



# **Access to healthcare in post-war Sierra Leone**

**Summary of a 2005 survey in four districts:  
Kambia, Tonkolili, Bombali, Bo**

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## **Post war Sierra Leone**

In 2002, Sierra Leone emerged from more than a decade of civil war. In recent years, the country has been mostly stable, with the exception of a few incidents at the border with Liberia. The civil war – in which half the population was displaced, 50,000 people were killed, 100,000 were mutilated and 250,000 women were raped – has ruined the country's economy, infrastructure and social services.

Despite the end of the hostilities, population's health status has not improved. Sierra Leone's maternal mortality rate is among the highest in the world<sup>1</sup>. Some 17% of children die before their first birthday and 25% die before they reach the age of five. Malaria is the number one killer. A new national malaria protocol based on artemisinin-based combination therapy (ACT) has been adopted but effective treatment has not yet been implemented.

The country's healthcare delivery system is in a poor state. Among the health sector's many problems are insufficient financial resources for guaranteeing appropriate healthcare. Faced with the shortfall of subsidies from government and international sources, most public health structures apply a de facto system of cost recovery, requiring patients to pay for most services.

At present the health authorities, together with donor agencies, international organisations and technical advisors, are discussing the formal reintroduction of a cost recovery system for drugs and services at all levels of primary healthcare. The policy under discussion is spelt out in the document 'Health Services Cost Recovery Policy for Sierra Leone'<sup>2</sup>.

## **Population survey**

In this critical period of reconstruction and discussion of policy change about tarification of health services in post-war Sierra Leone, MSF decided to carry out a population survey in four rural districts of the country. The survey focus was on mortality, financial access to healthcare and its determinants as well as socio-economic conditions of the population.

The two-stage cluster sampling survey was conducted between April 22 and June 16, 2005 and compared three samples of 900 households each (30 clusters of 30), chosen within a 5 km radius of clinics applying different healthcare payment systems: cost recovery, flat fee and free care. This was done to minimise the impact related to geographical access and to enable us to focus on other reasons for exclusion, particularly those linked to financial access.

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<sup>1</sup> Maternal Mortality in 2000, estimates developed by WHO, UNICEF & UNFPA. October 2003. Available at [http://www.childinfo.org/areas/maternalmortality/maternal\\_mortality\\_in\\_2000.pdf](http://www.childinfo.org/areas/maternalmortality/maternal_mortality_in_2000.pdf)

<sup>2</sup> Health services cost recovery policy for Sierra Leone, Ministry of Health and Sanitation, August 2005.



*Map of Sierra Leone showing the four survey districts*

The districts of Kambia, Bombali, Tonkolili and Bo were selected because of previous or current MSF presence there and because their populations are representative of the rural areas in which MSF-Belgium (MSF-B) and MSF-Holland (MSF-H) work.

In total, 2,735 households were surveyed :

- **903 in the cost recovery sample** :which was selected from the rural population living in the catchment areas of the MoHS community structures where a cost recovery system is in place. This includes households in all four districts surveyed. User's fees in this system vary according to diagnosis and prescription of tests and/ or drugs. These costs are added to the price of the consultation, which can vary across districts.
- **921 in the flat fee sample** : which includes the areas where the clinics are supported by MSF-H in supplies, medicine and incentives for the personnel and where a flat fee payment system is in place. This includes households in the districts of Kambia and Tonkolili.  
In Kambia, user's fees amount to 200 Le for children (0.08\$) and 500 Le for adults (0.2\$)  
in Tonkolili, user's fees amount 500 Le for children (0.2\$) and 1,000 Le for adults (0.4\$). These fees are supposed to include consultation, tests and drugs.
- **911 in the free care sample**: which includes villages in the catchment areas of clinics supported by MSF-B in Bo, where a free care system is in place for women, children and men under 20 and over 45. Men aged 20 to 45 pay a flat fee of 1,000 Le (0.4\$).

The recall period studied in the survey covers the days from the first of January up to the day the questionnaire was administrated. Other complementary information was gathered through focus group discussions and data collection about health centres in the areas surveyed as well as analysis of the experience of MSF-Belgium in abolishing user fees in the district of Bo.

For reasons of scope and resources, information regarding socio-cultural aspects was limited and the quality of healthcare provided assumed to be the same.

## Main Results and interpretations

### ■ Excess mortality

Mortality rates are consistently high throughout the three samples:

Crude Mortality Rate	<b>1.7-1.9 deaths</b> /10,000 persons/day
<5 Mortality Rate	<b>2.7-3.5 deaths</b> /10,000 children/day

These mortality figures are extremely high and well above the internationally recognised emergency threshold<sup>3</sup>.

