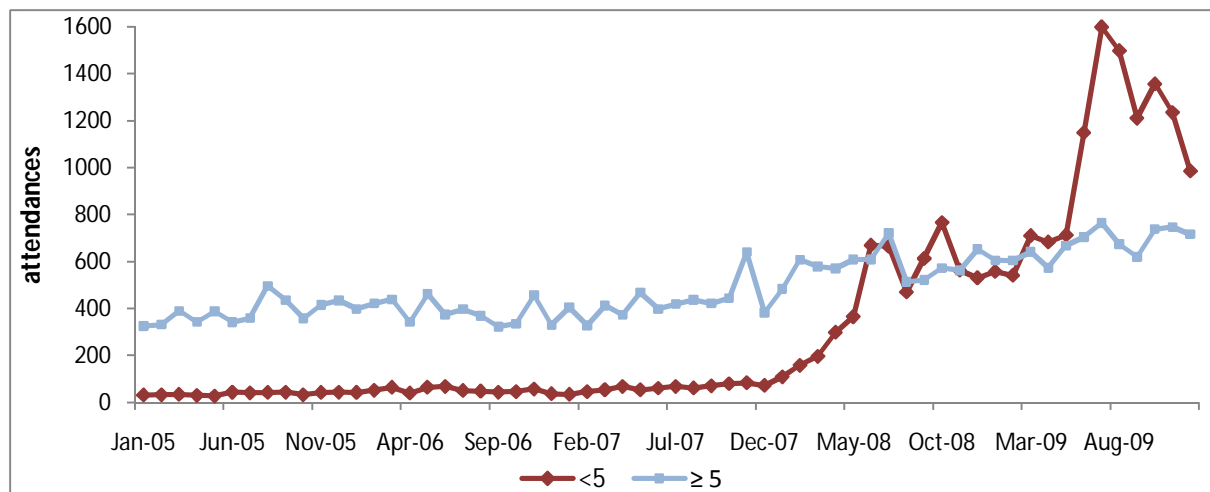


Figure 2: Attendances (under- and over 5 years of age) at the Magbenteh Community Hospital (2005 – 2009)

variability of malaria, with the highest transmission risk in this area from May until October (9). Obviously there was also a rise observed in the number of admitted patients, but interestingly this increase was much more limited than the increase in out-patients. The total number of admissions increased by 100% from 1,274 to 2,537 in 2008 and by 160% to more than 3,300 in 2009. For the under-fives this increase was respectively 335% and 580%, which of course is still an impressive increase, but nevertheless is much smaller than the increase in outpatient consultations. This means that a smaller percentage of the total number of under-five outpatient attendances was admitted, which most probably was caused by the fact that the children who came to the clinic were less ill on arrival and could more often be treated with simpler and cheaper outpatient treatment instead.

The question that arises from the above data is what caused this huge increase in patient numbers? Preceding this increase several smaller and bigger changes took place at the hospital which could have let, or at least could have contributed, to this increase. One of the most obvious causes would be the changes in price structure. From the start of the hospital in 2004 there was a policy that patients needed to pay something for their treatment and while officially the policy was that under-fives received free treatment, money would still be asked and free treatment only provided if someone could not afford to pay. From the beginning of 2008 a new price policy was adapted which had to lead to a clearer and more transparent pricing system. One of the biggest changes in this price policy was that all under-fives would receive free treatment, irrespective of their (financial) status. While this policy was never publicly announced, a rapid increase of under-fives attending the hospital was seen. Since there seemed to be no barrier whatsoever for people to take their child for treatment the risk of overuse of the limited facilities was very present. To limit this risk a small registration fee of 1,000 Leones (US\$ 0.30) was charged soon after the introduction of the new price policy. Other factors that can have contributed to the increase in utilisation of the hospital could have been the ongoing support of an NGO with the permanent presence of (expatriate) doctors, nurses and other support staff. As mentioned earlier one of the main problems of health facilities in Sierra Leone is the lack of an available supply of health

personnel, so just the fact that there are always doctors and nurses available could already be sufficient reason to come. The quality and availability of drugs is also something that improved greatly during this period. Before 2008 drugs were bought on the local markets, resulting in the purchase of substandard or even counterfeited drugs and many occasions of drug shortages. After 2008 a system was set up where all drugs were purchased at the international, non-profit, drug dispenser IDA, which led to a reliable supply of high quality drugs. Since none of the above mentioned changes were clearly communicated with the communities it seems that whatever the reason for the change in outpatient attendances, *word of mouth* played an important role.

Unpublished data from other health facilities in Sierra Leone show a similar trend. In 2005 Médecins Sans Frontières (MSF) conducted a survey in four districts of Sierra Leone to compare three different healthcare payment systems: cost recovery, flat fee and free care (10). In their study only 1 out of 3 households reported having used their nearest health centre during the last period of illness, if this health centre had a cost-recovery system. Almost 50% made use of the so-called informal sector and the main reason given was a lack of money. When going from an all-inclusive flat fee to free care they noticed an increase in consultations in the group of under-fives of 60%. Even though they came to the conclusion that a 'moderate' flat fee can already lead to a significant financial barrier for the poorer households, they did see a higher utilization rate of the health centres with a flat fee than those with a cost-recovery system (48 versus 35%) and this distinction was even bigger for the poorest quintile of the households surveyed (40 versus 19%). Other recent data from the *Ola During Children's Hospital* in Freetown, which is the only government run and largest children's hospital in Sierra Leone, showed a similar trend to the data from the Magbenteh Hospital (11). In August 2009 they reduced the cost for their in-patient care, while the cost for the out-patient consultations remained the same at 15,000 Leones (\pm US\$ 4.5) which they have planned to make free for under-fives as of April 2010. Already out-patient consultations doubled from 624 per month in the first half of 2009 to over 1,400 during October and November of this same year and while admissions were more or less stable around 300 per month during the past four years, they rose to 765 in November 2009. Besides the price reduction it is thought that the improved quality of care also played a role in the increase in patient numbers and here too community awareness arose solely by word of mouth.

While not a lot of literature from Sierra Leone on this topic is available, several studies from other developing countries have shown that the removal of user fees can immediately lead to an increase in attendances to health facilities. In February 2001 the government of Uganda decided to abolish all user fees in the public facilities. Nabyonga et al showed in a study in which they compared the usage of health facilities before and after the removal of cost-sharing that there was a clear increase in the usage of these facilities (12). It needs to be noted that at the same time as the abolition of the user fees, the Ugandan Government also released large sums of money to increase the quality of care and the availability of drugs.

These two factors alone could already have led to an increase in the number of consultations, even in a cost-recovery system (13). However there is evidence that simply improving the quality of care will never totally compensate for a high level of cost, but it can partially compensate (14).

It is also relevant to look at the patient's perception of good quality of care. This includes not just the availability of high-quality drugs and sufficient competent health personnel, but also the interpersonal skills and respectful contact between healthcare provider and client (14). It has been seen that a high number of child deaths could have been prevented over the past years if certain interventions would have reached them (15). These are (simple) interventions like oral rehydration therapy, antibiotics for sepsis and pneumonia, antimalarials and zinc supplementation. Simulation models show that the abolition of user fees, which would have led to better access to some of these interventions, could have prevented more than 200,000 deaths annually in 20 African countries (16). It has even been argued that had user fees not been promoted by the World Bank in 1987, over 3 million child deaths could have been averted (17). In many of these studies, which prove a strong correlation between the reduction of costs and the increased utilization of health facilities, it is assumed that this will directly lead to improved health outcomes. This, however, has never been proven. A recent study by Ansah et al (18) showed an increased utilization of health services in Ghana with free health care, but looking at indicators like mortality and anaemia, the authors could not find any proof of a better health outcome. Limitations of this study were the short follow up period of 6 months which combined with the small sample size led to very small numbers to analyse (4 versus 5 deaths and 3 versus 2 children with severe anaemia). By assigning households in an intervention and a control group, the households in the intervention group were also already sensitized about the need and existence of health facilities, which led to relevant bias. Perhaps the one thing that can be concluded from this study is that increased utilization of facilities cannot automatically be used as a proxy for improved health.

So looking at all of the above and comparing the statistical data from the Magbenteh Community Hospital with data from other facilities in Sierra Leone and relating these to relevant international literature, it is the aim of this research to learn more about the health seeking behaviour of people in a developing country like Sierra Leone. Why do people choose to come to a formal health facility like the Magbenteh Hospital and why do other people stay in the informal circuit of traditional healers and drug pedlars? What are the main reasons of delaying seeking healthcare and more importantly what could be solutions for these problems? How can you make sure that people attend in a timely way to receive the right treatment? We will use mixed methods to gather information from the specific situation in the Magbenteh Hospital and this information we will try to extrapolate in order to draw wider conclusions. The following list of objectives will be used.

1.4 Objectives

1.4.1 Overall objective

To learn more, through questionnaires, semi-structured interviews and literature review, about the health seeking behaviour and decision making process of people visiting the Magbenteh Community Hospital with their under 5 child.

