Evaluation Report

The Gloucestershire Hospitals (UK) and Kambia District Hospital (Sierra Leone) Link

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November-December 2008

Evaluation supported by the Tropical Health and Education Trust (THET), with funding from the Department for International Development (Dfid)

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ACRONYMS

ANC	Ante-natal Clinic
ARI	Acute Respiratory Tract Infection
BCG	Bacillus Calmette Guerin
BEOC	Basic Emergency Obstetric Care
CEOC	Comprehensive Emergency Obstetric Care
CHO	Community Health Officer
C/S	Caesarean Section
DFID	Department for International Development
DMO	District Medical Officer
DPT	Diphtheria, Pertussis and Tetanus
EPI	Expanded Programme of Immunization
GH	General Hospital
GHNHSFT	Gloucestershire Hospitals NHS Foundation Trust
IMCI	Integrated Management of Childhood Illnesses
NGO	Non-government organization
INGO	International non-governmental organisation
KA	Kambia Appeal
KDH	Kambia District Hospital
KHA	Kambia Hospital Appeal
MCHA	Maternal and Child Health Aides
MoHS	Ministry of Health and Sanitation
MO	Medical Officer
MSF	Médecins Sans Frontières
NHS	National Health Service
OPD	Out-Patient Department
OPV	Oral Polio Vaccine
PHU	Peripheral Health Unit
RCH	Reproductive and Child Health
TBA	Traditional Birth Attendants
THET	Tropical Health and Education Trust
UNICEF	United Nations Childrens Fund
USAID	United States Agency for International Development
WHO	World Health Organization

1. Executive Summary

In 1992 a Health Link[1] was established between Kambia District Hospital (KDH) in Sierra Leone, and Cheltenham General Hospital in the UK. Cheltenham General Hospital is now part of the Gloucestershire Hospitals NHS Foundation Trust. The Link is supported financially by a charitable arm in the UK, called The Kambia Appeal (KA). The KA is also actively involved in managing the work of the Link.

The Link partnership has proved a durable one, continuing despite a civil war in Sierra Leone lasting from 1992-2002. Over the last 17 years, the Link has been involved in a wide range of activities; these have included funding the training of a range of community health workers, providing medical and other equipment, setting up a pilot motorcycle ambulance scheme, and sending health professionals from the UK to assist with clinical services and training.

The Link has a strong focus on supporting maternal health—a key priority for the Ministry of Health in Sierra Leone. The Link has attempted to address the three delays that cause maternal mortality: 1) delay in deciding to seek care, 2) delay in reaching care in time, and 3) delay in receiving adequate treatment. Initially a Link between two hospitals, the Link has broadened its activities to include support for two community health centres in Kambia District, as well as funding the training of Traditional Birth Attendants and other community health workers.

The report sets the scene by reviewing health indicators and the health-care system in Sierra Leone, and in Kambia District (Chapter 2, Background). Years of civil war have damaged much of the country's health infrastructure, and key health indicators (including for maternal mortality) are among the worst in the world. The two main Link partners—Kambia District Hospital, and Gloucestershire Hospital—are also introduced.

Chapter 3 sets out the rationale for this evaluation. During the Link's 17 years, much data has been collected; however, this is the first time that a formal evaluation has been undertaken. The chapter sets out the purpose of the evaluation, outlines the methods used, and highlights challenges and limiting factors. It is hoped that this evaluation report will provide an overview of the Link's key achievements to date, highlighting successes and challenges.

Chapter 4 looks at the issue of maternal and child health in Sierra Leone in more detail. It reviews key indicators, as well as recent government policy initiatives in this area.

Chapter 5 reviews the key activities of the Link. The Link's recent and current projects are broadly focused around the following areas:

- support for maternity and other services at Kambia District Hospital, through financial support to enable caesarean sections to be carried out, as well as visits by UK staff, and provision of equipment and materials
- training to health workers to strengthen their capacity in delivering maternal health care in both the hospital and in peripheral health units (PHU); the Link has worked with various cadres of health workers, including Traditional Birth Attendants.
- provision of motorcycle ambulances to transport pregnant women (and others) to clinics and hospitals
- exchanges between medical and non medical staff from both Link partners to each other's working environment

[1] Throughout this report, the term Link is used to refer to a partnership between two health institutions, one in the UK and one overseas. For more information on Links, see www.thet.org

The review of Link's health interventions and activities is followed by specific recommendations (Chapter 6).

The report then considers the functioning of the Link partnership itself, reviewing management structure and decision making, financial management, communications and reporting (Chapter 7.) There has been regular communication between partners and supporters of the Link, which has captured much useful information on activities carried out and key challenges. However, this report suggests that there is need for a stronger joint planning process to ensure that the activities of the Link are "demand driven." There is also a need to strengthen monitoring, reporting and evaluation systems; chapter 8 provides additional recommendations for planning and management of the Link. Chapter 9 provides key conclusions arising from this evaluation.

2. Background

2.1 Sierra Leone

Sierra Leone is situated on the West Coast of Africa; its capital city is Freetown. The country covers an area of almost 28,000 square miles, with a population of around 5 million people. Sierra Leone's recent history has been dominated by the ten-year civil war of 1992 to 2002. Over 20,000 people were killed during this time; thousands more were injured and an estimated two million people were displaced.

Sierra Leone is divided into three Provinces and the Western Area. Each of the Provinces is sub-divided into districts, which are in turn subdivided into chiefdoms, wards and villages. Infrastructure outside of Freetown is basic, with many areas served by poor roads and a very limited transport system. Power and water supplies suffered extensive damage during the civil war; around half of the population lacks access to safe water supplies.

2.2 Health services in Sierra Leone

The 1992-2002 civil war in Sierra Leone severely undermined the functioning of the health system. Many health workers were killed or displaced; access to health care was disrupted as people were forced to flee to neighbouring countries. Much of the country's health infrastructure (including hospitals and community-based 'peripheral health units', or PHUs) was damaged or destroyed.

Despite some progress in recent years, Sierra Leone is ranked as one of the poorest countries in the world (GNP per capita US$260 in 2007; World Bank). Since the end of the war, the government has set up free or low-cost district-level medical services for many vulnerable groups, including pregnant women, lactating mothers, school children, children under the age of 5, and the elderly (65 years and above). However, set fees for drugs and services may not always be adhered to, and additional charges are often levied. Such additional fees are used to help make up funding shortfalls faced by hospitals and health centres. Funding for services has become more difficult in recent years as some international NGOs have scaled back their relief efforts, following the end of the civil war. Financing difficulties at government level also mean that many medical staff receive little or no regular remuneration; this also contributes to a climate where some health workers may seek to make a modest income through charging informal fees. As a result of these factors, many theoretically "free" services are in fact not free at the point of provision; such hidden charges reduce the affordability of health care for the poorest.

There are regional inequalities in access to health care; service provision in rural areas is poor compared to larger urban areas. Human resources for health remain very limited at the district level, in terms of both the number and skills level of staff. Turnover rates can be very high (partly reflecting the low levels of remuneration.) Much of the country's health infrastructure remains dilapidated, with shortages of equipment, facilities and drugs.

The results of these difficulties can be seen in the country's **health indicators**:

	Sierra Leone	**Africa**
Life expectancy at birth (years)	39	48
Maternal mortality ratio (deaths/100,000 live births)	1,800	910
Infant mortality ratio (deaths/1,000 live births)	170	100

Source: Health needs and health services of Sierra Leone, A Situational Analysis, March 2007, JICA.

2.3 Kambia District

The work of the Kambia-Gloucestershire Link takes place in Kambia District, one of the five districts that make up the Northern Province of Sierra Leone, situated in the northwest of the country. The district shares borders with the Districts of Bombali and Port Loko, and with the Republic of Guinea and the Atlantic Ocean in the west. Kambia District is made up of seven Chiefdoms.

The town of Kambia is the district headquarters. The District Council has just been reformed after a gap of over 30 years. The council lacks revenues, and is reliant on the Local Government Finance Allocation to meet operational costs.

Kambia is one of Sierra Leone's poorest regions; the economy is based mainly on subsistence farming, as the area lacks important natural resources found in other regions, such as diamonds and bauxite. The area also suffered widespread destruction while under rebel occupation during the civil war; during this time, some 10% of the population was estimated to have been displaced[2].

2.4 Health services in Kambia District

Even within the context of Sierra Leone, health services in Kambia District are poor, hampered by chronic staff shortages and inadequate facilities. Kambia District has a total population of 337,212, served by one secondary health facility—Kambia District Hospital (KDH). The hospital is managed by one Medical Officer. In addition to the hospital, the district has 38[3] community-based PHUs, which are overseen by one District Medical Officer (DMO).

For the majority of the time, Kambia District Hospital and the PHUs do not have access to electricity or to supplies of clean, running water. Equipment is limited, and often old and in need of repair. Drug supply can be erratic. Patients and their carers often have to take on caring roles due to lack of staff; patients and carers are sometimes asked to find their own drugs, equipment or fuel to enable services to function.

2.4.1 Kambia District Hospital

Kambia District Hospital (KDH) is the regional centre for health care in Kambia. The original facility, built by the British government in the 1950s, was destroyed by rebels in 1999 during the civil war. After peace was declared in 2002, the hospital was rebuilt with funding from the European Commission (thanks in part to lobbying by the Link), and re-opened in June 2004.

The hospital today consists of four wards: adult female and male wards, a paediatric ward and a maternity ward. Each ward can hold approximately 20 patients. In addition there are various outpatient facilities which host a general clinic, an ante-natal clinic and an under-5's clinic. The maternity ward consists of 24 beds, staffed by one qualified midwife, two Maternal and Child Health Aides (MCHAs) and two Traditional Birth Attendants (TBAs).

Kambia District has just two qualified doctors, eight midwives and 57 MCHAs. The two doctors are a Medical Officer (MO) and a District Medical Officer (DMO). The DMO had been in charge of both the hospital and PHUs for two years, when there was no MO in place.

[2] *Health needs and health services of Sierra Leone, A Situational Analysis, March 2007, JICA.*
[3] *Kambia District Council Development Plan 2006-2008*, June 2005, Development Planning Committee.

However, a new MO has now been appointed to run the hospital, while the DMO will continue to oversee the PHUs and to supervise the MO. Other senior staff include the hospital Matron, the District Health Sister and Registrar. The hospital is run by 30 skilled staff on pay roll. Other skilled staff and the majority of the unskilled staff, including the security guards, are volunteers. The hospital provides 24 hour service and is the referral centre for the PHUs in the district.

The hospital is run by the Ministry of Health and Sanitation (MoHS) through its representative in Kambia District Council. The representative is a member of the District Health Management Team (DHMT). A new board for the management of the hospital has been formed but as of early 2009 had yet to be inaugurated.

The hospital provides a range of services including: surgical intervention; BEOC and CEOC; and infant feeding. Primary healthcare services such as antenatal and post natal services, and EPI for children under 5 years, are also provided regularly.

Staff turnover, especially of MOs and DMOs, is very high. There have been 6 DMOs since 1992, one of whom is the present one, serving a second year in the hospital. During the same period, the hospital has had some 7 MOs, although for much of the time, the DMO and the MO were one and the same. During the civil war and recently, there were periods of up to two years at a time when there was no doctor at the hospital at all.