This is the case for the crude mortality rate in general, which is almost four times as high as expected in sub-Saharan Africa<sup>4</sup>. Under-five mortality is also above the emergency threshold of 2/10,000/day.

If the rate of 1.8/10,000/day is extrapolated to a full year, it means that 6.6% of the population dies in one year. The mortality is such that, even with a 5% birth rate, the population of the areas surveyed is not renewing itself.

There is a crisis in the population's health status<sup>5</sup>, especially considering that this mortality rate applies within a distance of 5km from health clinics and possibly underestimates the situation further away.

The main causes of mortality reported by the respondents were malaria or fever, respiratory conditions, diarrhoea and pregnancy-related problems.

### **Malaria is the number one killer:**

Malaria related deaths account for 25% to 39% of all deaths depending on the district. For the deaths that occurred among the population under five, malaria accounts for 44 to 63 % of the deaths.

Malaria-related mortality for the under five is high across the three samples: 0.9-2.2 deaths /10,000/ day. High mortality rates for malaria seem to be concentrated in the under five category which suggests that they are the most vulnerable. The figures are extremely high in Bo district : 2.2 deaths/10.000/ day, which is above the emergency threshold, only for malaria related deaths. This is higher than in the other districts and it supports the idea that endemicity of malaria is not homogeneous in Sierra Leone.

In view of the reported resistance to chloroquine<sup>6</sup> and the observed lack of effective anti-malaria drugs in health centres and hospitals without external support, the urgency of implementing ACT<sup>7</sup>, as planned in the national policy, is clear.

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<sup>3</sup> The crude mortality rate (CMR) in a stable population in developing countries is estimated at 0.5/10,000/day (for industrialized countries, this rate is around 0.3). A CMR of 1/10,000/day indicates an emergency. For under-fives (MR<5), the expected rate is 1/10,000/day while a mortality rate of 2/10,000/day indicates an emergency situation.

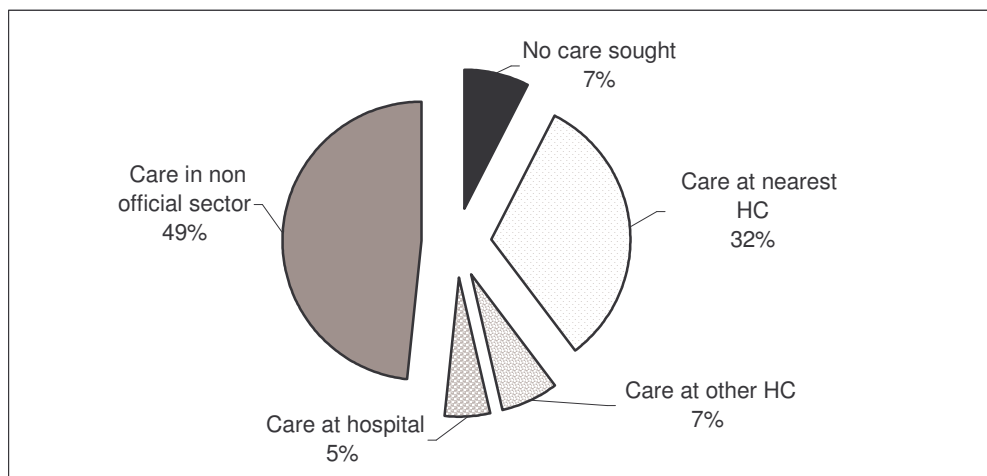
<sup>4</sup> The reference for developing countries is 0.5 deaths/10,000/day.

<sup>5</sup> Toole M;, Waldman R., Prevention of excess mortality in refugees and displaced populations in developing countries. JAMA 1990, 263 (24): 296-302

<sup>6</sup> Francesco Checchi et al, Evidence basis for antimalarial policy change in Sierra Leone, Tropical Medicine and International Health, Volume 10, p 146, February 2005.

<sup>7</sup> Artesiminin-based combination therapy

## ■ Under use of health services in the formal system in Sierra Leone



**Only 1 out of 3 households declared using the nearest health centre during their last episode of illness, when the health centre closest to home applies a 'cost recovery' system.**

Instead, the use of the non-official sector is very high: it is the recourse of choice for 1 out of 2 households in the survey. Non-official sector refers here to traditional healers and informal sector. Informal sector includes alternatives such as an ambulatory pharmacist ("pepe doctor"), home visit by a nurse, traditional birth attendants, pharmacists and other alternatives.