1.4.2 Specific objectives

1. To set up a questionnaire to gather information about the general demographics of caretakers and their children and grandchildren visiting the Magbenteh Community Hospital during a 3-week period in October/November 2009.
2. To find out, through the same questionnaire and through semi-structured interviews, the reasons why caretakers of children under 5 years delay their decision to come to the Magbenteh Community Hospital when their child is ill.
3. To find out, through the questionnaires and interviews, the reasons why caretakers come to Magbenteh Community Hospital instead of going to one of the neighbouring health facilities.
4. To get a better idea, through the questionnaires and interviews, to what extent cost is a determining factor in the decision of the people to seek healthcare and which level of cost is considered to be affordable.
5. To establish, through the questionnaires, what distances people are travelling to seek healthcare at Magbenteh Community Hospital and what out-of-pocket expenses they have already made before coming here.
6. To establish advantages, disadvantages and limitations of different research methods in a rural setting in Sierra Leone.

2. Methods

A mixed-methods approach was used for this research. Primary data consists of both quantitative and qualitative data obtained from a small-scale study set in the Magbenteh Community Hospital in Sierra Leone. In addition to this data collection, literature was reviewed which focused on health-seeking behaviour, cost and quality of care. For this review relevant articles were searched using PubMed and Google Scholar. Additional reports, mainly originating from UN-agencies like WHO, UNICEF and UNDP, were found through the respective websites of these organizations. Citations of the articles were checked for relevance and relevant articles were searched through PubMed or Google Scholar. The latter was also used to get relevant and more recent articles by looking through the list of articles that cited a relevant article used for this study (reverse citation). The following search terms and combinations of them were used to find content-related literature: Health seeking behaviour, free healthcare, cost, cost-effectiveness, user fees, quality of care, utilization, willingness to pay (WTP), decision making, Africa and developing countries. Besides the exclusion criterion of articles not written primarily in English, there were no other specific in- or exclusion criteria used in this search.

Since quantitative and qualitative research both require their own way of describing the methods, results and discussion, the structure of this paper will be as follows. The methodology and methods of the quantitative and of the qualitative part of this study will be explained separately in this chapter. In the results chapter attention will first be paid to the results of the questionnaires. The results and also the discussion of the interviews will follow. Since the qualitative data is already discussed in the results chapter, the discussion chapter will mainly focus on the discussion of the results of the quantitative data.

2.1 Questionnaires

2.1.1 Methodology

A large group of caretakers visiting the under-five clinic of the Magbenteh Hospital were, over a period of three weeks, asked to participate in this study. The reason for choosing this approach was because through these questionnaires it was possible to obtain a good amount of valuable quantitative data during a relative limited time-frame. Close to a hundred people visit the under-five clinic on a daily basis and all of them will have information to share on their personal decision making process, why they came on this particular day to this particular hospital. Through the short questionnaires, basic information about health-seeking behaviour of a large proportion of these people could be gathered in a relatively easy and reliable way. The questionnaire was deliberately kept to only one page and the total time for people to fill the questionnaire, with the help of a research assistant, was around 5 minutes. This could be done in the waiting-time between registration and consultation with the doctor or nurse. In this way not a lot of time of the caretakers was lost and it was anticipated that a high number of the people attending would participate in the study. Besides this main advantage of being able to gather valuable information from a large group of people in a relative short amount of time, one of the other advantages was that this study-approach is very suitable for repeating later to compare the results after a certain intervention or unwanted change or even to be repeated in another health facility. Because of the limited scope of this study it was not possible to do this comparison at this point in time, but it would definitely be worthwhile to do so in a later stage, even by a different research group. A questionnaire with only multiple choice questions was chosen with limited space for other (open) input. And while this gives the opportunity for better and more reliable quantitative analysis it does limit the amount of new information that can be gathered. Another disadvantage of the questionnaire was that the target group, who generally consisted of low-educated women, could easily misinterpret or misunderstand the questions. To overcome this problem the questionnaires were piloted with a small group of participants before exposing the whole target group to it. Because of the high illiteracy rate among the target group a research-assistant helped people to fill out the questionnaires. This may have increased the risk of interviewer-based bias. Furthermore with the questionnaires there was the risk of getting socially acceptable answers.

The target group for the questionnaires were the caretakers who accompanied their child to the under-five clinic of the Magbenteh Hospital during a specific period of time. There were no other in- or exclusion criteria. The reason for choosing this specific target group was because the biggest increase in outpatient-attendances was seen specifically in the group of under-fives. Due to the high number of daily-attendances a relatively large number of participants could be approached in the relatively short time-span of this study. Because of the limited amount of time needed to fill the questionnaire this could easily be done during the waiting-time. On the other hand by choosing this target group one of the biggest limitations of the study was that we only gathered information from the people who had

already made the decision and were able to go to the Magbenteh Hospital. The people who did not come to the hospital, either because they went to another facility or even because, for whatever reason, they did not go to any health facility at all, are not included in this study. To include this group in the study was, due to the limited scope of the study, just not possible, but it is something worthwhile to consider for further research.

2.1.2 Procedure

At the same time as writing the research protocol a first draft questionnaire and informed consent form was designed. Ethical approval was requested and after some revisions of the research proposal it was approved by the Research Ethical Committee of the Royal Tropical Institute (KIT) in Amsterdam and the local authority, the Hospital Ethics Committee of the Magbenteh Community Hospital. In the meantime a local research-assistant was sought to assist in the data collection and the first draft questionnaire was piloted on a small group of caretakers. With the results of this pilot and the recommendations of the ethical committees the questionnaire and the informed consent were adjusted to their final format. Throughout the study period only small adjustments were made. After the first ± 50 questionnaires it turned out that there were certain frequent answer possibilities that were not part of the standard options, so they were added. Since for this first set of questionnaires the answers were manually added on the form, they could still be included in the analysis. Throughout a period of three weeks all caretakers attending with their child or grandchild at the under-five clinic of the hospital were asked to participate. For those agreeing to participate, informed consent was obtained and documented through a signature or thumb-print and the questionnaires were taken. At the end of the study-period all questionnaires were collected and entered in the software program EpiData 3.1. To limit the risk on entry errors all questionnaires were double entered and the two data files were compared for inconsistencies, which were then checked and corrected according to the original questionnaires. Analysis of the data was done with the software EpiData Analysis version 2.2 release 1, some additional calculations and graphs were made with Microsoft Office Excel 2007. Chi square testing was used to calculate significance and $p < 0.05$ was taken to be significant.

2.2 *Semi-structured interviews*

2.2.1 Methodology

In addition to the questionnaires, a limited number of semi-structured interviews were used in this study. As mentioned above, one of the major disadvantages of the questionnaires was that, although large numbers of people participated, only a limited amount of new information could be gathered using closed questionnaires. In contrast the interviews gave good opportunities to acquire additional, more detailed, information about the health seeking behaviour and decision making processes. This method could also evaluate the amount of misinterpretation and sociably acceptable answers. Through interaction between the interviewer and the participants, indistinct answers could be further clarified. The interviews gave more flexibility in gathering information than the questionnaires and each interview will gather different and new information.

One of the main disadvantages of this approach is that it is a very time consuming process; both the interview as well as the analysis afterwards. The number of participants is relatively small which requires a different sampling strategy. While through in-depth questioning certain sociably acceptable answers might be avoided there is always the risk of interviewer influence. In the case of this study the main investigator was also the one doing the interviews, but holding a key position within the hospital as the chief medical officer and one of the few expatriate doctors there, presented a risk that the people interviewed could refrain from speaking freely. The reason why the principal investigator did the interviews was because the advantages outweighed this risk. Because of the broad knowledge of the subject, the principal investigator was more suitable in taking the interviews than getting an external person with no knowledge of the subject. Dynamics of the semi-structured interviews carried the potential risk that a person with limited or no knowledge of the subject would not get as much detail from the participants as someone with insider knowledge. By the time of the interviews the principal investigator was involved full-time in the study and had handed over all responsibilities as chief medical officer and doctor in the hospital to his successor. The participants would never have seen the principal investigator as the treating doctor of their child. One other limitation of this study-method was language. People in Sierra Leone speak many different languages, but fortunately the most common language, Kreo, is closely related to English and was well understood by the principal investigator. Because of the importance of good communication during qualitative research it was decided to have a local translator present during all the interviews. For the interviews in a local language other than Kreo this was indispensable and during the interviews held in Kreo it clearly improved communication. One of the big advantages of being able to understand Kreo was that errors due to poor translation could be picked up and corrected. On the other hand, the local translator posed a potential risk of bias.

The target group for the interviews was similar to the questionnaires; the group of caretakers of under-five children. For the interviews, however, the participants were not

chosen from the group of outpatients, but were chosen from those who were admitted as inpatients with their child to the children's ward. The main reason to recruit these participants was because they stayed at the hospital and for this reason it was easier for them to make sufficient time available for the interviews. In addition it was also expected that this group of people held the more illuminating stories since their child was obviously more ill, which could perhaps have been caused by some form of delay. The study was an explorative study and participants were chosen in a purposive way, based initially on their place of origin. People who had travelled longer distances to get to Magbenteh were asked to participate to see why they particularly chose to come to Magbenteh. For comparison some people who came from nearby were also selected.