2.4.2 Barriers to accessing health services in Kambia

Most people in Kambia District have limited access to either PHUs or to the hospital. Access is particularly poor for those living in rural areas and villages. Access is impaired by factors including: poor roads and transport facilities; lack of trained staff to run village-level PHUs; inability to pay health care fees; lack of confidence in the health service; inequalities in decision-making between men and women around health-seeking behaviour; and lack of access to information, including high rates of illiteracy, which results in difficulties in managing medication, as well as lack of awareness of warning signs during pregnancy or illness.

Shortages of trained and qualified personnel and very scarce financial resources have an adverse effect on the district's health service delivery. The delivery of services relies on two categories of volunteers: 1) trained and qualified volunteers, who are not on the government pay roll (without salary) and 2) not officially trained or qualified volunteers. The latter are given some training conducted by the District Health Management Team (DHMT). These two categories of staff are given modest incentives by the DHMT, when they can afford to do so. However, the situation is clearly contributing to high rates of staff turnover. This is a major issue, which cannot be solved by the Link alone. Without regular payment, retention of skilled staff is extremely difficult.

Another difficulty is that of financial barriers to accessing health care. Patients often face charges for services (including some that are intended to be free), as the hospital and PHUs attempt to recover some of their costs. Such "cost recovery" represents a fundamental barrier for clinical staff attempting to provide a good standard of care for pregnant women in Kambia. Financial constraints contribute to delays in seeking care, delays in accessing care, and delays in the provision of appropriate care within the hospital.

As funding for services is inadequate, and health workers' salaries are very low, it is difficult to see how this informal cost recovery system will be effectively challenged and changed. A combination of financial resourcing, co-ordinated efforts, strong political will, a realistic and transparent system and a means to ensure that staff are appropriately remunerated, are all

needed together to tackle the issue of cost recovery and create a health system that people can afford to use. As it stands many people, particularly the poorest, don't see hospital as a viable option and therefore do not access government health services, or attend when it is already too late.

2.5 The Gloucestershire - Kambia Link

In 1992 professionals from Kambia District Hospital (KDH) and Cheltenham General Hospital decided to establish a Health Link ('the Link'), as a response to the shortcomings in health services in Kambia, described above. This Link was envisaged as a partnership between the two institutions, guided by the principles of the Health Links movement. From the start the Link has had a strong focus on maternal health, although this has expanded more recently to include some activities around child health.

In order to generate income to support the work of the Link, Cheltenham General Hospital formed a non-government organization known as Kambia Hospital Appeal (KHA). The name was later changed to The Kambia Appeal, UK (KA), recognising the Links' involvement in a more diverse range of activities.

Cheltenham General Hospital is now part of the Gloucestershire Hospitals NHS Foundation Trust; hence the Link is referred to as the Gloucestershire – Kambia Link. (See Chapter 7 for a fuller discussion of the structure and management of the Link.)

3. The evaluation

3.1 Purpose of the evaluation

This evaluation was commissioned in order to: 1) recognise the achievements of the Link to date and to highlight lessons that have been learned, and 2) examine existing data documenting the work of the Link, highlighting any gaps in this data. The aim was to produce a document that provides a baseline for future work of the Gloucestershire-Kambia Link. The evaluation also aims to produce recommendations on areas that can be strengthened as the Link goes forward.

The Terms of Reference set out specific objectives for this evaluation, as follows:

1. To provide an overview of the information/data available on maternal and child health in Kambia
2. To provide a review and reflection of the Link's past activities and its impact on those involved in both Gloucestershire and Kambia.
3. To provide an overview of the Link's current activities.
4. To assess the extent to which the spectrum of interventions have achieved the objectives of increasing:
   i) knowledge of Health professionals/TBAs, MCHA and CHOs in recognising high risk cases
   ii) increasing physical access, and
   iii) improving service provision at the clinics (assessing quality and number of cases)
5. To identify gaps in information relating to points 1 and 3 above.
6. To provide broad recommendations for monitoring systems to address identified information gaps, particularly relating to point 4.

3.2 Methods used

The evaluation was undertaken during part of November-December 2008 by a team consisting of the Author, and her assistant from Nigeria, with some input from the West Africa Programme Officer of THET. The main method used was qualitative data collection.

During the planning phase, meetings were held with Kambia Appeal (UK) and with the Project Coordinator in Kambia before any field work and interviews were conducted. The UK Link partner provided documents including past newsletters, minutes of meetings from 1992, reports made by some visitors to Kambia, and other relevant documents.

The main methods used were:

- Focus group discussions: conducted with TBAs, CHOs "in training", members of the local community and the DHMT, based on topics that had been used in similar exercises.

- Semi-structured interviews with key informants, including the DMO, MO, Hospital Matron, District Health Nurse and the Hospital Administrator in Kambia.

- Questionnaires (Appendix 1) were completed by 25 visitors from the UK to Kambia. The questions sought information about issues such as respondents' knowledge of the Link; and what they thought the benefits of the Link were to them.

- Using a checklist (Appendix 2) developed by PATH Nigeria Consultants, an audit was carried out with the heads of the two PHUs supported by the Link. Some key findings are discussed in section 5.3 of this report.

- The Chairman of Kambia District and the Paramount Chief of the Chiefdom were also informally interviewed for their opinion on the Link.

- Field visits were undertaken to Kambia District Hospital, and to Rokupr, Barmoi and Maselleh PHUs to conduct an on-the-spot assessment of the services offered at these health facilities, and to find out about achievements as well as limitations/constraints faced by healthworkers.

3.3 Challenges and limitations

The evaluation was faced with a number of challenges, which have necessarily limited the range and depth of its findings. The timing for the whole exercise was relatively short; this was particularly difficult given that the evaluation was looking back over the history of a Link that was formed 17 years ago. (This was the first piece of evaluation work done since the start of the Link.) It is hoped that future evaluation work will be able to use this study as a starting point.

Another challenge was the concern about the evaluation process felt by staff at Kambia District Hospital. This was a new experience, and staff seemed concerned that they and their work were being "examined." Hopefully such concerns can be addressed in the future by discussion and planning among the Link partners, before any evaluation work takes place.

An additional difficulty is the fact that only those closely involved with the Link itself have an in-depth understanding of what the Link actually does. For example, while many patients may have benefited from services supported via the Link, most are (understandably) unlikely to be aware of the Link's involvement.

4. Maternal and child health in Sierra Leone

4.1 Maternal and child health in Sierra Leone

The near-collapse of Sierra Leone's health care system during the civil war and in the years afterwards, combined with widespread poverty and poor nutrition levels, have adversely affected the health of women and children. Nutritional status is poor: some 86% of pregnant women are estimated to be anaemic, while moderate stunting among under 5s actually rose from 34% in 2000 to 40% in 2005.[4]

Infant mortality rates are higher than the average for Africa (at 170 per 1,000 live births, compared with 100 per 1,000 live births for the region as a whole.) Sierra Leone also has one of the highest maternal mortality rates in the world (in the range of 1,800 – 2,100 maternal deaths per 100,000 live births). For example, a recent document prepared for United Nations Development Assessment Framework puts the maternal mortality rate in Sierra Leone at 2,000/100,000 live births.[5] Sierra Leonean women face around a 1-in-48 chance of dying every time they become pregnant. The main direct causes of maternal mortality are haemorrhage aggravated by lack of safe blood transfusion services; obstructed labour; and sepsis and toxaemia in pregnancy. Nutrition related disorders including anaemia and iodine deficiency are also prevalent among pregnant women.

Within the health sector, the shortage of trained and motivated staff is undoubtedly one of the key factors undermining the delivery of satisfactory care to pregnant women. The absence of skilled health personnel at birth; lack of drugs, medical equipment and other supplies; inadequate provision of emergency obstetric care; and an ineffective referral system are also known to be amongst the major contributory factors to the country's poor maternal health indicators. Beyond the health sector itself, pervasive poverty and low literacy rates (especially amongst girls and women) are among the factors limiting access to, and choices over, health care for women and girls.

4.2 Government policy on maternal and child health

Since the end of the civil war in 2002, subsequent civilian governments have aspired to improve the quality of health care, with a particular focus on mothers and children. A recent Ministry of Health and Sanitation policy document on Reproductive and Child Health (RCH) 2007 – 2015 outlines an intention to: *'improve the quality of reproductive and sexual health for all Sierra Leonean people with a bid to reducing poverty and achieving the Millennium Development Goals particularly those relating to reproductive and sexual health.'* [6]

The report also highlights the following vision: *'Sierra Leone children enjoy the highest attainable standard of health and development that meets their needs, and respects, protects and fulfils their rights, enabling them to live to their full potential and well being.'*

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[4] *Source: Health needs and health services of Sierra Leone, A Situational Analysis, March 2007, JICA.*
[5] *United Nations Common Country Assessment (2008-2010) for Sierra Leone,* January 2007.
[6] *Final draft on Reproductive and Child Health Strategic Plan for the 'New National Health Policy 2008-2015'.* Government of Sierra Leone, Ministry of Health and Sanitation, December 2007.

In order to attain these goals, key objectives include:

- reducing maternal mortality from 2,100 to 600 per 100,000
- reducing infant mortality from 158 to 79 per 1,000 births
- reducing the under-five mortality rate from 275 to 95 per 1,000.

The 2008-2015 planning process received support from international agencies such as the World Health Organization (WHO) and the UK's Department for International Development (Dfid). It is expected that these and other agencies will contribute significant funding to the government to assist it in working towards these goals. The government has set up a Reproductive and Child Health Division to lead this work.

5. Activities of the Link – achievements and challenges

The Kambia – Gloucestershire Link has a long history, beginning in 1992, and a wide range of activities have been carried out since this time. Recent and current projects undertaken by the Link are broadly focused around the following areas:

- Support for maternity and other services at Kambia District Hospital, through financial support to enable caesarean sections to be carried out, as well as visits by UK staff, and provision of equipment and materials.
- Training to health workers to strengthen their capacity to deliver maternal health care in the hospital and peripheral health units (PHU).
- Provision of motorcycle ambulances to transport pregnant women (and others) to clinics and hospitals.
- Exchanges between medical and non medical staff from both partners to each other's working environment.

The remainder of this Chapter reviews the Link's activities in more detail.

5.1 Support for Kambia District Hospital

5.1.1 Funding for caesarean sections

From October 2007 the Kambia Appeal began funding free caesarean sections at Kambia District Hospital (KDH). The average number of deliveries requiring caesarean sections at KDH is estimated to be around 10 per month (120 per year). The cost of each operation is Leone 230,000. Patients remain in the maternity ward for two weeks post-surgery care. The Link funds the operation itself; patients pay for the required drugs and post-operative care.

The flow of funds to the hospital to support this work has not always been smooth. At the time of the evaluation, funds had not been released for some three months; this appeared to be due to a delay in Kambia Appeal (UK) receiving reports from the Kambia Project Coordinator, which resulted in KA (UK) delaying the transfer of new funds. However, during this period, the hospital continued to perform caesareans, passing on the bills to KA (Kambia).