Ambulatory pharmacists ('Pepe doctors') on their bicycles were seen even in remote areas. They are popular in the villages because "they come to your home, they do not ask for consultation fees, they sell the same drugs you get at the health centre and for a cheaper price" and are flexible in their payment schemes: "sometimes they give the drugs for free or they give you credit."<sup>8</sup>

The main reason for choosing the non official sector is lack of money: it was cited by 33 % of the total of sick people in the sample, as the main reason for not consulting the nearest health centre to their home. This indicates that cost constitute a barrier to accessing the formal health system.

Additionally, 7.5 % of sick persons in the household did not consult at all during the last episode of illness. For 70 % of them the reason of non-consultation was related to money problems.

For the 12 % households who decided to bring their ill member in another official structure than the one closest to home (hospital or health centre), it was mainly determined by considerations of trust in the structure as well as linked to the perception of the gravity of the disease.

The prices paid by patients at the nearest health centre vary widely and on average are quite high. Half of the patients paid more than 8,250 Le (\$3.40) at the clinics. Compared to the official sector, prices paid in the non-official sector (0.9-1.3\$) are lower making it a financially attractive option for the patients. The

<sup>8</sup> As reported by the surveyors after their visits to the villages.

payment for medical services is likely to push people towards the non-public health structures that in practice often charge less.

### ■ The burden of care on patients in the formal system and the risk of impoverishment

The survey data confirmed that poverty is widespread. 97% of the population lives under the threshold of extreme poverty with less than \$1/person/day. A household of 7.4 people lives on an average of 24,500 Le a week (about \$10)<sup>9</sup>.

In a predominantly poor population – where the people spend less than \$0.2/person/day – to pay 3 \$ for a single episode of sickness is a lot of money. For the households surveyed, these prices represent more than 25 days of individual income.

Additionally, almost 1 household out of 2 declared having extra costs related to the episode of illness. Food and transport were most often mentioned. The mean additional costs amount to 1.8\$ per episode. This also has to be added to the patient's bill.

In such a context, healthcare payments are a substantial burden on households and can constitute a problem for the rural population because of the risk of further impoverishment.

This was reflected by the answers of the households concerning mobilisation of cash to pay for healthcare: more than 6 out of 10 household declared that they used risky survival strategies to pay for healthcare at the last episode of illness: they went into debt (15% of patients), sold assets or pawned a possession. Only one in four households declared that they could use the household's savings to pay for healthcare.

The survey focused on expenditure for primary healthcare. The risk of impoverishment is even greater when hospital care or treatment for chronic diseases is needed.<sup>10</sup> Mean expenses for hospital care reported in the survey where cost recovery was applied at the second level of care amounted to 46 \$. Health expenses can also become catastrophic when several members of the family are sick at the same time or in situations of chronic or constant illnesses.

Significant financial barriers in maternal healthcare were also reported in the focus group discussions, even when a life-saving caesarean section is needed. In hospitals without external financial support, the price for a caesarean section is extremely high, the equivalent of \$80 to \$250<sup>11</sup>. Women report long delays and even refusal of care if they cannot pay. They tell of incidents where mothers are kept in hospital until the family can settle the bill. To raise the money, the family has to make enormous efforts, incurring debt and affecting food expenditure for the household.

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<sup>9</sup> These are the results from the survey of the population living near the health centres with a cost recovery system. This survey investigated households in all four districts. There are some differences in the socio-economic situation between districts.

<sup>10</sup> Xu K., Evans B., Kawabata K. et al., *Household catastrophic health expenditure: a multi-country analysis*, Lancet 2003; 362: 111-17.

<sup>11</sup> As reported in the focus group discussions.

## ■ No effective protection mechanisms for the poorest

The charging of patients seems to affect particularly the poorest people within the population : when we consider the poorest quintile of population, utilization of the nearest health centre further drops down to 19% of the sick people in the sample surveyed. The poorest people are more likely to be pushed to use the non official sector than the rest of the population.

In theory, sick people who are unable to pay should be protected by an exemption system. However, exemptions can only be granted once they come to a health centre while the surveys show that over 50% of the population do not consult in the formal sector. Thus it is important to consider whether the population understands the exemption system and if the expectation of not being able to pay play a role when an individual decides whether or not to go to a health centre.

The national health policy states that children under five, breastfeeding women and elderly people should be exempted from payment. However, the survey shows that no more than 3.5% of the patients in this category received an exemption. Among general population in the sample, only 4 % of the sick were exempted of paying during the last episode of illness.