2.2.2 Procedure

After designing an interview guide and an informed consent form, ethical approval for the semi structured interviews was requested and was granted by the Research Ethical Committee of the Royal Tropical Institute (KIT) in Amsterdam and by the Hospital Ethics Committee of the Magbenteh Hospital. After approval a translator was recruited and the interviews were undertaken. All interviews were held in a secluded room outside of the ward and were recorded for later transcription and some notes were taken during the interviews. Following transcription of the interviews all relevant statements were classified under major themes and in this way all respondents' narratives could be easily compared.

3 Results

3.1 Questionnaires

For a period of 3 weeks (14 days) during October and November 2009 all caretakers that came with their child or grandchild to the under-five clinic were asked to participate in this research by filling out a questionnaire. Throughout this period 943 people attended the clinic of which 814 (86%) completed the questionnaire. General socio-demographic characteristics of the group of caretakers show that the vast majority are female (97%) and of the group of parents the mean age is 25 years (see also table 1). While the child mortality is very high in Sierra Leone three quarters of the people attending did not have a personal history of losing one of their children. But when we exclude the group of people who only gave birth to the one child they took to the clinic, the percentage of people who lost one or more child was 32%. In the group of people with 4 or more children more than half had a history of losing one or more of their children, with the most dramatic account of giving birth to 10 children and only having 3 alive. Looking at the socio-demographics of the children attending, the male-female ratio was 50.7 versus 48.9% and the number of males and females was evenly distributed in all age groups.

Caretakers	N	%	(Grand) children	N	%
Sex			Sex		
Male	20	2.5	Male	413	50.7
Female	792	97.3	Female	398	48.9
Not entered	2	0.2	Not entered	3	0.4
Relationship to child			Age groups		
Parent	733	90.0	≤ 12 months	315	38.7
Grandparent	50	6.1	12 – 24 months	220	27.0
Sibling	14	1.7	25 – 36 months	146	17.9
Other/not entered	17	2.1	37 – 48 months	88	10.8
Age groups (parents; n=733)			> 48 months	42	5.2
< 20 years	117	16.0	Not entered	3	0.4
20 – 35 years	408	55.7	Mean age (months)	21	-
> 35 years	33	4.5			
Not entered	175	23.9			
Mean age	25				
N° of children (parents; n=733)					
1	206	28.1			
2	172	23.5			
3	101	13.8			
4	83	11.3			
≥ 5	171	23.3			

Table 1: Socio-demographic characteristics of questionnaire respondents

The first part of the questionnaire focused on the type of complaint that people came with and possible delays that occurred between the onset of the complaints and attendance at the clinic. The most frequent complaint that people presented with was fever, more than 90% reported this for their child. Other frequent complaints were cough (59%) and

diarrhoea and vomiting (39%) (for full list see table A1 in annex). The median delay before seeking healthcare was 2 days (interquartile range of 2 to 4 days), but since this is the self reported delay it may differ. From the total of 814 people, 205 people said to have delayed their visit to Magbenteh with more than three days. This group was asked to indicate the reason for this delay. The most common reasons were: “because the caretaker thought that it would get better without help” (30%), “because they went somewhere else first” (28%) and “because the father/mother of the child was not around to take him or her to the hospital” (21%). Of all caretakers more than 60%

said to have been to another facility with their child for the same complaint before coming to the Magbenteh Hospital. In table 2 the health-facilities that were mentioned are listed. From this table it can clearly be seen that most people who sought healthcare somewhere else first, went to a dispensary to buy drugs (59%) or they bought drugs at a so-called “drug pedlar” (19%). Another hospital was visited in 81 cases (16%) and while there are almost 20 clinics in the

	N	%
Dispensary	293	58.8
Drug pedlar	93	18.7
Hospital	81	16.3
Traditional healer	19	3.8
Clinic	8	1.6
Not entered	2	0.4
Other	2	0.4
Total	498	100.0

Table 2: Visited health-facilities before coming to Magbenteh

district for each hospital, only very few (less than 2%) people reported going to a clinic first. 19 people ($\pm 4\%$) visited a traditional healer before coming, but this percentage might be higher since people do not always feel free to admit that they have visited a traditional doctor. Half of the caretakers came for the first time to Magbenteh Hospital and from the other half, 160 (20% of total) came for the second time and 244 (30% of total) came for the third or more time. The percentage of people going somewhere else first was significantly higher in the group of people who came for the first or second time to the hospital than in the group of people who had been there more than two times (65 versus 52%; $p=0.0003$). From this finding someone would expect that people who have been to Magbenteh Hospital more often, would seek healthcare in an informal setting (e.g. traditional healer or drug pedlars) less frequently. However when comparing the groups who came first and who came two or more times the latter had visited informal healthcare significantly more often ($p=0.0024$). From all 814 questioned caretakers 112 (14%) reported having been to any informal health care provider before attending to the hospital, like mentioned above the majority of the people who had been to another health facility first had been to a so-called dispensary (36% of all caretakers and almost 60% of the ones who said to have been somewhere else before coming to Magbenteh). These dispensaries vary widely in quality and they do not belong clearly to either the formal or the informal circuit.

Prices paid at these different health facilities were rather modest, with the prices at the formal facilities being much higher. The median price paid at all facilities was 500 Leones (IQR 500, 3,000) while out-of-pocket expenses made by people who had been to a hospital were more than 10 times this amount. Of the people who went to an informal facility more

than 65% paid 500 Leones (\pm US\$ 0.15) or less, for the formal facilities this was less than 18%. On the other hand almost a third of the people who accessed formal care paid more than 5,000 Leones (\pm US\$ 1.50) while in the group of people who went to the traditional healer or the drug pedlar only 1 in 12 paid over 5,000 Leones. The most frequent reason for going somewhere else first was because they came at a time that the Magbenteh Hospital was not receiving patients, for instance on a Saturday. In the three week period of the study 130 people gave this as the reason for why they went somewhere else first. So by extending the office hours most probably outpatient attendances would rise even further.

The main purpose of this research was to explore the reasons why people decided to come with their ill child to the Magbenteh Hospital. It was expected that cost played an important part in this decision making process. The 3rd part of the questionnaire focussed on this aspect. Interestingly on the question concerning the reason for coming to Magbenteh, only 44 people (5%) mentioned cost, while in that same question almost everybody (96%) mentioned the quality of medicine and care (see table A2 in annex). Other frequent answers on this question were that they had heard good stories by word of mouth (400 people said this, which is 95% of the group of people who came for the first time) and 385 people mentioned good experiences in the past (94% in group of people who had been at Magbenteh before).

On the question of what they thought was more important; "good quality of medicine and care" or "affordable cost", only 3 people chose affordable cost. Socially acceptable answers might have influenced the outcome of this question, but looking at the fact that no pressure was put on people, the questionnaires were taken by a local representative with no relation to the hospital and such a huge majority of the people pointed out quality of medicine and care to be the most important factor, it can be concluded that quality of care apparently is something that is very important to people. People were asked whether they would be willing to pay more than the 1,000 Leones that they currently pay. In the initial questionnaire this topic was covered in an open question concerning what they were willing to pay, but

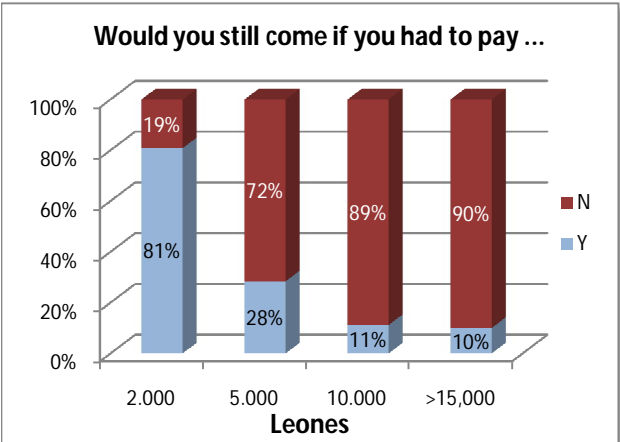


Figure 3: Willingness to pay more

during the piloting phase it became clear that this was a very difficult question for the target population to answer. In the final questionnaire this question was changed in a closed question in which people were asked if they were willing to pay 2,000, 5,000, 10,000 or 15,000 Leone. In figure 3 on this page you can clearly see that most people said that they would be willing to pay 2,000 Leones, which is still double what they pay now, but that

there was a clear cut-off point at 5,000 Leones which, for almost three quarters of the people was considered too much. Comparing, once more, the new attendences with the people who had been at Magbenteh before, it seemed that the former was willing to pay more. In this group more than one third was willing to pay 5,000 Leones and 14 and 13% were willing to pay 10,000 and 15,000 Leones. In the group of people who had visited Magbenteh before these percentages were respectively 22, 9 and 7.

The final part of the questionnaire consisted of a few questions about the geographical location of the attendees and the out-of-pocket expenses they incurred with transport. With the huge increase in patient numbers there was always the belief among the staff that there was an influx of people from far away. Looking at the results of this question it is clear that this is not the case. While there were still a few people who came from far away with a maximum distance travelled of 114 miles, almost 90% of the people had travelled less than 3 miles and 95% of the people came from the Bombali-district, the district where the Magbenteh Hospital is located. Interestingly even while most people came from walking distance, more than 80% of these people still preferred to come by public motorbike, for which they have to pay 1,000 to 1,500 Leones one-way.