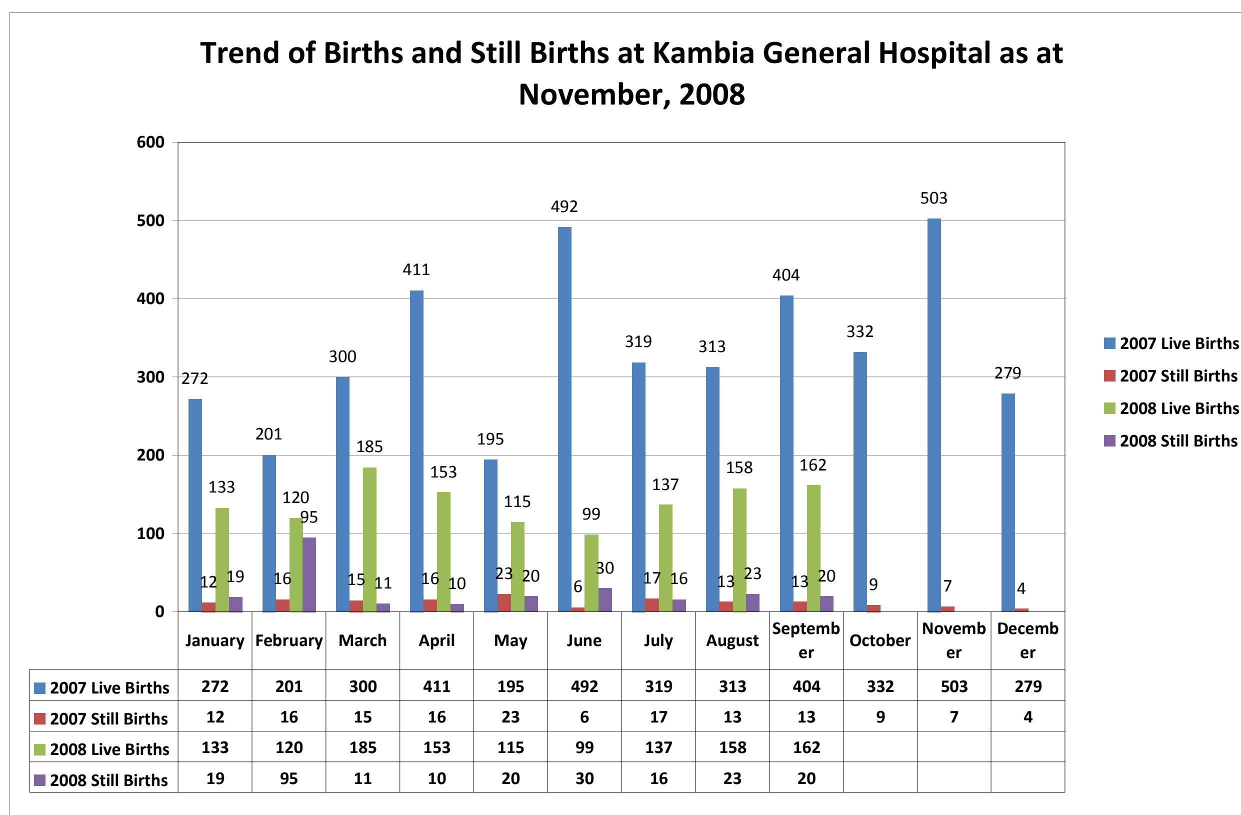
Table 1: Link-funded caesarean sections at Kambia District Hospital.

Month	***No. of caesarean sections funded***
Oct 2007	7
Nov	12
Dec	0
Jan 2008	0
Feb	10
Mar	5
Apr	9
May	7
Jun	3
Jul	8
Aug	7
Sep	7
Oct	17
Nov (to December 6th, 2008)	26
Total funded	**118**

Source: Hospital records through KA Kambia Co-ordinator.

Lucy – the sudden increase in Caesareans in Nov 08 is interesting. We have checked these out, with details in the operating theatre book, and some never took place. It looks as if some were invented to increase the numbers to 120, but you'd better not put that in the report!

Graph 1: The outcome of deliveries at Kambia District Hospital in 2007 and 2008



	January	February	March	April	May	June	July	August	September	October	November	December
2007 Live Births	272	201	300	411	195	492	319	313	404	332	503	279
2007 Still Births	12	16	15	16	23	6	17	13	13	9	7	4
2008 Live Births	133	120	185	153	115	99	137	158	162			
2008 Still Births	19	95	11	10	20	30	16	23	20			

This graph shows a significant decrease in the number of births at the hospital in 2008, perhaps due to the lack of free services that were provided by MSF in 2007. Before they ceased work in the district, MSF funded both normal deliveries and caesarean sections at the hospital. Since October 2007 the Link has funded the cost of caesarean-section operations (although not post-operative care and other costs); a fee is now charged at the hospital to cover the cost of normal deliveries — although this is a nominal fee compared with the cost of a caesarean.

5.1.2 Issues affecting the Link's work at Kambia District Hospital

The following general points, noted during the evaluation, caused difficulties for MCH and other work at Kambia District Hospital.

a) Staff shortages

There is a serious shortage of staff, and many staff (including skilled staff) are working unpaid — see Section 2.6. This contributes to high turnover and undermines morale. It also contributes to a climate where additional fees may be charged for hospital services, reducing access for the poorest.

b) Funding issues

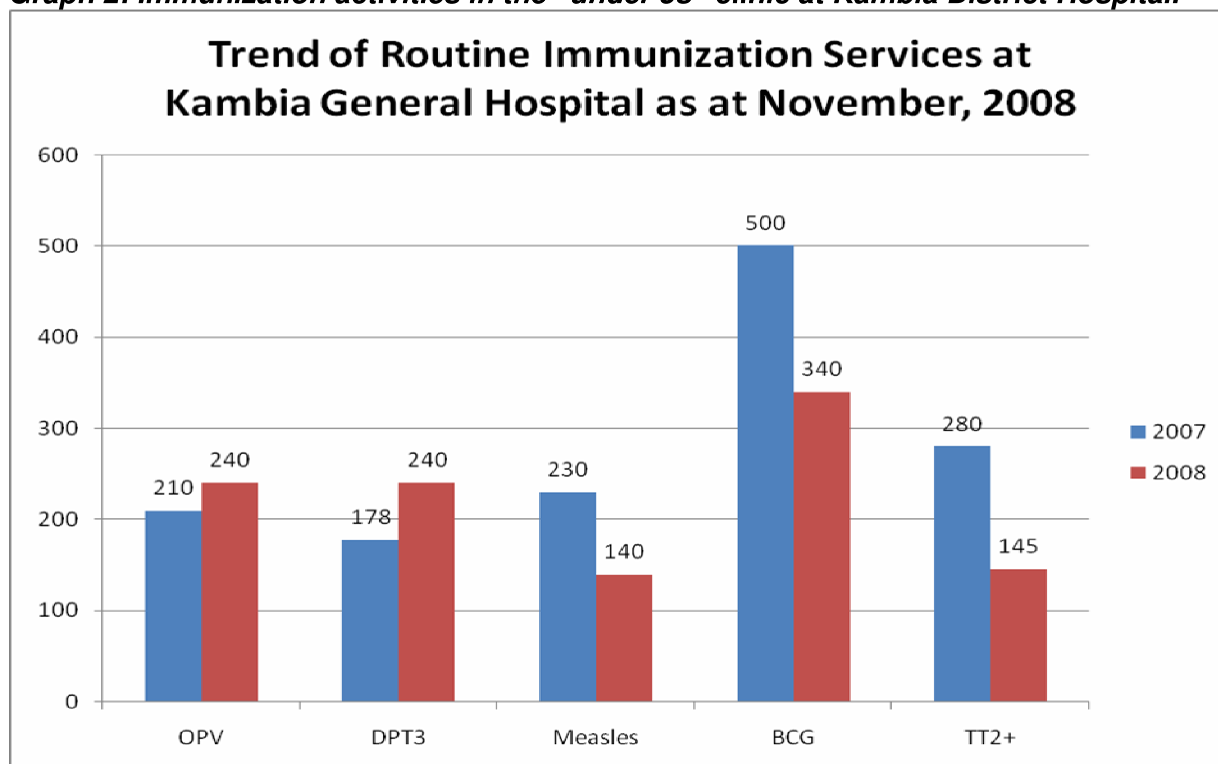
The KDH staff are reliant on the flow of funds from KA(UK) to support work such as the provision of free caesarean sections. However, such funds can be held up by slow reporting by the local KA office. (In the past, when funds were transferred directly to the hospital, there were difficulties with lack of budget control.)

c) **Lack of feedback on referrals**
There is no standard procedure for the hospital to provide feedback to the rural Peripheral Health Units (PHUs) about patients they have referred to hospital – making it difficult for the PHUs to know the outcome of their referrals.

d) Inadequate water supply and sanitation
There are only two water supply points. Ward toilets lack water and are kept locked; patients must use the grounds behind the hospital. There is no running water in the theatre; surgeons require someone to pour water on their hands for scrubbing. Conditions around the wards are unsanitary, with areas of stagnant water.

e) Drug shortages
Drugs and equipment are in short supply. For example, the drop in the BCG and Measles coverage in 2008 (see Graph 2) is the result of shortage of vaccines. (Although the Link is not working directly with immunization at KDH, falling immunization rates will potentially have an affect on the Link's work at PHUs.)

Graph 2: Immunization activities in the "under 5s" clinic at Kambia District Hospital.



5.2 Training for community health workers

The Link has funded three types of training for community health workers, as follows:

5.2.1 Community Health Officer training programme

Community Health Officers (CHOs) are the highest level of community health worker; they are trained to work in PHUs. The Link has already funded three CHOs to complete the Higher Diploma in Community Health Sciences at Njala University in Sierra Leone. The curriculum contains 168 hours of basic surgical training (eg suturing etc) and 168 hours of maternal health training. The Link is currently sponsoring an additional 11 students (of which

two are women) to complete the CHO course; five will qualify by the end of 2009. The three CHOs who completed their course in 2008 have started working (unpaid at the time of the evaluation) in hospitals at Kambia, Rukupr (Maghema Chiefdom) and Kamasasa (Tonko Limba Chiefdom.) It takes up to two years for CHOs to be added to the government's payroll.