Of the people who did receive exemption of user fees at the nearest health centre, none was from the poorest quintile in the cost recovery sample. It seems that the criteria laid out in the national health policy do not influence how exemptions are granted.

In the formal health system, as it is organized today, there is no protective mechanism for the poorest and the most vulnerable people.

## ■ Alternatives to the 'cost recovery' system

In order to minimise the financial barriers and the financial burden of formal health care, we could look at two alternative experiences from rural areas in Sierra Leone, implemented by MSF.

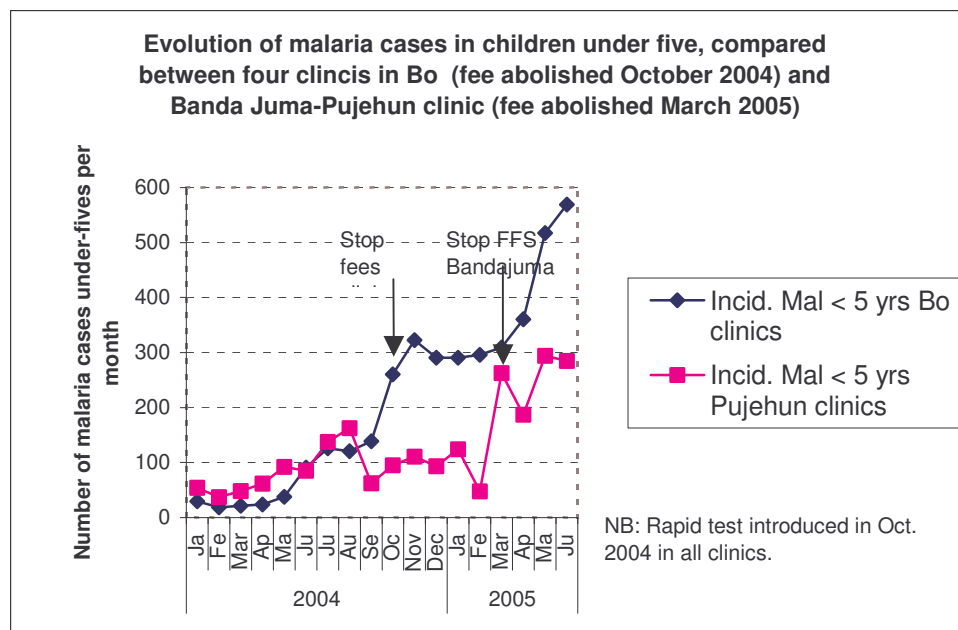
MSF-H implements support to formal health structures in Tonkolili and Kambia districts, maintaining a patient payment for curative care in the form of an all-inclusive flat fee (between 0.08\$ for children and 0.4\$ for adults) and with a waiver system for those who cannot afford it.

MSF-B implements support to formal health centres in Bo province with a 'free care' system for a majority of the patients, i.e. women, children under 5 y, elderly people (over 60 y). The remaining patients pay an all-inclusive flat fee of 1000 Le (0.4\$). There is a possibility for the staff to waive this fee in case not affordable for the patient.

Overall we find, compared to the people dependent on health structures with user fees under the cost recovery per item:

- Higher utilisation rates
- Higher utilisation rates by the poorest people
- Less reports of financial barriers as reasons for non-use of formal health structures
- Less frequent coping mechanisms with risk for further impoverishment of household

The experience in Bo district when shifting from a flat fee to a 'free care' system for women, children and elderly, shows a steep increase of utilisation rates. Consultations for curative care corresponded to an increase of attendance rates from **1** new contact/inhabitant/year in September 2004, to **3.6** in December 2004, to **4.5** in June 2005. This effect on attendance rates was sustained into 2005 and remained relatively high thereafter, **between 3 and 4 new contacts/inhabitant/year** on average. Consultations for children under five increased by 60%.





Even a 'moderate' flat fee can constitute a significant financial barrier for cash-strapped households.

The rise in utilisation rates for curative care had also a positive influence on preventive care. Furthermore, it allows to attract malaria patients and patients with serious illnesses in need of hospitalisation. Cancellation of fees also seems to encourage earlier healthcare-seeking behaviour, as shown by reduced rates of hospitalisation among outpatients towards expected rate of 5%.

In the results of the household surveys we see a similar tendency. In both cases, patients use the nearest health centre more: between 48 and 52 %, compared to 35% in cost recovery sample. In the lower flat fee or the 'free care' systems the importance of 'money problems' is reduced among the reasons for not using the formal health structures or choosing alternatives.