3.2 Semi-structured interviews

Eight interviews were held, which lasted on average just under 20 minutes. Seven of the interviewees were mothers and one interviewee was a father of a child admitted to the paediatric ward of the hospital. Five of the eight interviewees came from places more than 10 miles away from the hospital and the remaining three came from close by. The themes that came up during the interviews are summarized in table 3.

Main themes	Sub-themes
Financial	• Financial considerations
	• Sources of family income
	• Cost of transport
Health benefits & risks	• Good treatment
	• Health education
	• Healthcare in Sierra Leone in general
	• Reasons for delay
Networks	• Quality of care/interpersonal relationships
	• Word of mouth
Past experiences	• Experience at other formal facilities
	• Experience at informal facilities
	• Experience Magbenteh

Table 3: Themes from semi-structured interviews

3.2.1 Financial

The initial thought that was the basis of this study was that the abolition of the user fees was the main reason outpatient attendances increased. It was thought that financial considerations are an important factor in the decision making process of people for attending a certain health facility. But in line with what emerged from the results of the questionnaires people did not mention the financial considerations as one of the main factors why they had chosen to come to the Magbenteh Hospital. However throughout the interviews it was tried to get as much information as possible from the interviewees about this subject. This resulted in the fact that every person interviewed said in one way or the other that the free treatment had influenced their decision to come to Magbenteh Hospital. The reason why, most of the time, they did not mention it spontaneously, was because it is not their most important reason for coming. Cost, however, emerged as one of the most important reasons not to go somewhere.

"[On the question why they did not go to the clinic] Here is preferable, because they administer good drugs. [On the question if it is not also because of the cost] It is also because of the cost. In the clinic they charge 3,000." (interview 7)

From many of the replies concerning financial considerations it was seen that it was not necessarily the free treatment that people appreciated, but more the fact that they were

under the impression that Magbenteh employed an exemption mechanism for people that cannot afford to pay for treatment. Interestingly this approach was deliberately changed in the beginning of 2008 when it was decided that every child under the age of five years should receive free treatment irrespective of the (financial) status of its parents.

“The good medicine are most important for me, but if I cannot pay at Magbenteh they are sorry for me.” (interview 5)

This exemption mechanism, or “the feeling sorry for the people”, seemed to be specifically something that people would tell their relatives and friends about when advising them to go to Magbenteh, the so-called word of mouth promotion. Most probably one of the main differences with other places where officially there is an exemption system in place is that at Magbenteh people really do not have to pay anything, while in these other places most of the time, especially the poorest, end up paying an unofficial fee (or bribe) for their consultation and/or medication (19).

“The message is going around that at Magbenteh they are sorry for the people that cannot afford. So when you come here and you don’t have money they will treat you.” (interview 2)

Many studies have proven that this system of informal payments is one of the main barriers for poor people to access health care (20). Looking at the reasons why at Magbenteh apparently there seems to be no evidence for informal payments the most probable reason is because of the ongoing financial support and supervision of the hospital by an international NGO. In comparison to government employed staff the higher salaries for the staff (nurses and doctors) will lead to improved motivation and less need for supplementing their salaries through informal fees (21). Also the permanent presence and supervision by expatriate staff probably plays a crucial role.

“People used to say that at Magbenteh they are helping the people who cannot afford, for that reason I am happy to be here” (interview 3)

As mentioned earlier, Sierra Leone belongs to one of the poorest nations in the world. With a Gross National Income (GNI) of 320 US\$ (Worldbank 2008) Sierra Leone ranks 201 out of the 210 countries in total and no less than 70% of the people live below the poverty line (2) with even higher percentages in the rural areas. The interviews attempted to get better insights into the sources of income of the people visiting the Magbenteh Hospital. Looking at the answers for these questions it is quite clear that the people do not have a lot of money to spend and that many times the transport costs alone create a heavy financial burden.

“My child has complaints of boils and itching of lower extremities since one week. Because of transport problems I could not come any earlier. My husband is not available and that is why I do not have money for transport.” (interview 4)

Through the interviews it became clear that in many occasions other family members had to provide financial assistance for transport. The result is that these family members (in most cases the mother-in-law) hold strong influence over the decision as to when and where somebody can go with their sick child and in this way the independence of the mothers is limited.

“When my mother-in-law saw that my child was about to die, they borrowed the money for transport from somewhere. I don’t know from where.” (interview 4)

In some occasions it was even not clear where attendees could get the money to travel back to their homes and in these cases they seemed to be dependent on the goodwill of certain family members. Of course it needs to be noted that these imposts are bigger for people who come from far away since they had much higher transport costs than the majority of the people who come from nearby. Transport costs to come from remote rural places are substantially higher than, for example, travel between bigger cities/towns. This clearly amplifies the inequality of the people living in remote places, who already have less access to proper health facilities.

“I am not able to pay more money. To come here I took two bikes which cost me 20,000. To get this money I had to sell my crops. For now I do not have the money to go back, but when my child is better and discharged I will go to relatives in Makeni to borrow money. I will pay back the money with the goods they need.” (interview 2)

While, contrary to our expectations, cost wasn’t spontaneously mentioned as one of the main factors influencing the decision making process, it became clear from the interviews that people do experience substantial financial barriers in their access to healthcare. Excessive transport costs are one of the major barriers, but the problem is compounded because the majority of people just don’t have a solid source of income.

“I cleaned some rice and carried the rice from the village and walked for 5 miles, there I sold the rice. The little money I made I decided to take transport. My wife and I pay paid 6000 to come here.” (interview 1)

While the removal of user fees does relieve the financial barriers, it does not solve the problem of high transport costs especially for people living in the rural areas. The lack of income can lead to unnecessary delays resulting in unnecessary morbidity and mortality.

“I tried for two days, but the child was not getting better, then I went to the bush and picked some fruits, Ochra, Giblox and other vegetables and sold these to get money to pay for the clinic.” (interview 3)

3.2.2 Health benefits & risks

From the results of the questionnaires it was apparent that good medicine/treatment was the main reason for people to come to Magbenteh Hospital and that cost was secondary. This same trend was noticed during the interviews.

"I come here because the medicine is good" (interview 4)

By "good medicine" people mean a whole range of things, but the actual quality of the drugs is certainly one of them. "Good medicine" also seems to mean the quality of care given in general and the way they are treated at the hospital. This quality of care issue will be highlighted further in the next chapter. How participants gain an impression of the actual quality of medicine wasn't always clear and this seems to be subjective largely based on the impressions of others.

"The people said that there is good medicine in Magbenteh" (interview 2)

An objective measure of the good quality of the medicine seems to be that their child actually gets better after treatment. Whether this was the case in other facilities was not something that became clear from the interviews. Many people buy drugs from people in the streets (so-called pedlars) and the quality of these drugs (with a high proportion of counterfeit drugs) is definitely below standard.

"The first time I came here my child got better after the treatment, so I decided to come again. The first time my child was sick a friend told me to go to Magbenteh because they have the best medicine." (interview 5)

One could ask, if there are places around that offer affordable and good quality healthcare, why would people still decide to first buy their drugs at an informal and unreliable place like the drugs pedlars or the so-called "mushroom-clinics"? The most logical explanation is that these informal places are much more accessible. They are closer to the people's homes so there are no high transport costs involved and they do not have strict opening hours like most of the formal places do. Nevertheless it can be concluded that the practice of first going to these other, less reliable places does lead to delays, which again could result in unnecessary morbidity and even mortality.

"When my child became ill I went to Loretto clinic, but first I was buying drugs at the street. For the medicine on the street I paid 1,000." (interview 5)

Based on the above findings it can be concluded that the solution lies not only in making healthcare free of charge but also to make it accessible in other ways, especially by extending the opening hours. From the questionnaires and the interviews it can clearly be seen that the people are happy with a certain type of healthcare and that, through this healthcare and word of mouth promotion, it is possible to change the health-seeking behaviour of people in a positive way.

“Before when my children would be sick I would go into the bush, get native herbs and give. I never went for any illness of my children to a hospital or clinic before. I will not use native herbs again, but I will come again to Magbenteh when my child is ill.” (interview 6)

3.2.3 Networks

We know now that financial considerations and good quality of medicine play an important role in the decision making process of the people to go to a certain health facility, but one of the important conclusions of the interviews was that “quality of medicine” meant much more than the quality of the drugs alone. The quality of care in general and more specifically the way doctors and nurses treated their patients, the so-called interpersonal relationship, seemed to be very important for patient satisfaction.

“...the nurses here are not sleeping at night. At any time they come and look at your child and if your child has fever they come and give medicine. In other hospitals they sleep. This is the main reason to come here. In other hospitals when my child is sick the mother has to do all the work, the nurses do not care a lot, they only give the medicine. But here the nurses will embrace the children, they will encourage mother, they touch the children and give the medicine.” (interview 4)

Several studies have previously identified the importance of good interpersonal relationships between healthcare providers and consumers and how this affects client-satisfaction and leads to greater use of health facilities (22, 23). In a Tanzanian study by Manongi *et al.* (24) there was an attempt to improve staff attitudes through a series of workshops, but this didn't achieve a clear improvement in patient satisfaction. During focus-group discussions the nursing staff indicated that as long as their needs in the working environment were not met (in terms of salaries, allowances for overtime and respect from administrative and more senior health staff) it would be unlikely that the focus on patient needs would improve. While not specifically studied this could indicate that because the working environment at the Magbenteh Hospital is better than at the surrounding health facilities (certainly true in respect of staff payment) there is more attention to the needs of patients as a result.