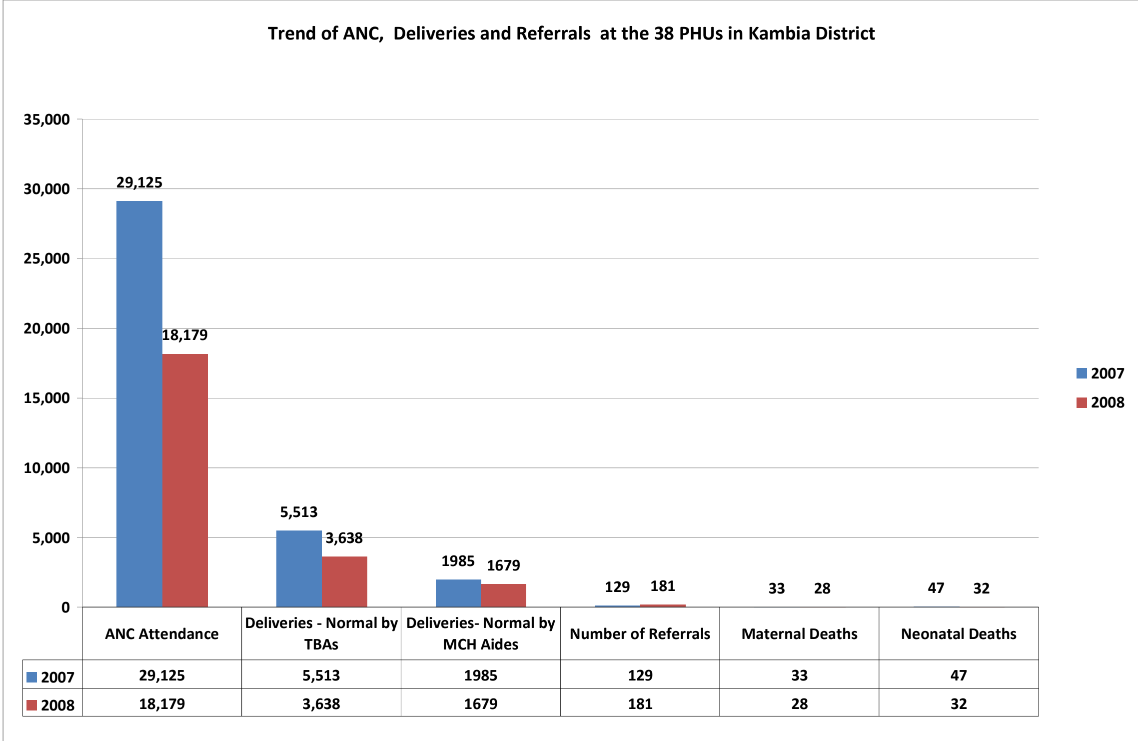
5.2.2 Maternal and Child Health Aides

The Link ran a refresher training course for 50 Maternal and Child Health Aides (MCHAs) on identifying obstetric emergencies on 5th and 6th February 2006. The course ran for two days with 32 in attendance on the first day and the remaining 18 on the second day.

5.2.3 TBA Training programme

The majority of deliveries in Kambia District are attended by Traditional Birth Attendants (TBAs). Looking at Graph 3, in 2007 TBAs attended 5,513 normal deliveries at the PHUs, while a further 1,985 normal deliveries were attended by MCHAs. More than 29,000 women in the district attended antenatal care in 2007 (TBAs are trained to promote antenatal attendance.) The number of women attending antenatal care in 2007 was far higher than the number of women who actually delivered at the PHUs, suggesting that far more births take place at home than in the PHUs. Figures are not available to show how many of these births are attended by TBAs. Studies have shown that women who are aware of the benefits of attending antenatal care at health facilities, may still prefer to deliver at home with TBAs[7]. Graph 3 shows that the TBAs are an important link in improving maternal health.

Graph 3: Trend of antenatal attendance, deliveries and referrals in all Kambia PHUs



	ANC Attendance	Deliveries - Normal by TBAs	Deliveries- Normal by MCH Aides	Number of Referrals	Maternal Deaths	Neonatal Deaths
2007	29,125	5,513	1985	129	33	47
2008	18,179	3,638	1679	181	28	32

Source: District Health Nurse, PHU section of hospital

There are currently 800 TBAs working in Kambia District either in the community, at the PHUs or at Kambia District Hospital. All TBAs provide largely voluntary services. They are

[7] Mohammad. RH, *A community program for women's health and development: Implications for long-term care of women with fistula*, International Journal of Obstetrics and Gynaecology, July 2007

not paid by the PHUs, or the communities to whom they provide services, although TBAs do sometimes receive small gifts or payments from families.

The Link has provided training to more than half of the TBAs in the district: in 1998, 240 TBAs were instructed on basic knowledge of detecting at-risk births, while another 250 TBAs attended refresher trainings. Another round of training was held in April 2006; 300 new TBAs, were trained, while refresher training was held for another 100.

Apart from records kept by the PHUs, there is limited monitoring of the activities of the TBAs. In the past, a system of "pebble boxes" was implemented, allowing records of deliveries etc to be kept by TBAs without needing written forms. However, there is no record of the TBA trainings covering use of the boxes, and none of the TBAs interviewed mentioned this system; hence this monitoring system does not appear to be operational.

5.3 Link support for Barmoi and Maselleh Peripheral Health Units (PHU)

5.3.1 Introduction to Barmoi and Maselleh PHUs

Since 2004 the Link has supported two PHUs, one located in Barmoi, a village about 16 miles from Kambia District Hospital, in Masungbala Chiefdom, and one in Maselleh (Tonko Limba Chiefdom). In 2006 KA renovated the PHU in Barmoi, at a cost of £16,000. These facilities are located in the heart of their communities and are the key source of general health services. The PHU in Maselleh serves 29 villages (with a catchment population of 6,048) while the PHU in Barmoi serves 40 villages (with a catchment population of 7,000). Maselleh PHU has an active village committee which oversees the PHU; however, the village committee at Barmoi has not met for 18 months.

Table 2: Demographic data for Barmoi and Maselleh PHUs as at November 2008

	Catchment population	Number of settlements	- of which: outreach settlements (a)	Number of ambulances	Number of skilled staff	Trained TBAs (b)	Untrained TBAs (b)
Maselleh PHU	6,048	29	7	2	1	16	33
Barmoi PHU	7,000	40	7	3	3	59	0

Source: Barmoi and Maselleh PHUs.
(a)Outreach villages are allocated a team of outreach workers from the PHU who make regular visits.
(b) The majority of these TBAs are not based at the PHUs, but work in the surrounding villages.

Services provided by the two PHUs include:

a) Treatment of minor ailments - daily
b) Expanded Program of Immunization – for children under 5 years, twice weekly; for pregnant and non pregnant women, once weekly
c) Motorcycle Ambulance service (bringing clients to the facility and for referrals to Kambia District Hospital where necessary)
d) Nutrition education
e) Antenatal and post-natal services
f) Deliveries
g) General health education
h) Provision of drugs (meant to be provided "at cost", although additional charges may be levied.)

Both PHUs received an average of 50 patient visits per day; records at the PHUs did not allow health outcomes for patients to be tracked. Treatments given are recorded in a book, but there was no information on follow-up or subsequent visits.

5.3.2 Staff shortages and other challenges at Barmoi and Maselleh PHUs

a) Staff shortages

Services are not available 24 hours a day at the two PHUs, due to staff shortages. However, the CHOs and MCHAs live on the premises—as a result, they are effectively "on call" for emergencies.

There are differences in staffing levels between the two PHUs. As can be seen from Table 2, Maselleh PHU relies heavily on untrained TBAs, while at Barmoi all TBAs have been trained. Maselleh PHU also has only one skilled staff member present on a regular basis, an MCHA who is not on the payroll. Official policy is for PHUs to be headed by a CHO; the MCHA therefore receives supervision and support from the CHO from Numea, a nearby PHU, who visits three times a week. Barmoi PHU has three trained staff; the centre is run by an unqualified CHO, who does however have 20 years of healthcare experience.

b) Other challenges

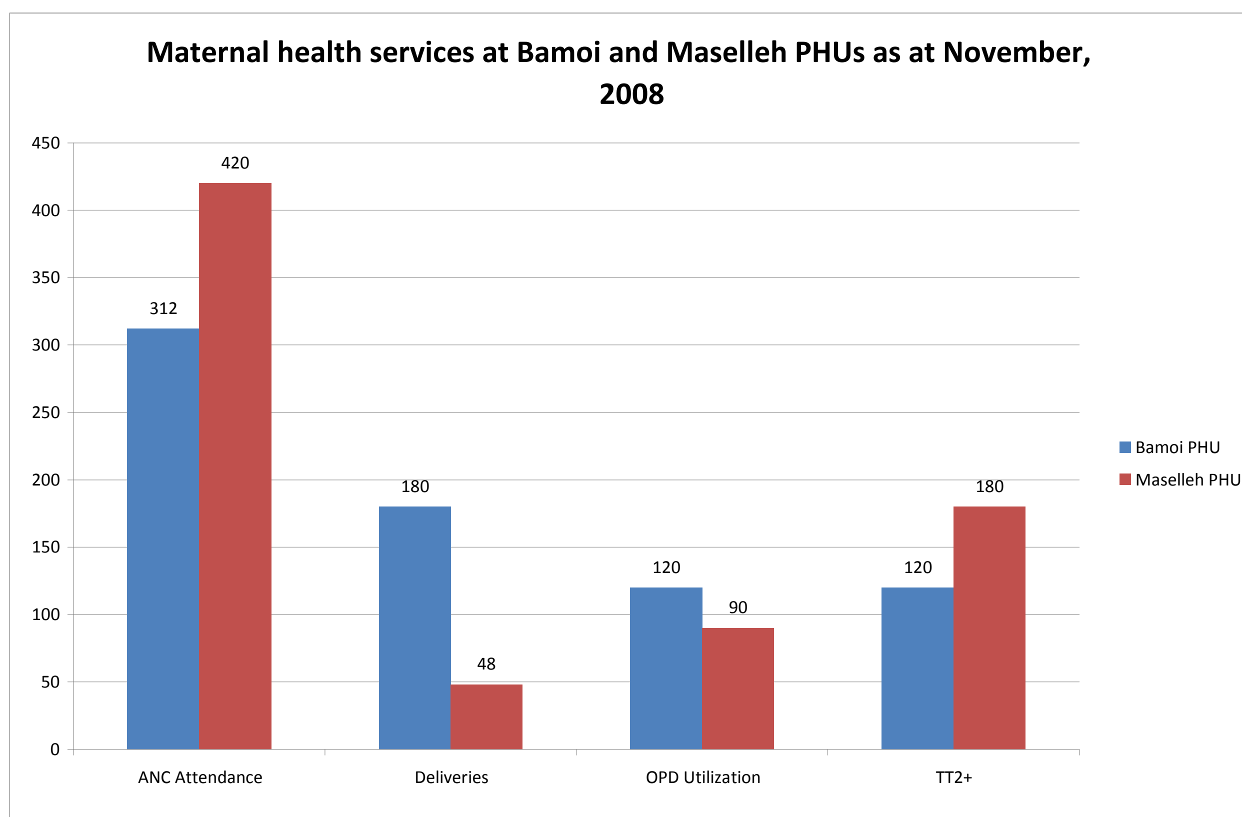
- Maselleh and Barmoi PHUs both lack important resources such as partograms and safe delivery cards.
- There is no means of communication with the motorcycle ambulance drivers in the event of problems (eg a breakdown while taking a patient to Kambia District Hospital).
- The two PHUs lack protocols for IMCI and ARI; they lack Basic Emergency Obstetric Care (BEOC) equipment.
- The PHUs have and use standard referral forms for patients sent to Kambia District Hospital; however, the hospital does not provide feedback to the PHUs on these patients.
- Data management for the drug cost recovery system is inadequate and the data generated is not used for decision making.