In particular for the poorest quintile of the households surveyed, the application of a low flat fee or 'free care' leads to higher utilisation of the nearest health centre: 40 to 42% in the alternative systems, compared to 19% in the cost recovery system.

By applying an all-inclusive flat fee, there is also clearly a reduction of the financial burden of the cost of illness. The average total cost paid in terms of user fees is 1.2 \$ compared to 3.3\$ in the cost recovery sample.

### **Remaining problems**

From the household surveys it appears that the majority of people tend to use the informal sector, even when living relatively near a public health structure. A combination of factors as convenience, cultural or social habits, issues of trust can intervene.

However, even in the alternative payment systems, lack of money remains among the reasons of non-use of the formal health structure. One should not forget that besides the patient fees there are often other costs for the households of ill persons: transport, food, opportunity costs. Abolition of fees reduces total costs but lack of cash remains an obstacle in seeking care in the formal health structures. Expanding health care offer through outreach activities beyond the existing health structures might be helpful.

Although the total cost paid by the patient at point of use is significantly reduced in a primary health care system with an all-inclusive fee, the mean price paid by patients (1.2\$) is still equivalent to more than one week's individual income (nine days). This remains a serious effort for cash strapped households and may continue to deter people from early use of the health centre or reinforce the poverty cycle for households in difficulties. As applied today, the flat fee system still represents a heavy burden on families and more than one in two families have to resort to risky coping mechanisms to raise the cash needed.

Further reduction of the patient fee might reduce financial barriers and risks, but a major problem is the failure of the exemption system. In the flat fee sample only 7% of the population surveyed benefited from an exemption.

The present exemption system is based mainly on the decision of the health staff. Without unambiguous criteria it seems hard to supervise and patients have insufficient information on its practical application, so they cannot object or complain when asked to pay.

Even in the 'free care' system in Bo, application was imperfect as shown by the discrepancy between instructions and reality in the household survey. There are indications that the information on the 'free care' system does not reach people, even if they live relatively near the health centre. Lack of information or uncertainty about fitting the exemption criteria might also deter patients to consult.

Additionally, as a financing source for health centres, the revenues collected from user's fees are irrelevant to the total cost of care, and yet they represent a heavy burden on families. To replace this source of revenue for the health centres would require a relatively small increase in subsidies from support organisations and would improve households' access to healthcare.

**Providing care free of charge at point of use seems to be the best alternative to a cost recovery system. Although not sufficient on its own, it is a first necessary step that could help minimise existing barriers to healthcare. It could help to improve utilisation of essential health care services, even by the poorest, and to limit the risks of further impoverishment of households. Based on these findings, MSF finds it unacceptable to charge any fee in the facilities it supports and will emphasize treatment and prevention of malaria.**

**Mortality is high in all samples, above the emergency threshold, for both children and adults and indicates that the health situation of Sierra leonenas in rural areas is precarious. These high mortality rates require urgent and effective action, in the health sector and other areas. MSF will focus on interventions targeted at reducing mortality.**

## Implications for health actors in Sierra Leone

- High mortality rates- well above the international emergency threshold- indicate the precarious status of the rural population. This excess mortality is mainly due to preventable and easily curable illnesses. The health stakeholders should adapt their interventions in light of this situation. In order to meet the urgent medical needs of the population, more efforts should be going towards better coverage of effective essential care to the rural population.
- Malaria: Specific attention should be given to malaria as a major cause of mortality. Effective supply of artesiminine-based combination therapy (ACT) in formal health structures and the implementation of affordable treatment is a priority. There should be access to effective diagnosis and treatment of malaria, with specific attention paid to children who are particularly at risk. Preventive measures and correct case management at all levels are also needed.
- Maternal care: Efforts to reduce maternal mortality have to include the provision of accessible and affordable, timely maternity care. Reducing financial barriers for deliveries and in particular for emergency obstetric care, including caesarean sections, is crucial. The current patient fees push rural families into poverty and can cause life-threatening delays.
- Financial barriers to care: User fees – even when considered ‘low’ – are an important financial barrier. Exemption systems do not protect the most vulnerable segments of the population. Stopping the charging of patients for healthcare is a necessary first step. It could help minimize other existing barriers to the use of public services.
- There should be discussion on mechanisms for financing healthcare without putting the main burden of cost on patients. National and international health actors should not be rushed into re-introducing the cost recovery system.
- Based on the findings above, MSF finds it unacceptable to charge any fee in the facilities it supports and will emphasize treatment and prevention of malaria.