“Magbenteh treats the people different than the other places in Sierra Leone. Whenever I come to this hospital I feel at home, the doctors receive me well as well as the nurses in the ward. This is different from the other hospitals, we pay there and they shout at patients, they ignore them and they do not encourage patients.” (interview 8)

One of these neighbouring facilities is the Makeni government hospital. A study in 1997 by the Prevention of Maternal Mortality (PMM) Network showed from focus-group discussions that patients were not always satisfied with the attitude of health staff at that facility (25). At the time patients indicated that staff at other hospitals were more attentive, this is what one participant said: “When you take a serious (obstetric) case there (to the mission hospital

in Kamakwie), they try hard to help you as quickly and as best as they can. But for the Government hospital in Makeni they don't even look at your face in time."

Shortages of resources were already problematic and one participant said: "You are given a prescription to buy your drugs at a pharmacy outside the hospital, even at night. This is strenuous." From discussions with staff it can be concluded that staff morale was low mainly because of very low salaries, which also forced them to charge extra fees to patients. Through extra external funds the PMM network tried to improve this situation and during the study period from 1989 to 1995 this seemed to have a good effect with double the amount of maternal admissions already in the first year of the intervention and 8 of the 10 patients interviewed said that services in the hospital had improved. Judging by the statements of some of the participants in our study this improvement was not sustained over time, probably partly because Makeni-town was subsequently badly struck by the civil war.

"They also said that the nurses are trying well at Magbenteh, when you come with your patient they will take good care, unlike the other hospitals, where you still have to take care for your child yourself and they ask for money. At the government hospital just after admission they will tell you this drugs cost this, if you don't have the money to buy, they will give you prescription to buy drugs at a particular pharmacy." (interview 5)

Quality of care and the willingness to pay (WTP) are closely related. In a Nigerian study more than 90% of participants indicated that an improved overall quality of care and ready availability of drugs would motivate them to pay more for care in health centres (22). Several studies have shown that the WTP by females is lower than for males, which most probably can be explained by the lower autonomy women have over household resources (26, 27). It has also been shown that people are more willing to pay for services in a referral hospital than, for instance, in a district hospital (28) and that the WTP increased significantly if drugs are available and if the waiting time for consultations is reduced (26). Interestingly while this issue of waiting time was seen as an aspect of quality of care in many studies it wasn't mentioned throughout the interviews in the present study. This indicates that apparently this is not a big problem at Magbenteh, but also not at the other health facilities that people have been to. The reason most probably is that health facilities are not visited frequently and in return are not busy and waiting times are limited.

The role of word of mouth seems to have been important in the increase in outpatient attendances in the present study. This was also seen throughout the interviews where all interviewees indicated that word of mouth played a role in their decision to come to Magbenteh. Looking at what elements in the communication seemed to be important, both cost as well as good treatment was mentioned.

“Someone told me to go, the old ones that used to come and seek for medication here, they are the ones that carry the information that when you go at Magbenteh Hospital you will get the best treatment and it will not cost you.” (interview 1)

Not a lot of research seems to have been done on the subject of ‘word of mouth’ in relation to health care, especially in developing country settings. There is however some literature that pays attention to word of mouth in the developed world. Kenagy and colleagues in a 1999 article published in JAMA come to the conclusion that word of mouth is the most powerful force in health care marketing (29). The information coming from your friends and family is considered as the most trustworthy (30) and most probably more trustworthy than health related messages reaching the communities through health education programmes. Based on the results of our study it can be concluded that word of mouth is a very powerful tool for spreading health-related messages among the community and it is definitely an area to be looked at further, perhaps as part of health education programmes. During the interviews it even seemed that stories were cast in an even more positive light just to convince people to also go to Magbenteh.

“I heard some people saying that when you go to Magbenteh they will help the mothers and they will help the children, everything is free. If you don’t have anything to eat, they provide food for the children. The drugs are free, the nurses are friendly. [On the question what the other people in the village will do] They are not going to use native herbs again, the other woman advised me to come here.” (interview 6)

The effect of just one positive story can already be enough to convince someone to go to a certain health facility. Likewise, one bad experience can of course also lead to whole villages not going to a certain facility anymore and to fall back to their traditional habits. It is therefore very important to maintain the same high standard for every patient that comes.

“One relative of mine came here before with her own child and the child returned healthy.” (interview 7)

3.2.4 Past experiences

The final theme that came up during the interviews was the one of past experiences either at Magbenteh or at another formal or informal health facility. Only few things were said about past experiences at Magbenteh and they all came more or less down to what was mentioned earlier about quality and free care. Of course the setting of the interviews at the Magbenteh Hospital, taken by staff of the hospital did not necessarily facilitate harsh criticism.

“I came to Magbenteh because when I came here before they received me well, the doctors treated the child and the child improved and they offer free treatment.” (interview 8)

More interesting information came from the experiences in other facilities. While it doesn’t always seem as if there is a proper referral system in place in Sierra Leone most of the time

people go first to a health post or clinic and if their child does not improve they go elsewhere. In one way this creates a delay, but relying on the medical skills of the staff at these centres facilitates a system of triage and referral.

"My child was admitted for one day in health centre. The nurse of the health centre sent us to Magbenteh." (interview 2)

Besides the earlier mentioned story about the Makeni government hospital a few other remarks were made about the neighbouring hospitals. These remarks varied from positive:

"I am happy with the clinics around the place where I live, because I don't know about medicine I happy with anything they give me." (interview 3)

To more critical ones:

"In Holy Spirit [= mission hospital in Makeni] they overcharge people and when I came here they gave free treatment to my child, that's why I choose to come here." (interview 8)

Finally a few comments were made about past experiences in the informal circuit, which includes the drug pedlars and the bush-doctors. Some people seemed to have eye for the limitations and perhaps even the dangers of making use of the informal health system. They even indicated that from now they would rather make use of health facilities like Magbenteh.

"I am afraid to buy medicine at those doctors passing around because they carry expired drugs so that is why I decided to come to the hospital." (interview 1)

There were also advantages of the informal system mentioned and most of them were financial. Many times the people do not have to pay for this informal healthcare, mainly because the so-called bush-doctors are closely related to the people in the village. From the results of the quantitative data we already saw that 60% of the people who indicated that they visited a traditional healer did not have to pay anything and the rest indicated that they paid a very small amount. Furthermore these traditional healers also seemed to be less strict on direct payment and they are flexible in the form of payment they will accept. Together with proximity, this financial flexibility of the informal healthcare could be an important reason why people would still decide to make use of this informal system before coming to the formal system.

"If the bush-doctor is not your relative you need to pay him, but he will accept whatever you have (chicken, rice, etc.)." (interview 6)

4 Discussion

4.1 *General discussion*

The discussion of the qualitative data was incorporated into the previous chapter, as is common practice with qualitative research where results and analysis are combined. This chapter will mainly focus on the quantitative results. The main purpose of this study was to learn more about the reasons why people would decide to come with their child or grandchild to the Magbenteh Community Hospital. Looking at the huge increase in outpatient numbers at the Magbenteh Hospital after the abolition of user fees, the main thought was that cost would play an important role in the decision making process of attendees, something that is supported through a wide range of literature which was already discussed in the introductory chapter (12-14, 16-18). The questionnaires attempted to gain a deeper insight into the decision making process of people visiting the Magbenteh Hospital with their child or grandchild. In contrast to what was expected, cost was not mentioned as the main reason for attending, but factors like quality of medicine and word of mouth seemed to be much more important. Does this mean that cost is not an important factor in the decision making process of the study population? Looking at the huge increase in outpatient attendances after the abolition of user fees for this specific group we can conclude that this is not the case. Cost was definitely a barrier to access before and was the main reason for people not to come to Magbenteh Hospital. The aim of this research was not to show why people do not go to a certain health facility, but it was to show why people do go to a certain facility and the principal reasons were good quality of medicine and word of mouth promotion. Drug quality and perceived effectiveness of the treatment provided were keys to the choice of healthcare provider and while this was not examined directly in our study the perception that foreign drugs are considered to be of higher quality than national/regional manufactured products was found elsewhere (31). This distrust of the locally produced drugs is not without basis, since it has been proven that these drugs are less reliable (32). The origin of the drugs could also have played a role in the increase in outpatient numbers in the Magbenteh Hospital. At the same time that the new price policy was introduced, major adjustments were made to drug procurement. From the beginning of 2008 all drugs were bought through the International Dispensary Association (IDA) and came from abroad. So it could very well be that this has also influenced the judgement of the population of the hospital and likewise the attendance-rate. In relation to this drug quality and the abolition of user fees it has also been said that people have a general suspicion towards goods that are given free of charge (31) and that they undervalue anything that is free (22) which can then lead to a higher proportion of the people not completing their full course of treatment (33). In both the quantitative and the qualitative parts of this study there was no indication that this is the case.