5.3.3 Maternity services at Barmoi and Maselleh PHUs

Graph 4, below, presents a snap-shot of pre- and post-natal services being used at the two PHUs (and their surrounding catchment areas) in November. Considerably fewer deliveries took place at Maselleh (48 compared with 180 at Barmoi); these figures include deliveries at the PHUs as well as within the surrounding catchment area. However, this was based on one month's data, and the trends over a year may be different.

As noted in Section 5.3.2, the majority of the TBAs (33 out of 49) at Maselleh are untrained, while all the TBAs at Barmoi have received training. A future evaluation could consider whether this had made a difference to health outcomes for mothers and children at the two centres.

Graph 4 – The number of patients benefiting from specific services at Barmoi and Maselleh PHUs. *(Figures for deliveries are the total for the entire PHU catchment area.)*



Source: Maselleh and Barmoi PHU records

5.4 Motorcycle ambulance service

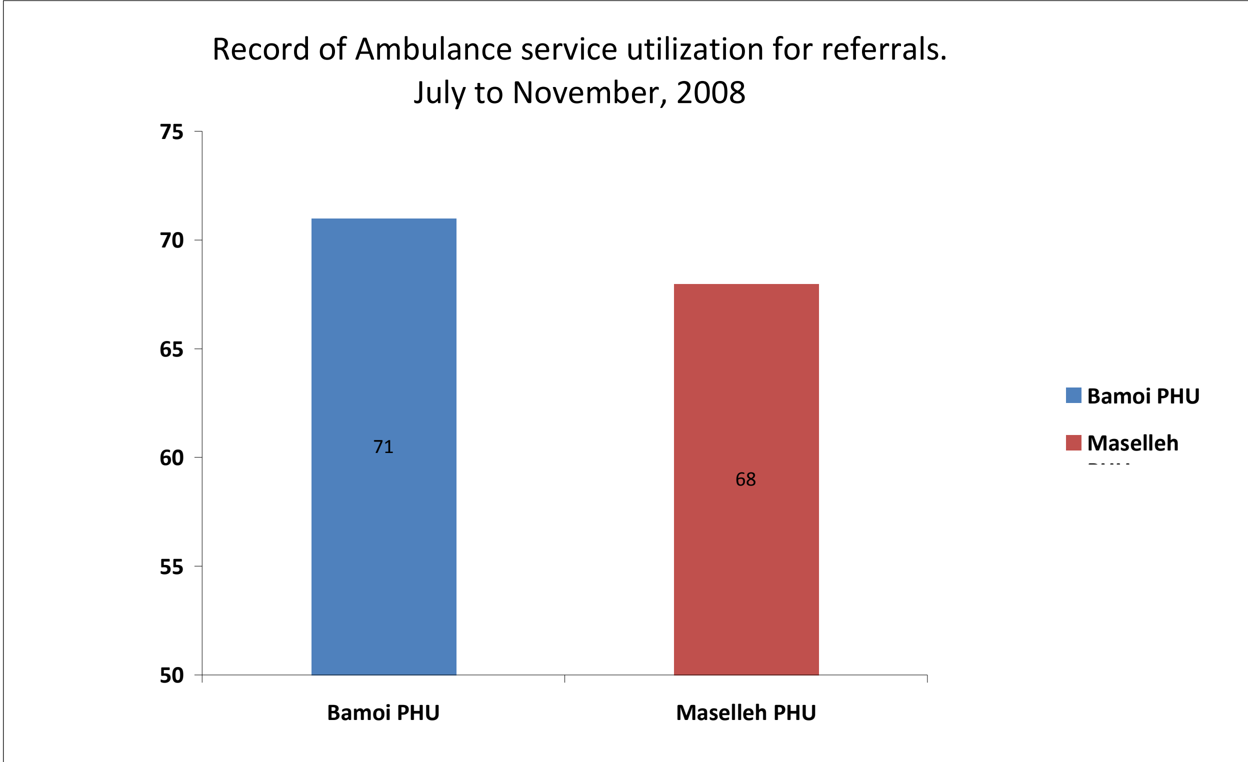
In March 2007, the Link began funding a pilot motorcycle ambulance service scheme. Five motorcycle ambulances have been supplied so far; three are based at Barmoi PHU, and two are based at Maselleh PHU. An additional motorbike ambulance is kept as a spare at the Kambia Appeal office. Before the service was fully launched, drivers from the local community were identified and trained. A mechanic was also identified and sent to Freetown to train on motorcycle maintenance. The motorbike ambulances then came into use from July 2008. Between July and November 2008 the ambulances were used to take at least 139 patients either to the PHUs or to hospital (see Graph 5). The usage could be higher still; at the time of the evaluation, the PHU heads reported that they had run out of the forms used to record details of ambulance usage, and were waiting to receive more forms from the KA (Kambia) office. In general, however, the PHUs keep an up-to-date record of the use of the ambulances, with mileage covered, the location where patients were collected, and where they were taken.

This is a pilot intervention by the Link: there are plans to increase the number of motorcycle ambulances, if they are found to be having a positive impact on health outcomes.

During focus group discussions held as part of the evaluation, community members expressed deep appreciation for the ambulance service, stating that the vehicles have saved the lives of many patients in their villages, particularly pregnant women. The ambulances were used for taking patients either to the PHU or (when referred) to Kambia District Hospital. A variety of patients had made use of the service, including pregnant women, those with injuries and patients with malaria. Feedback regarding the service was positive; it was clear that an expansion of such services would be welcome.

The Link has clearly been successful in its objective of introducing a pilot motorcycle ambulance service; the scheme has helped to expand access to health services (including maternity services) for those living in remote areas. Overall, the service was operating well. However, one shortcoming was noted. The motorcycle ambulance drivers were not always paid regular fees for their services. Under the pilot scheme, fees for the drivers were raised from local community contributions. At Barmoi, the drivers received 5000 Leones monthly from the PHU; however, community collections appear to have been limited—it is likely that the PHU itself is making up the shortfall. At Maselleh, community collections appear to have been effective; however, the drivers were not being paid anything at all, and were providing their services on a voluntary basis. Maselleh PHU reported that they had transferred funds to the KA (Kambia) office, where they had been placed in the bank—but a smooth system for making payouts to the drivers was not in place. This was demoralizing to the drivers, particularly given the importance placed locally on the service they provided. In short, neither PHU yet has a smooth system to making regular payments to the motorbike ambulance drivers, funded by the local community.

***Graph 5**: Use of pilot ambulance service for referrals, July to November 2008.*



Source: PHU records.

5.5 Health education video

The Link has funded the production of a community heath video, filmed in Kambia with participants from the local community. The video is designed to educate pregnant women and their families about the importance of seeking health care from trained personnel. The video (called "Belleh Woman, Go de Right Side") has been screened at PHUs throughout the District, and has also been used daily at the Fistula Hospital in Freetown.

This video is a valuable resource for the Link, and could be used strategically as part of efforts to tackle delays in seeking healthcare. For example, in the future the Link might

consider running regular screenings, and collecting data on how many people see the video, and what has been the result (for example, case studies of health workers or pregnant women whose behaviour may have changed as a result of seeing the video.)

5.6 Links exchange visits to and from Kambia

Since the start of the Link, visitors from the UK (both medical and non-medical) have visited Kambia regularly. Staff from Kambia have also visited Cheltenham General Hospital, to undertake training in various fields. The remainder of this section looks at the benefits and challenges of these visits, based on interviews with participants.

5.6.1 UK to Kambia Link visits

Since the Link was set up in 1992, 43 medical and non-medical professionals from Cheltenham, Manchester, Edinburgh, Canada and South Africa have visited Kambia to assist at the hospital. They include: 5 surgeons, 2 gynaecologists, 7 GPs, 9 medical students (electives), 4 midwifes and 4 nurses. The remaining visitors included some members of the KA Board of Trustees, a laboratory technician, a hospital administrator, plus film makers, a journalist and photographer. (Some were from Cheltenham Geneal Hospital, and so were directly a part of the Link; others came from other institutions, but were encouraged to go through their connections to the Link.) All the visitors sponsored themselves to travel to Kambia, but received accommodation and transport from the local Link partner.

Interviews for this evaluation reveal a high level of motivation among the visitors. The majority of respondents understood that the main purpose of the Link was improvement of health services, with a focus on maternal and child health. Almost all (89%) identified Kambia Appeal as the main UK partner (rather than the Gloucestershire Hospitals Trust); that is, there was strong recognition of the Kambia Appeal “brand”, but a less clear recognition of the Link as an institution-to-institution relationship between two hospitals. Most (79%) said that they visited Kambia to fulfil a lifetime desire to help improve heath systems in developing countries. The remainder went to explore ways to help KA to improve its work, and to see the problems on the ground in order to support their fundraising work for KA. Before travelling to Kambia, visitors’ expectations varied from fear and uncertainty about working in a post-conflict situation, to a “pull” feeling of wanting to help in whatever way they could.

5.6.2 Key benefits to participants from the UK

All respondents said that they learnt new perspectives on patient-centred care during their time at Kambia District Hospital. Respondents stated that the visit helped them to put NHS challenges in perspective, and helped them to develop an awareness of global health issues. Medical professionals reported that experiencing unfamiliar pathologies, where there was a lack of medical equipment and drugs, forced them to develop their clinical skills. Medical professionals also said that being in situations where, regardless of their positions in the UK, they were looked upon to solve medical problems that may be new to them, made them improve their problem solving and leadership skills, and that this persisted on returning to the UK. Medical students who went for their electives claimed that their visit exposed them to extra responsibilities, helping them to improve their creative thinking. (While these new experiences were seen as a benefit by participants themselves, the Link may want to consider liability issues where UK staff are performing clinical activities that would be outside their remit in the UK.)

Other reported benefits included personal satisfaction and improved self esteem. The respondents also stated that they enjoyed their time in Kambia, with opportunities to socialize after hospital hours.

5.6.3 Key challenges for participants from the UK

a) Limited pre-departure information, training and planning

Medical professionals mentioned the lack of a 'guide book' or fact sheet to help them with preparations before leaving the UK. Suggestions for what this should cover included: what kind of clinical situations to prepare for; an induction to the hierarchy within Kambia District Hospital, including who to approach regarding professional issues; clear guidelines on any limits/restrictions on appropriate clinical activities for visitors; and, an overview of clinical practice and conditions at Kambia District Hospital. Most visitors felt that it would have been useful to have received more guidance regarding the shortage of staff, especially medical doctors (who were sometimes completely absent from the hospital during actual visits).

b) **Cultural differences and communication**

Some visitors reported difficulties in fitting in with/understanding the local culture on arrival; they felt that it took a day or two to familiarise themselves. Some found communications difficult, but were able to get translators to help in some cases. In future, enhanced pre-departure preparation may be able to speed up this familiarisation process.

c) Other issues reported

A small number of respondents felt that the Link was too reliant on key individuals and that the majority of staff at Kambia District Hospital did not seem strongly committed to or involved in the Link. Some also commented that key local community leaders were not regularly informed about the Link's activities. A few respondents felt that, in a couple of cases, materials and equipment received by Kambia Hospital had not always been used as intended (eg equipment not being deployed to rural areas, as planned.) Improved record-keeping and monitoring to track use of equipment could help resolve such issues.