Word of mouth was already discussed in the qualitative part of this paper and while not a lot of studies focus specifically on this subject it is mentioned as a strong factor in many related studies (11, 31). It emerges from both this and from previous studies that word of mouth is a

strong instrument for reaching the community. We recommend making use of it to reach the communities as much as possible.

Delay in seeking healthcare is still considered to be one of the main causes of unnecessarily high morbidity and mortality (34, 35) and while on average people reported coming with their child two days after the onset of the disease, delayed presentation is considered to be one of the main causes of a high under-five mortality rate in the Magbenteh Hospital. This figure of two days may of course be biased by a felt need to give socially acceptable answers; in general people are less likely to admit that they have waited long before bringing their child to the hospital. The main reasons for delaying were related to some form of belief that the child would get better by itself or that they had gone somewhere else first. Interestingly, an important reason for first going somewhere else was because people came to Magbenteh Hospital when they were only receiving emergency cases. The normal opening times of the under-five clinic are restricted to mornings on weekdays. During the study period it was found that up to 50 people per week went somewhere else first for this reason and it is likely that an even higher number of people were sent away and never came back. In addition to low cost, good quality of medicine and word of mouth promotion, flexible and broad opening hours can also have considerable influence on the accessibility of health facilities.

Interestingly if people decided to go elsewhere first they would generally go to a dispensary just to buy drugs. Hardly anyone reported attending a clinic before coming to Magbenteh, even though clinics constitute the majority of other health facilities in the district. Reason for this could be that people do not need to come to Magbenteh Hospital anymore because they have already received the right treatment at the clinic. Looking at the low under-five attendances of clinics in the district (on average clinics have around 100 under-five attendances per month, while in comparison at Magbenteh this is around 1300) this is not the most logical explanation. People seem to prefer to go to an NGO-run place like Magbenteh and judging from the results of the interviews the most important reason for this is the perception of better quality of medicine and care at these places. Future research could perhaps focus more on the differences between often and less frequented health facilities.

Willingness to pay (WTP) has already been covered in the qualitative part of this thesis. From the quantitative data a clear cut-off point for WTP was around 5,000 Leones. Almost three quarters of participants found 5,000 Leones too much, while 2,000 Leones was acceptable for the vast majority of people. While the initial assumption was that any cost would be a barrier for access to healthcare, more than 80% of people are even willing to pay double what they presently pay. Of course the remaining 20% of the people who are not willing or perhaps not able to pay the higher amount, are the group that you would also like to reach since they are otherwise at risk of being deprived of good healthcare. From this perspective a system with exemption mechanisms for people who cannot afford to pay would be

preferable. However setting up exemption systems for the poor has proven to be difficult (36).

Fabricant *et al.* looked at the financial burden put on people in Sierra Leone by healthcare (37). While the average expenditure on healthcare was just under 7% of the annual income of all income groups, this was more than 25% for the poorest people. It was seen that a large proportion of these high costs were incurred at higher-level facilities, i.e. government and mission hospitals. The main reason for this finding was that once people had to travel a certain distance to reach a primary health care (PHC) unit, they would rather go immediately to a higher-level facility because of the perceived greater chance of receiving the right type of care. This means that high household expenditure on health is not resolved by exemption mechanisms for the poor in these PHC units, but needs a much wider approach in which quality and access is improved and more people are drawn to the PHC units. Nevertheless from our results it could be seen that costs made by people at the official facilities, including PHC-units, was much higher than costs made at informal facilities. So to make PHC units more accessible also costs (official and unofficial) should be lowered.

Interestingly our quantitative data revealed that people who had been to Magbenteh before were less willing to pay more than 5,000, 10,000 or 15,000 Leones than the people who came for the first time. This could very well point to the fact that once people are used to a certain price level, they are less willing to pay more subsequently. Thus, raising the user fee could very well lead to a decrease in outpatient attendances. It is expected however that this would be a temporary decrease and that if the quality of care remains the same, people would eventually return (37). From this perspective, patient retention should also be a priority. From our quantitative data we concluded that people who had been more than once to the Magbenteh Hospital would less often have been at another health facility first, but when they did, it would be more often to an informal than to a formal type of facility. So it remains important to educate the people about the risks of certain types of informal healthcare, even if they have already taken the step of coming to a formal healthcare facility.

4.2 *Limitations*

Some limitations of this study were mentioned in earlier chapters. The main limitation was the fact that only the people actually visiting the Magbenteh Hospital were included. This will have limited the perspective of gathered data and does not give a picture of the health seeking behaviour of the population as a whole (especially the barriers to accessing healthcare). In other words the study population was able to come to the Magbenteh Hospital by themselves but the people who didn't would be expected to have experienced the greatest barriers. To obtain an insight in the decision making process of this part of the population, a thorough survey in several different villages and communities would be required, but this was not feasible within the scope and timeframe of this study. Furthermore there was the risk throughout the study of soliciting socially acceptable answers and there could have been a certain degree of interviewer based bias. Both of these limitations were already highlighted in the methods chapter. The language barrier during the qualitative part of this study was also discussed previously.

4.3 *Lessons learned*

One of the most important personal lessons learned during this study was that doing a meaningful study which includes both quantitative and qualitative research methods is very time-consuming and needs sufficient planning. Because of time restraints some parts of the study could not be prepared and worked out as thoroughly as wished. The fact that the study took place in a developing country also caused some additional difficulties, of which proper communications with relevant authorities was one of the biggest. It was the initial plan to gather additional information about the functioning and performance of other health facilities in the neighbourhood (e.g. attendance figures), but this was not possible.

In terms of the questionnaires, the main difficulty was to design a number of questions that the average Sierra Leonean is capable of answering. Besides the fact that most participants are illiterate it also became clear during piloting that a western style of questioning is problematic for most of the target group. Questions like: *“what is the most important reason to come here”* and *“how would you rate this on a scale from one to ten”* were impossible to answer for a large proportion of the target population, even after a thorough explanation. An important lesson was the importance of piloting the questions to a small proportion of the target group before using them more widely.

Finally, in addition to the above mentioned time constraints, it was found that the sequencing of quantitative and qualitative research is important. Because of the limited time-frame during this study both the questionnaires and the interviews were taken at around the same time and before any analysis was done. In retrospect, it could have been preferable to first have some (preliminary) results of the questionnaires so certain interesting outcomes could have further been clarified through the interviews. While in this study quantitative and qualitative methods were treated as separate it would have been better to have linked the two approaches. The results of the questionnaires could have helped during the semi-structured interviews and the results of the interviews could have aided the design of the questionnaire.

4.4 Future research and recommendations

This study was intended to be an explorative study of health seeking behaviour and decision making processes of the people in a region of Sierra Leone. As a result of the exploration a range of suggestions for future research arose. From the results of this study and earlier published studies it can be concluded that there is a strong link between the abolition of user fees and huge increase in outpatient attendances. It would be interesting to investigate whether this increase in outpatient attendances also leads to improved health outcomes. It may well be that despite the increase in attendances there is still a large group of people who are not willing or able to attend a hospital or clinic. To get greater insight into this, further research would include people from the communities through a survey and to include people who visited other formal and informal health facilities. The structure of such a study could be similar to this study with a quantitative part in the form of questionnaires and a qualitative part with interviews, perhaps supplemented with focus-group-discussions. One of the many interesting issues to examine through such a study would be why people decide to make use of the informal system instead of the formal one.

Our study focused on the group of patients under the age of five since it was in this group that we had seen the biggest increase in attendances. For future research it could be worthwhile to broaden this focus and to also look at reasons why other patients do or don't go to certain health facilities. At the beginning of 2008 the maternity ward of the Magbenteh Hospital was newly opened and after more than a year, attendances at this ward were still very low. As with under-five mortality, Sierra Leone has problematic maternal mortality figures and an important factor is that people do not come to a health facility to ensure safe delivery, especially when there are complications. It would be an excellent study with a broad impact to find out more about the reasons why women deliver at certain places. Similar techniques to this study could be used. Finally the role of word of mouth came up often during this study and few studies have focussed on this subject. From the results of our study it can be seen that word of mouth can be a powerful tool for reaching people in the communities. It would be worthwhile to investigate word of mouth promotion to see how it can be used in the most effective way in future development programmes.

In line with the importance of word of mouth it was also clearly seen that it is of utmost importance for a health facility to maintain high standards. Negative experiences spread just as quickly within the communities and good reputations built over several years can be seriously undermined. While for most facilities the main task is to improve the quality of care, for a place like Magbenteh the challenge is to maintain the current high level of care. Another recommendation following this study is to pay more attention to health education while people visit the hospital. The results of the quantitative data show that the percentage of people first going to an informal health care facility was higher for people who had been to Magbenteh before than in the group of people who came to Magbenteh for the first time.

The use of health education while people visit a formal health facility could reduce the inappropriate usage of informal facilities which in return will limit the delay.

Finally it was seen that the limited clinic opening hours for non-emergency cases created access barriers for people. In the light of this a strong recommendation would be to extend these opening hours, for instance by also having an under-five clinic on Saturday mornings. This way fewer people will be forced to attend informal places out-of-hours and again delays and unnecessary morbidity and mortality can be avoided.

5 Conclusions

The main aim of this study was to gain a better understanding of health seeking behaviours and decision making processes of the people visiting the under-five clinic of the Magbenteh Hospital. The immediate reason for choosing this topic was a huge increase in outpatient attendances which followed the removal of user fees for the under fives. The initial assumption was that the lower cost was the main reason for people to attend the Magbenteh Hospital while not having done so previously. A mixed method approach was used with both quantitative and qualitative methods. Surprisingly both the questionnaires and the semi-structured interviews revealed that cost was not mentioned as the main reason to come to the Magbenteh Hospital by the target population. There seemed to be a wide range of factors that played a role in people's decision to come to this specific hospital at this specific time. Cost was one of these factors, but was not the main one. However looking at the huge increase in outpatient attendances following the abolition of user fees it is safe to conclude that while cost was not the main reason for people to attend Magbenteh Hospital, cost could very well have been the main reason not to come to the Magbenteh Hospital in the past despite a wish to. This is something that is also described in the literature and on a broader scale it can be said that (high) cost for health care can definitely be considered to be one of the main barriers to access healthcare.

Of the other factors influencing the decision making processes of people in their choice of healthcare provider, good quality of care and more specifically the good quality of the medicine provided seemed to be most important. Several aspects relating to good quality of care came up, with the interpersonal relationship between healthcare provider and client being the most important. It seems to be the case that good interpersonal relationships and good quality of treatments provided seemed to differentiate Magbenteh Hospital from the surrounding health facilities. The reason for this difference between health facilities lies for a big part in the underlying organizational and financial structure. Magbenteh is (financially) supported by an international NGO which leads to good working conditions for the staff and permanent presence and supervision of several expatriates. For health staff to maintain a good relationship with their patients, to give good medical care and to make sure that they do not charge unofficial fees or demand bribes from the patients, working morale needs to be maintained. The best, and perhaps only, way to do this, is through good working conditions.

It also became clear that word of mouth promotion played an essential role in the increase in outpatient attendances. At no point was any publicity given to the fact that the hospital had changed its pricing policy, but within weeks of this change there was an unprecedented increase in patient numbers. Other studies have documented a similar effect of word of mouth. Interestingly not a lot of research seems to have been conducted on this subject (especially in resource poor settings) so it would definitely be worthwhile to investigate this further. Looking at the results of our study we can conclude that word of mouth is a

powerful tool for spreading health related messages and even more so to giving publicity about certain health facilities. Finally in addition to low cost, good quality of care and medicine and word of mouth, it was also seen that flexible and long opening hours can have a huge effect on the accessibility of health facilities.

Since this study focussed largely on the role of cost in the accessibility of healthcare facilities, special attention was paid to financial matters. One of the main conclusions about the financial situation of participants was that in general the people have very little margin for discretionary expenditure. Most of the people interviewed did not have a fixed source of income and the out-of-pocket expenses for matters like transport were already a considerable burden on their financial situation. It was important for them to know in advance that high amounts of unofficial payments and bribes would not be asked and that if they really could not afford to pay for their treatment, exceptions were made.

A much heard fear of the abolition of user fees is that this would create an overutilization of services and that people would come from far away to make use of these services. After the initial abolition of user fees there was a certain amount of frivolous-use seen at Magbenteh and to prevent overutilization of services, a small registration fee was introduced. This small one-off fee seemed to have the required effect. In respect to distances travelled, against the general impression of the staff at Magbenteh, people did not tend to come from places far away and the vast majority had travelled less than 3 miles. Finally there is the believe that people would not value free care and compliance would be low, but no prove was found for this throughout our study.

Looking at all of the above we come to the general conclusion that improving access to health facilities is a complex matter with many different factors. We feel that the under five clinic of the Magbenteh Hospital is a good example of how certain barriers for access to healthcare can be removed. The main reason why this seems to have worked in this case and not in so many other places lies most probably in the difference of the underlying financial support of the Magbenteh Hospital when compared with surrounding health facilities. The bottom line is and remains that to maintain a system of good quality and affordable and accessible healthcare facilities, sufficient ongoing financial support is necessary.

Acknowledgements

The author of this thesis wishes to express his thanks to everyone who has contributed to the success of this study. Special thanks go to the management and staff of the Magbenteh Community Hospital for their provided assistance during the preparation and execution of the questionnaires and semi-structured interviews. We wish to especially thank the few people who have functioned as translator during the interviews and we wish to thank the research assistant, Mr. Emmanuel M. Conteh, for his thorough and precise work. Without the time and valuable information of all the participants this study would not have been possible and for this we would like to thank them. We sincerely hope that the results of this study will contribute to an overall improvement of healthcare in Sierra Leone of which they, their relatives and many more can benefit. Dr. Marit van Lenthe is thanked for her advice in the statistical analysis of the quantitative data. Finally from the Royal Tropical Institute (KIT) in Amsterdam the author would like to thank the backstopper and the thesis advisor (names not mentioned in order not to bias the examination committee) for his very helpful assistance, especially in the field of the qualitative research.

References

1. CIA world factbook: Sierra Leone. [Online]. 2009 [updated 2009 November 27; cited 2010 January 13]; Available from: <https://www.cia.gov/library/publications/the-world-factbook/geos/sl.html>.
2. Klugman J. Human Development Report 2009. New York: United Nations Development Programme; 2009.
3. World Population Prospects: The 2008 Revision, Highlights, Working Paper: United Nations, Department of Economic and Social Affairs, Population Division; 2009. Report No.: ESA/P/WP.210.
4. UNICEF. The State of the World's Children 2009; Maternal and Newborn Health. New York: United Nations Children's Fund; 2008 December. Report No.: E.09.XX.1.
5. UNICEF. The State of the World's Children; special edition; Statistical Tables. New York: United Nations Children's Fund; 2009 November 20.
6. Revised Health Services Cost Recovery Policy Guidelines for Sierra Leone. Final draft report: Government of Sierra Leone. Ministry of Health and Sanitation; 2006; Available from: <http://whosierraleone.org/Policy/National Cost Recovery Policy Guidelines FINAL 2006.pdf>.
7. Wakabi W. Mothers and infants to get free health care in Sierra Leone. *Lancet* 2010;375:882.
8. WHO. World Health Statistics 2009. Geneva: World Health Organization; 2009.
9. Climatological Suitability for Malaria Transmission - Local Analysis. [Online]; 2010 [cited 2010 May 23]; Available from: http://iridl.ldeo.columbia.edu/maproom/.Health/Local/csmt_history.html?map.X.plotvalue=12.07W&map.Y.plotvalue=8.89N&map.X.units=degree_east&map.Y.units=degree_north&map.X.plotfirst=13.5W&map.Y.plotfirst=4.5N&map.X.plotlast=9W&map.Y.plotlast=11.5N.
10. Ponsar F, Philips M. Access to healthcare in post-war Sierra Leone. Summary of a 2005 survey in four districts: Kambia, Tonkolili, Bombali, Bo. Unpublished document: Medecins Sans Frontieres; 2006 January.
11. Spry E. Ola Durings Children's Hospital - Discussion paper. Unpublished document: 2010 January.
12. Nabyonga J, Desmet M, Karamagi H, Kadama P, Omaswa F, Walker O. Abolition of cost-sharing is pro-poor: evidence from Uganda. *Health Policy Plan*. 2005;20:100-8.
13. Audibert M, Mathonnat J. Cost recovery in Mauritania: initial lessons. *Health Policy Plan*. 2000;15:66-75.
14. Haddad S, Fournier P. Quality, cost and utilization of health services in developing countries. A longitudinal study in Zaire. *Soc Sci Med*. 1995;40:743-53.
15. Jones G, Steketee RW, Black RE, Bhutta ZA, Morris SS. How many child deaths can we prevent this year? *Lancet*. 2003;362:65-71.
16. James C, Morris SS, Keith R, Taylor A. Impact on child mortality of removing user fees: simulation model. *BMJ*. 2005;331:747-9.
17. Yates R. Universal health care and the removal of user fees. *Lancet*. 2009;373:2078-81.
18. Ansah EK, Narh-Bana S, Asiamah S, Dzordzordzi V, Biantey K, Dickson K, et al. Effect of Removing Direct Payment for Health Care on Utilisation and Health Outcomes in Ghanaian Children: A Randomised Controlled Trial. *PLoS Med*. 2009;6:48-58.
19. Mamdani M, Bangser M. Poor People's Experiences of Health Services in Tanzania: A Literature Review. *Reproductive Health Matters*. 2004 Nov;12(24):138-53.