5.6.4 Kambia to UK Link visits – benefits and challenges

Fourteen medical and non–medical professionals have visited the UK for training in various institutions (ie not just within the Link). Those trained include: an anaesthetic nurse in the Department of Anaesthetics at Oxford, an eye nurse at the Institute of Ophthalmology, London and a midwife on the importance of breast feeding at the Institute of Child Health. Other visitors from Kambia to the UK include: a theatre sister, purchasing officer, hospital registrar, two midwives and a staff nurse, all trained in Cheltenham.

Only 4 out of the 14 were interviewed for this evaluation, because the majority of those who visited the UK before the civil war have since left Kambia. Some have been displaced while others are now working in Freetown and other districts in the south. They could not all be traced in the short time that was available for this evaluation. Of the four respondents that still have links with the hospital, one of them, a laboratory technologist, is being funded by Kambia Appeal to study for a Diploma in lab technology in Freetown. The Link may want to consider this turnover rate when allocating funds for UK visits rather than local trainings (although the visits did take place over many years.)

a) Benefits

All four respondents stated that they had had a very good exposure to the management and clinical aspects of Gloucestershire Hospitals Trust. They all also said that their experience in the UK had been very fulfilling, that they had learnt a great deal and had been able to use these skills on return to Kambia. They all felt that the experience had improved their status, both among colleagues and in their communities. They reported that the visit to the UK had enhanced their self esteem.

b) Challenges

The most challenging issue reported was exposure to high-tech equipment used in the UK. All respondents said that they felt demoralised when comparing the situation in Gloucestershire Hospitals Trust with that in Kambia. They did not think that such equipment would be used in Kambia in their lifetime, which generated feelings of frustration and hopelessness.

5.6.5 Other completed Link activities

a) Donated equipment and drugs

Since its establishment the Link has provided one Land Rover ambulance, one general purpose Land Rover, motorbikes, bicycles, autoclaves to sterilise instruments, a general surgical set, a delivery set, hospital beds, bed linen, mosquito nets, a water pump, a surgical suction pump, medical books, a regular supply of medical drugs and other supplies. Recent donations by the Link include provision of medical equipment, supplies of drugs, an oxygen concentrator, sterilisers, re-hydration supplies for the treatment of cholera, mosquito nets, a fridge for the pharmacy, a blood glucose monitor, HIV test kits, cooking utensils and hospital beds.

A future evaluation could examine issues of "retention" and cost-effectiveness (for example, the cost of shipping items such as bicycles from the UK versus purchasing them locally). It would also be interesting to consider the decision-making process; how are priorities for donations agreed, and by whom?

b) Vesico vaginal fistula (VVF) surgery

In 1996 one of the founders of the Link (a gynaecologist), assisted by another surgeon from Manchester, performed 16 VVF repairs at KDH. He performed 19 more between 2003 and 2004. VVF surgery services are now provided by the Mercy Ships in Freetown; hence such surgeries no longer take place at Kambia District Hospital.

c) Therapeutic feeding centre at KDH

One UK Link visitor brought a number of severely malnourished children to the hospital for nutritional rehabilitation; with the support of staff at KDH, a Therapeutic Feeding Centre for the under 5s was set up. Ten children under five years old were on admission, with an MCHA in charge. The intention was to seek Unicef funding to allow the hospital to continue this programme. During the evaluation period the hospital nutritionist was not available for interview, although it is believed that Unicef is now providing funding. If the Link is to continue to have a role, it may wish to expand the programme to the two PHUs, if the programme is seen as a priority locally. Any such work would need to be within the planned and funded activities of the Link.

6. Recommendations – Link Activities

This chapter gathers recommendations for further development of the Link's activities and programmes, based on the findings in Chapter 5, and input from key informants.

It is clear that the Link has been active and creative in its efforts to improve maternal health and reduce maternal mortality in Kambia District. Shaping the Link's activities has been its effort to address the "three delays" that cause maternal mortality:

1) delay in deciding to seek care
2) delay in reaching care in time, and
3) delay in receiving adequate treatment.

The Link has attempted to address the first delay through, for example, training TBAs on detection of at-risk mothers, and encouraging them to alert PHUs and the hospital; this has been supported through the production of a culturally appropriate health education video (Belleh Woman, Go de Right Side), aimed at encouraging pregnant women to seek medical care. The Link's funding for free caesarean section operations at Kambia District Hospital may also be helping to avoid delays in seeking care, by removing one of the financial barriers to accessing care. The second delay is addressed by the Link through its provision of motorcycle ambulances, a pilot service that has been enthusiastically welcomed within the community. The third delay has been addressed primarily by the training of CHOs, MCHA and TBAs in the district to provide improved services to pregnant women.

6.1 Training for community health workers

a) Strengthen planning and monitoring of training

All training of health service providers should be well planned and managed by the Link Coordinators and committees, with good financial and other record keeping. There is a need for more data on the impact that trainings are having; for example, have TBAs improved their ability to spot at-risk mothers following training? Is this resulting in more referrals, and better outcomes for women and children? Methods that could be used to capture and assess the impact of trainings include case studies, or interviews with participants once they are back in the "workplace."

b) Consider additional follow-up training/CPD

The community health service providers trained by the Link should ideally have regular follow-up training to ensure that they are able to put new skills to use.

There is a need to identify appropriate continuing professional development for the CHOs, and to provide this if possible, in order to improve standards of health care and to reduce the need for referrals to the hospital.

c) Training for TBAs at Maselleh PHU

Maselleh PHU currently has a high number of untrained TBAs; since this PHU is supported by the Link, training the TBAs from the villages around this PHU should be considered.

6.2 Support and extend maternity services at Kambia District Hospital

The following steps could be taken to support and extend maternity services at KDH:

a) Expanded emergency obstetric service at KDH
Investigate ways to provide expanded emergency obstetric care at Kambia District Hospital. This will require detailed analysis and a carefully planned response.

b) Resolve problems that lead to delays in funding for caesarean sections
KDH currently received funds for c-sections via the Kambia Project Coordinator. At the time of the evaluation, the release of funds had been delayed. The Link may wish to consider how to reduce such delays. One factor delaying the release of funds may have been delays in reporting back to KA (UK). This may need to be addressed, eg via training/support for the Kambia Project Coordinator, and/or development of standard reporting forms. The Link may want to consider the issue of accountability between the local Kambia Appeal office, and Kambia District Hospital.

c) Remuneration and financing of services
Many skilled health workers at KDH (and in the community) are receiving little or no regular pay; this makes retention very difficult. Lack of funding for health services also results in a "cost recovery" system where fees may be charged for drugs and services that are meant to be free-of-charge—which creates a significant barrier to accessing health services for the poorest. These are both major issues, which cannot be solved by the Link alone, but which need to be considered during planning of interventions.

d) Improved water supply at Kambia District Hospital
Kambia District Hospital lacks adequate water for a secondary health institution; in spite of the presence of a Water and Sanitation (WATSAN) section in the hospital, hospital toilets are not in use due to the lack of piped water in the wards and departments. These issues are not, admittedly, within the Link's current objectives. However, the lack of adequate water is a serious constraint to KDH's ability to provide safe maternity (and other) services.

6.3 Support and extend community-level maternity services (at the two PHUs)

e) Advocate for retention of trained healthworkers
It is important that the Link continues to advocate for improved retention of CHOs and MCHAs within the district (for example, through systems such as requiring a commitment to remain in district for a number of years after training).

Lack of regular salary is clearly a problem for retention of skilled healthworkers. While this is outside the scope of the Link, the Link may wish to consider short-term financial support for eg CHOs in limited cases—although this is clearly not sustainable.

f) Protocols and resources
Development of protocols and provision of resources such as partograms would strengthen maternity services at the two PHUs.

Where equipment and other resources are provided to the hospital and PHUs, it is important that there is a robust assessment of priorities, lead by local staff, and that records are kept showing what happens to the resources provided.

g) Belleh Woman video
This is a valuable resource for the Link. Consider ways to make increased, and more strategic use of this resource (eg regular showings at a range of PHUs). It would be important to consider how to measure the impact this was having; this would require

improved data collection (eg case studies illustrating changes in behaviour among mothers/health workers.)

6.4 Motorcycle ambulances

a) This pilot scheme has strong community support. If possible, the Link should support the purchase of additional vehicles to expand the service.

b) The Link could consider how to strengthen the existing system of community financial support for the ambulance scheme (ie community contributions being used to pay the drivers, cover fuel costs etc.) At present there seem to be difficulties with irregular collection of funds (Barmoi) and lack of a clear system for the transfer of funds back from the Kambia Appeal (Kambia) office (Maselleh)—leading to non-payment of drivers. The Link may want to consider short-term gap-filling, while these difficulties are ironed out.

c) Consider ways to encourage Kambia District Hospital to provide some feedback to PHUs on the referrals that they make using the ambulance service (eg on impact of delays.)

d) The Kambia Appeal (Kambia) office needs to provide sufficient forms to the two PHUs to allow them to keep track of use of the ambulance service.

e) The Link may want to consider ways to improve communications with the ambulance drivers.

6.5 Planning and management of Link visits from the UK

6.5.1 All visits – preparation

- Consider developing or enhancing pre-departure guidelines, training and other preparation for both medical and non-medical staff visiting the Link. This should include cultural orientation as well as clinical issues.
- Consider providing a thorough in-country orientation on arrival, to include general issues (eg induction to Kambia District Hospital) and clinical issues (eg locally appropriate methods).
- Consult THET or other Links for examples of pre-departure training resources.

6.5.2 All visits – planning of activities

- Ensure that all activities carried out by visitors fit within joint activity plans agreed by all Link partners. Proposed new activities require joint decision-making by all Link partners; ideas for new programmes may be welcomed by local staff, but if they are not planned for within the Link, they may not be sustainable.
- Encourage visitors to put ideas for any new activities or programmes to the Link partners, so that these can be planned and costed, and funds raised.

6.5.3 Planning of surgeries

- Before sending surgeons to Kambia, there needs to be a robust analysis of local demand and also capacity (ie in terms of local staff availability and time, and availability of drugs and follow-up care). The DHMT should be consulted before surgical interventions take place, as they will be able to assess the resources they have and the type of interventions that the hospital can manage.
- Ideally, there should be a capacity building aspect to all surgery visits (where an appropriate medical professional is available to be trained.)
- Both Link partners (Gloucestershire Hospitals Trust and Kambia District Hospital) should be clear about the follow-up patient care required for any surgical intervention before it takes place. This should be discussed with the hospital staff before the visiting doctor leaves; or hospital staff could have set protocols for each intervention.

6.6 Therapeutic feeding and an expanded focus on child health

- The Link should investigate whether the therapeutic feeding centre in Kambia District Hospital has been able to secure ongoing funding from Unicef. If not, the Link may wish to consider how to support and manage this programme in a sustainable way, that complements the Link's maternal health activities.
- If the Link wishes to broaden its focus to include child health, joint planning by both Link partners would be needed to identify needs and priorities, and plan any new programmes.