20. Soeters R, Griffiths F. Improving government health services through contract management: a case from Cambodia. *Health Policy Plan.* 2003;18:74-83.
21. McCoy D, Bennett S, Witter S, Pond B, Baker B, Gow J, et al. Salaries and incomes of health workers in sub-Saharan Africa. *Lancet.* 2008;371:675-81.
22. Uzochukwu B, Onwujekwe O, Akpala C. Community satisfaction with the quality of maternal and child health services in Southeast Nigeria. *East Afr Med J.* 2004;81:293-9.
23. D'Ambruoso L, Abbey M, Hussein J. Please understand when I cry out in pain: women's accounts of maternity services during labour and delivery in Ghana. *BMC Public Health.* 2005;5(1):140.
24. Manongi R, Nasuwa F, Mwangi R, Reyburn H, Poulsen A, Chandler C. Conflicting priorities: evaluation of an intervention to improve nurse-parent relationships on a Tanzanian paediatric ward. *Human Resources for Health.* 2009;7(1):50.
25. Leigh B, Kandeh HBS, Kanu MS, Kuteh M, Palmer IS, Daoh KS, et al. Improving emergency obstetric care at a district hospital, Makeni, Sierra Leone. *Int J Gynaecol Obstet.* 1997;59(Suppl. 2):S55 - S65.
26. Mataria A, Giacaman R, Khatib R, Moatti J-P. Impoverishment and patients' "willingness" and "ability" to pay for improving the quality of health care in Palestine: An assessment using the contingent valuation method. *Health Policy.* 2006;75:312-28.
27. Bonu S, Rani M, Bishai D. Using willingness to pay to investigate regressiveness of user fees in health facilities in Tanzania. *Health Policy Plan.* 2003;18:370-82.
28. Abel-Smith B, Rawal P. Can the poor afford 'free' health services? A case study of Tanzania. *Health Policy Plan.* 1992;7:329-41.
29. Kenagy JW, Berwick DM, Shore MF. Service Quality in Health Care. *JAMA.* 1999;281:661-5.
30. Edgman-Levitan S, Cleary PD. What information do consumers want and need? *Health Aff.* 1996 Nov;15(4):42-56.
31. Lönnroth K, Tran T-U, Thuong LM, Quy HT, Diwan V. Can I afford free treatment?: Perceived consequences of health care provider choices among people with tuberculosis in Ho Chi Minh City, Vietnam. *Soc Sci Med.* 2001;52:935-48.
32. Bate R, Coticelli P, Tren R, Attaran A. Antimalarial Drug Quality in the Most Severely Malarious Parts of Africa - A Six Country Study. *PLoS ONE.* 2008;3:e2132.
33. Lönnroth K, Uplekar M, Arora VK, Juvekar S, Lan NTN, Mwaniki D, et al. Public-private mix for DOTS implementation: what makes it work? *Bull World Health Organ.* 2004;82:580-6.
34. de Savigny D, Mayombana C, Mwageni E, Masanja H, Minhaj A, Mkilindi Y, et al. Care-seeking patterns for fatal malaria in Tanzania. *Malaria Journal.* 2004;3(1):27.
35. Abantanga F, Nimako B, Amoah M. The range of abdominal surgical emergencies in children older than 1 year at the komfo anokye teaching hospital, Kumasi, Ghana. *Ann Afr Med.* 2009;8:236-42.
36. Creese AL. User charges for health care: a review of recent experience. *Health Policy Plan.* 1991;6:309-19.
37. Fabricant SJ, Kamara CW, Mills A. Why the poor pay more: household curative expenditures in rural Sierra Leone. *Int J Health Plann Manage.* 1999;14:179-99.

Annexes

A1. Table: Complaints mentioned in questionnaire

	N	% (of total children)
Fever	750	92.1
Cough	482	59.2
Diarrhoea/vomit	318	39.1
Sleepless/crying	243	29.9
Loss of appetite	199	24.4
Abdominal complaints/worms	116	14.3
Pale	92	11.3
Headache	90	11.1
Running nose/common cold	85	10.4
Difficult breathing	80	9.8
Boils	68	8.4
Itch	68	8.4
Convulsions	30	3.7
Accident/fall	24	2.9
Other (specify below)	85	10.4
Total	2730	340.2

A2. Table: Reasons for coming

	N	% (of total children)
Quality of medicine	784	96.3
I heard good stories	400	49.1
Good experience Magbenteh	385	47.3
Family member told me to go here	45	5.5
Cost are affordable	44	5.4
NGO-expatriate doctors present	30	3.7
Bad experience elsewhere	20	2.5
Distance	7	0.9
Staff always present	5	0.6
Other (specify below)	7	0.9
Not entered	2	0.2
Total	1729	340.2

A3. Example questionnaire

Record number:	
Attendance Date:	
HEALTH SEEKING BEHAVIOUR QUESTIONNAIRE	
All questions contained in this questionnaire are strictly confidential	
Child's age: years months <input type="checkbox"/> M <input type="checkbox"/> F	Caretaker's age: years <input type="checkbox"/> M <input type="checkbox"/> F
Caretaker's relationship to child: <input type="checkbox"/> Parent <input type="checkbox"/> Grandparent <input type="checkbox"/> Sibling <input type="checkbox"/> Other	N° of children: of which n° alive:
<i>(only to be filled if parent, for father only if of children with present wife)</i>	
QUESTIONNAIRE	
Q1a. What medical complaints does the child have?	<input type="checkbox"/> Fever <input type="checkbox"/> Cough <input type="checkbox"/> Difficult breathing <input type="checkbox"/> Diarrhoea/vomit <input type="checkbox"/> Loss of appetite <input type="checkbox"/> Convulsions <input type="checkbox"/> Boils <input type="checkbox"/> Accident/fall <input type="checkbox"/> Itch <input type="checkbox"/> Pale <input type="checkbox"/> Abdominal complaints/worms <input type="checkbox"/> Sleepless/crying <input type="checkbox"/> Running nose/common cold <input type="checkbox"/> Headache <input type="checkbox"/> Other (specify)
Q1b. How long were these complaints present before coming here?	<input type="checkbox"/> days <input type="checkbox"/> weeks <input type="checkbox"/> months
Q1c. If your child has been ill for more than 3 days what is the reason that you only come now?	<input type="checkbox"/> I went somewhere else first <input type="checkbox"/> Thought it would get better by itself <input type="checkbox"/> Did not have the money to pay for transport <input type="checkbox"/> I was not allowed to go <input type="checkbox"/> Had not enough money to pay for treatment <input type="checkbox"/> Father/mother not around <input type="checkbox"/> No transport/far distance <input type="checkbox"/> Other (specify)
Q2a. Before coming here did you go somewhere else for the same illness? (also if just to buy medicine) <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(if no, go straight to Q3)</i>	
Q2b. If yes, to which facility/person? <input type="checkbox"/> Traditional healer <input type="checkbox"/> Dispensary <input type="checkbox"/> PHU <input type="checkbox"/> Clinic <input type="checkbox"/> Hospital <input type="checkbox"/> Paddler <input type="checkbox"/> Other	
Q2c. How long ago? days weeks months	Q2d. Did you receive treatment in this other place? <input type="checkbox"/> Yes <input type="checkbox"/> No
Q2e. What did you have to pay in this other facility? (consultation and treatment) Leones	
Q2f. What reason(s) did you have to first go to another health facility before coming to Magbenteh?	<input type="checkbox"/> Other place is easier to reach/closer <input type="checkbox"/> Was send away at Magbenteh/closed <input type="checkbox"/> Good experience in past elsewhere <input type="checkbox"/> Bad experience in past at Magbenteh <input type="checkbox"/> Did not know about Magbenteh <input type="checkbox"/> Family member told me to go there <input type="checkbox"/> Costs are less elsewhere/no money <input type="checkbox"/> Father/mother not around <input type="checkbox"/> I had work to do/busy <input type="checkbox"/> Other (specify)
Q3a. How many times have you been with this child at Magbenteh? <input type="checkbox"/> 0 First time <u>or</u> time(s) before	
Q3b. What reason(s) do you have to visit Magbenteh today and not one of the other health facilities in the region?	<input type="checkbox"/> Costs are affordable <input type="checkbox"/> Quality of medicines <input type="checkbox"/> Staff always present <input type="checkbox"/> Good experience in past at Magbenteh <input type="checkbox"/> Bad experience elsewhere <input type="checkbox"/> I heard good stories <input type="checkbox"/> Family member told me to go here <input type="checkbox"/> Distance <input type="checkbox"/> NGO-expatriate doctors present <input type="checkbox"/> Other (specify)
Q3c. Would you still come if you had to pay? 2.000 leones? 5.000 leones? 10.000 leones? > 15.000 leones?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
Q3d. What is more important for you? <input type="checkbox"/> Good quality medicine <input type="checkbox"/> Affordable cost <input type="checkbox"/> Don't know	
Q4. Who mainly decided to come here? <input type="checkbox"/> Yourself <input type="checkbox"/> Spouse (husband/wife) <input type="checkbox"/> Other family member <input type="checkbox"/> Other	
Q5a. Where did you come from this morning?	
<input type="checkbox"/> Magbenteh <input type="checkbox"/> Makeni <input type="checkbox"/> Other District: <input type="checkbox"/> Bombali <input type="checkbox"/> Other (specify)	
Chiefdom: <input type="checkbox"/> Makari Gbantí <input type="checkbox"/> Bombali Sebora <input type="checkbox"/> Other (specify)	
Q5b. How far did you travel? miles <u>or</u> kilometres	Q5c. How long did it take you to get here? hours minutes
Q5d. With what mode of transport?	Q5e. How much did you pay on transport to get here? Leones
<input type="checkbox"/> By foot <input type="checkbox"/> Bike <input type="checkbox"/> Minibus <input type="checkbox"/> Taxi <input type="checkbox"/> Private car <input type="checkbox"/> Other	
Do you have any additional comments or questions for us?	
Questionnaire v 4.3	