6.7 Strengthen monitoring and evaluation of health interventions and training activities

There is a need for the Link to collect more evidence of the impact that its activities are having. Such information will be invaluable for identifying priorities and planning programmes. It will also build credibility with funders, and will be vital if the Link wishes to scale up any of its activities, seeking larger scale funding.

Many methods can be used to collect such data. The Link partners will need to consider what information is really needed, and what are the most cost- and time-effective ways to obtain it. The following examples are intended to encourage debate around this issue:

- This evaluation found evidence of considerable community support for the motorcycle ambulance scheme, and anecdotal evidence that "lives are being saved." Data could be collected from staff at the PHUs and Kambia District Hospital to demonstrate this positive impact – for example, interviews or case studies illustrating cases where use of the ambulance service had indeed resulted in a positive outcome for a patient.
- KA could begin to collect data on the impact of Link support for CHOs. This could be, for example, a collection of case studies, highlighting what students feel they have learned, how they are able to use their new skills, and benefits to their communities.
- "Before and after" quantitative data showing any changes to health outcomes (eg live births, immunisation rates – or whatever is available) since KA began support to the two PHUs would be useful. If this is not possible, consider collecting a "before and after" case study illustrating the differences that KA support for these PHUs has made to health outcomes in the two villages.

- Evidence of TBA’s ability to identify at-risk mothers before and after training could be collected.
- The Link may wish to review the THET Monitoring and Evaluation Toolkit for Links for additional guidance.

7. The Link Partnership

This chapter looks in more detail at the structure and management of the Link.

7.1 The Gloucestershire - Kambia Link - overview

The initial link between Kambia District Hospital (KDH) and Cheltenham General Hospital was established by Richard Kerr-Wilson and other health professionals from both hospitals in 1992, as a response to the shortcomings in health services in Kambia. Cheltenham General Hospital is now part of the Gloucestershire Hospitals NHS Foundation Trust.

The Link has proved to be a durable one, despite considerable challenges. The civil war disrupted the work of the Link when Kambia District Hospital was destroyed by rebel forces in February 1999. After the end of the war in 2002, medical services for the hospital were initially provided by Médecins Sans Frontières (MSF Holland) until their departure in 2007. The Link resumed its activities in 2002; the UK Link partners were involved in lobbying the European Commission for funds to help rebuild Kambia District Hospital, and this reconstruction work was completed in 2004.

In order to generate income, in July 1992 the UK Link partner formed a non-government organisation known as Kambia Hospital Appeal (KHA). The name was later changed to The Kambia Appeal, UK (KA), recognising the Link's involvement in a range of community-based activities beyond Kambia Hospital itself. KA generates income from varied sources including fundraising activities, donations from supporters, corporate support and other grants.

Many of the activities implemented in Kambia have been well-received locally and have had a positive impact on local health services. The Link has always had a strong focus on maternal health, and until relatively recently, the UK Link partner has been mainly confined to the department of Obstetrics and Gynaecology in Cheltenham General Hospital, with relatively limited input from the rest of the Trust. The Link had received support from senior management since 1998[8]. However, in 2008 the Board of the Gloucestershire NHS Foundation Trust gave official approval to the Link.

7.2 Link management and communications

7.2.1 Management structure and decision-making

Many health Links are managed by Links committees sitting within each of the two hospital partners, who together make decisions and oversee activities. The Kambia-Gloucestershire Link is a little unusual, in that it has an additional structure—the charity Kambia Appeal (KA), formerly known as the Kambia Hospital Appeal. The KA in the UK has a Board of Trustees and a Project Coordinator (James Dowling), who together are responsible for raising funds for the Link and for day-to-day management. There are also strong ties with Cheltenham General Hospital, the institutional home of the Link. For example, the operation of KA is based in the home office of one of the Link's founders. There is also a Link committee within Gloucestershire NHS Foundation Trust (GHNHSFT)., set up in 2008 following Board Approval.

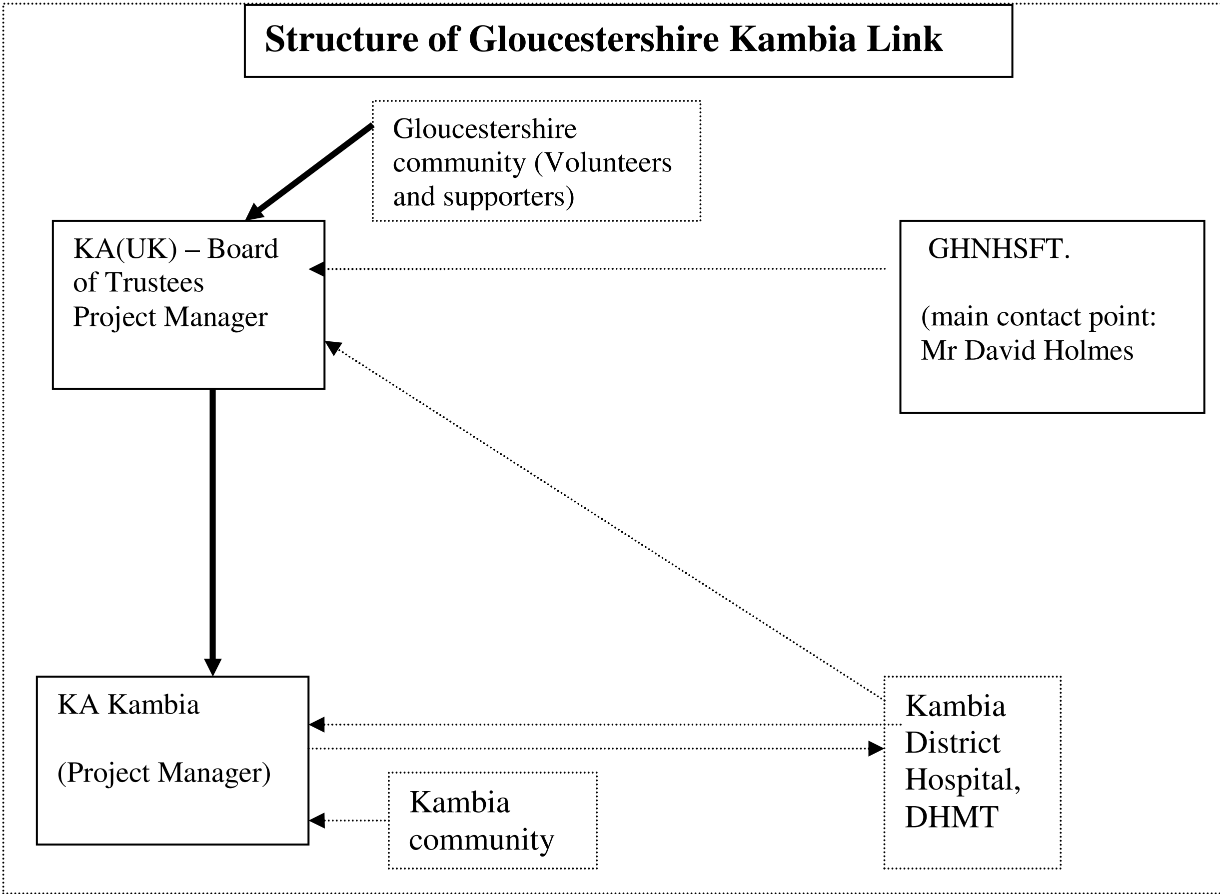
[8] KHA Newsletter No 7, Autumn 1998.

Since 2007 the Kambia Appeal has also had a permanent base in Kambia; KA Kambia operates from a house and compound previously occupied by MSF. The base, which serves as accommodation for visiting medical staff and students from the UK, is located about 15 minutes walk from Kambia District Hospital. Since September 2007 KA Kambia has had a local coordinator (Moses Kabbah), who has made great progress in working with the Ministry of Health and the Kambia District Council on KA's behalf.

Before the formation of KA Kambia, KA (UK) and the UK Link partner worked through contacts with the MO and DMO in charge of Kambia District Hospital and a local link committee in Kambia. However, the management of the Link's activities is now done by KA (UK) and KA Kambia. Within Kambia District Hospital itself, there is no longer a committee or group specifically set up to take a lead on activities of the Link (although Link matters were discussed within the DHMT); perhaps as a result, the KDH staff did not seem to feel a sense of ownership of the Link.

The hospital and clinics in Kambia are owned by the Sierra Leone Government and managed by the District Health Management Team (DHMT), a decentralised department of the Ministry of Health and Sanitation. The KA (UK and Kambia) work in collaboration with the DHMT, responding to requests for assistance by the District Medical Officer.

The diagram below shows the structure of the Gloucestershire-Kambia Link; the lines show how interventions are planned and organised at present.



Decision-making: It is not clear that there is a specific decision-making process that involves all the partners in both the UK and Kambia. It would be useful for this to be clarified.

It might be useful for both hospitals to have committees or steering groups involved in managing the Link—although the relationship with KA would have to be clear. Currently, it appears that there is not a clear process for the staff of Kambia District Hospital to feed into decision-making for the Link; it is important that this is resolved, if the Link is to be "demand driven" and the hospital is to feel a greater sense of ownership for the Link. This is also true for the DHMT, which does not seem to have a clear understanding of the Link as a resource to be drawn on to support their own plans. Greater local involvement in planning and decision-making could help to create a "demand led" Link with a stronger sense of local ownership.

The staff at the two PHUs (Barmoi and Maselleh) are managed by the DMO; as such they feel the same lack of connection to the Link as the staff at the hospital level.

7.2.2 Financial management

The Link's activities are funded through KA's fund raising activities (which have included grant applications to donors such as Comic Relief UK.) In the UK, KA has a Treasurer who is responsible for overseeing financial management of the charity.

Financial management in Kambia has at times been challenging. Before the appointment of a Project Coordinator in Kambia in 2007, all funds and materials were sent directly to Kambia District Hospital. Given the short staffing and other difficulties there, financial management and record-keeping was limited.

The development of the KA (Kambia) office has helped to bring marked improvements in financial management, although there is still room for improvement. In Kambia the Project Coordinator now keeps some record of income and expenditure. Funds are transferred to Kambia from the UK; the Kambia Project Coordinator then withdraws funds as needed, reporting back to Kambia (UK) when funds are next required. However, sometimes there are delays in the release of funds, possibly reflecting delays in reporting; for examples, funds for caesarean sections were delayed towards the end of 2008.

To avoid such delays in future, there is an urgent need to streamline this process, perhaps by developing standard reporting forms or setting up a regular reporting system (eg monthly, rather just when funds are needed), and supporting the Project Coordinator (eg with training on reporting, budgeting and used of spreadsheets). KA (Kambia) also does not appear to be accountable to the hospital staff, perhaps because of the lack of a strong Link team or Link identity within the hospital; this makes it difficult for hospital management to work with KA when funds are delayed.

7.2.3 Communications and reporting

The provision of a satellite communications system and computer equipment to the Kambia office has improved email contact between the two Kambia Appeal offices, greatly improving communication between these two partners.

KA (UK) keeps some regular records, comprising minutes of Trustee meetings, as well as yearly newsletters informing members of the Link's activities. The Project Coordinator in Kambia is now also providing some financial and other reports, before new funds are released (see 7.2.2).

Record keeping and reporting for Link activities at Kambia District Hospital and the PHUs could be strengthened. Existing data collected by the hospital and PHUs make it possible to assess the impact of some of the Link's activities in relation to its focus on maternal and child health issues in Kambia. However, there are gaps (see Section 6.7). There are also

insufficient records of what individual UK visitors have done while at Kambia District Hospital. This makes it difficult to ensure accountability, and also continuity between visitors. Some UK visitors did write reports for the Link but these are kept in the UK; it would be valuable for partners in Kambia to have access to these.

The absence of comprehensive Link reports makes evaluation of the Link's activities difficult. There is some attempt to keep track of participants in trainings (eg lists of names and signatures), but there is a need for effective monitoring and regular evaluation of all the Link's activities. This needs to be planned by all partners. (See section 6.7 for more detailed recommendations for evaluation and monitoring of activities.)

8. Recommendations for the Link Partnership

8.1 Develop a demand-driven planning process that involves all partners

The Link has in the past benefited from the support of highly motivated individuals, who have carried out many of the Link's activities. This has been a key strength, allowing activities to take place which would simply not otherwise have been possible. However, reliance on such input can mean that there is a risk of "supply side driving" (ie decisions are taken about what activities to do, depending more on the skills available from the UK side, than demand in Kambia).

Non-demand-driven interventions can be a constraint to the core activities of the Link. For example, interventions such as visiting surgeons performing a high number of surgeries can overstretch the hospital (with nursing care for patients after some surgeries lasting up to two weeks), reducing time for other activities.

There is scope to strengthen the Link's planning of activities, and to make this planning more "demand driven." This will allow the Link's activities to have a deeper and more "strategic" impact on building local capacity for health care. Such plans, developed with all partners including staff at Kambia District Hospital, should make clear what expertise the hospital requires (in terms of training or service provision), when this is needed, and for how long. There should be a clear framework guiding all of the Link's activities eg a longer-term set of goals and objectives, with regular (eg annual) activity plans. It is important that the DHMT is also consulted and kept informed. As far as possible, efforts should be made to ensure that the Link's plans are in alignment with hospital, regional and national health plans.

8.2 Greater ownership by the hospitals

In Kambia, most hospital staff had little sense of ownership of the Link, and limited understanding that the Link was an institutional relationship in which their hospital was an equal partner. There may be ways to resolve this eg setting up a Link committee within the hospital, including staff such as the Matron and the Registrar as well as the MO, DMO and Kambia Project Coordinator. Such a committee could be involved in both decision-making for the Link as well as overseeing Link-related activities at the hospital.

It might also be useful to "broaden out" ownership of the Link within Cheltenham General Hospital and the wider Trust, perhaps involving a wider range of staff from other departments/disciplines. Whilst relatively few staff are likely to be involved in visits to Kambia, a far wider group could be involved in activities such as fundraising events. This may be a good time to develop such wider support, now that the Link has secured Board-level support.

8.3 Further strengthen information-sharing with the local community

The Project Coordinator in Kambia has played an important role in communicating the work of the Link to key community leaders. It is important that he continues to meet regularly with the health representative at the District Council to update him on activities of the Link. It would also be helpful if he paid informal visits to the Paramount Chief of Kambia, to provide updates on the Link's activities and to ask for advice on how the Chief thinks the Link can improve.

8.4 Strengthen systems for record-keeping, monitoring and evaluation

Despite recent improvements in this area, there is scope to further strengthen monitoring and evaluation systems for the Link itself (ie in addition to records of specific health interventions):

- Kambia Appeal should support the Project Coordinators to develop their capacity to keep suitable financial records and reports.
- Develop a regular system for reporting for all funds transferred to Kambia, including details of activities funded, and budget breakdown. Consider setting up a regular, standardised narrative and financial reporting system.
- Materials in the form of drugs and equipment sent to Kambia should be properly recorded; their use should be monitored.
- Improve reporting and record-keeping by visitors from the UK; monitor visitors to ensure their activities comply with the Link's overall annual plans. Visitors should be able to check what previous visitors did, what their reports recommend and use lessons learnt to feed into their own work.
- Plan to carry out regular evaluations of some/all of the work of the Link, to help capture lessons learned, measure impact of activities, and ensure good decisions are being made about needs and priorities for future activities. Regular monitoring and evaluation will improve credibility with donors – as well as being a useful resource that feeds into future planning. Ensure any evaluation work is jointly planned by all partners.
- Share KA and other Link reports with all Link partners.

9. Conclusions

A great deal of work has been carried out by the Link in the past 17 years. The Link has proved extremely durable, despite great challenges (for example, the gap in activities during the civil war.) Many challenges that are negatively affecting the Link's interventions are beyond the remit of the Link. Problems such as inadequate salaries for health workers, and lack of infrastructure, water and electricity supply in Kambia cannot be solved by the Link alone, they are part of the requirements for an effective national health system.

The Link has made great strides in developing its management structure, setting up Kambia Appeal, and appointing a KA representative in Kambia itself. It is important that steps are now taken to strengthen planning and coordination, in a way that ensures both hospitals are involved in the planning and implementation of Link activities.

The activities of the Link should be "demand driven" by Kambia District Hospital. All activities need to fit within the framework of a clear strategic plan, which again should be developed jointly with partners in Kambia. The DHMT should be informed of all planned interventions, and feedback sought. As far as possible, efforts should be made to ensure that the Link's plans are in alignment with hospital, regional and national health plans.

Despite many recent improvements, there is scope to strengthen reporting and accountability within the Link still further. Regular financial and narrative reports are needed; this information flow should go in both directions. For example, 'trip reports' written by UK visitors could usefully be shared with Kambia Hospital.

A number of people (both medical professionals and others) have contributed their time and resources to spend periods of time volunteering in Kambia. To make the most of this valuable resource, it is important that such visits are built around requests from Kambia. This work will also need to fit within the longer-term strategic and activity plans of the Link. In addition, visitors from the UK could be helped to get "up and running" more quickly, with the introduction of some standard pre-departure preparation and documentation.

The Link's activities have focused on maternal health, particularly around ways to address the reasons for delays in seeking health care (delays in deciding to seek care; delays in being able to reach care; and delays in appropriate care being provided.) The Link has been creative in broadening its activities beyond Kambia District Hospital, to the wider community, including through support for PHUs.

It is clear that many of the Link's interventions enjoy considerable community support. For example, there is strong community support for the motorcycle ambulance scheme, and a real feeling that this has "saved lives" of pregnant women and others. However, the lack of data makes it difficult to prove this impact. An improved system of information collection combined with regular monitoring and evaluation will enable the Link to really demonstrate the positive impacts that its work is having. This does not have to always rely on detailed quantitative data: methods such as case studies could provide rich qualitative evidence of the impact of the Link. All future plans should build in monitoring and evaluation activities from the start.

Large numbers of health workers including TBAs and CHOs have already benefited from the Link's training programmes. Such training work could be strengthened even further through measures such as providing regular follow-up training. Again, collecting data that analyses how such training has been put to use, will help support effective planning and decision

making. Issues such as the lack of salary for trained healthworkers may be beyond the scope of the Link; however, there may be places where the Link can step in on a short-term basis (for examples, ambulance drivers receiving stipends at one of the supported PHUs, but not the other.)

The government of Sierra Leone has made improving the country's dire maternal health indicators a priority. Within Kambia District, one of the poorest regions of the country, the Link is already contributing significantly to this effort in a variety of creative ways. The Link now has enormous potential to build on these successes, and to have an even deeper and more "strategic" impact on improving health services.

Appendix One

Questionnaire used by the evaluator with Link respondents who visited either Kambia, or the UK

Name: ____

Base 1) Cheltenham 2) Kambia

Telephone/Mobile number/email: ______________________________

Date of visit to link: ______________________________________

What is your profession? ___________________________________

How did you find out about the link? ____________________________

Why did you visit (partner) link?

____

What were your expectations before you visited project?

____

Do you know the purpose of the Link between Cheltenham Hospital and Kambia Hospital?
Yes No

If yes, briefly describe what you understand by the purpose (Link)

Did your visit improve your understanding of the link?

Benefit of your visit

It increased my knowledge of the link Yes No

It has helped me in improving my professional practice Yes No

If yes, say in what way …..

Did you learn any new skills at your partner's hospital? Yes No

If yes, say what ones ……

Challenges:

Did you have any problem with communication? Yes No

In your view, is the funding of the Link adequate? Yes No

What other challenges did you observe in the Link?

Please give suggestions as to how the Link can be improved: ……………………

Appendix Two

Health System Monitoring Checklist for PHUs (PATH Nigeria Consultants)

Facility Name: Visiting Date:

Head of Facility:

Service Delivery:
Does the facility have a micro plan showing settlements, catchment population, targets and hard to reach areas?
Are the standing orders Available and used?
Are outreach services provided?
Are there any protocols for the management of priority conditions (e.g. anaemia, diarrhoea, ARI, HAST, malaria IMCI)?
Are universal precautions guidelines available/followed?
Is privacy provided for clients?
Are records analysed and displayed?
Comments: Summarise the findings in your note book, noting serious observations made

Programme Specific Indicators

Routine Immunisation
Are immunization services available at all times?
Have you experienced vaccine stock-out (for BCG and TT) in the last 3 months?
Are vaccines forecast according to standard operating practices?
Is the facility able to store vaccines and other supplies?
Are fridge temperature charts within accepted range on day of visit?
Comments: Summarise the findings in your note book, noting serious observations made

IMCI
Does facility provide IMCI services on all days?
Does health worker have knowledge on IMCI protocols?
Observe health worker managing 2-3 cases using guidelines
Is the assessment correctly done?
Is the case management correct?
(if unable to observe case management, discuss with Health worker
Comments: Summarise the findings in your note book, noting serious observations made

DRF
Are drugs purchased approved by facility DRF committee?
Are all drugs purchased through JIMSO?
Is there proper storage and security?
Are bin cards correct and up-to-date?
Is D&E available? What are the criteria used?
Comments: Summarise the findings in your note book, noting serious observations made

Infection Control /Injection safety
Is there an adequate supply of clean water?
Are guidelines/protocols for infection control available?
Are appropriate hands washing practices observed?
Is there a sharp disposal container in the treatment/injection room?
Is the waste burnt and buried?
Are there used syringes on the ground?
Comments: Summarise the findings in your note book, noting serious observations made

Safe Motherhood
Were partographs used for all deliveries in the past 3 months?
Are the safe delivery cards being used?
Is the facility doing BEOC services?
Are staff trained in LSS?
How many have been trained? When was last training?

Internal General Management and External Linkages
Are targets the sets set for the facility and reviewed?
All staff on duty who should be?
Is punctuality and absenteeism well monitored?
Who supervises the staff?
Do staff meet to review targets?
Are there regular minuted team meetings?
Is transport arrangement available for the referral system?
Is data used for decision making?
When was the last meeting with community members held?