



REPORT ON

DISTRIBUTION OF LONG LASTING INSECTICIDAL NETS IN
MWANA, DEMOCRATIC REPUBLIC OF CONGO

FOR

THE AGAINST MALARIA FOUNDATION

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1. Bednet distribution programme for the health zone of Mwana DR Congo

I. Justification of the programme.

Malaria is the most important motive of consultation in the health facilities and consequently represents a major problem in primary health care in the Democratic Republic of Congo. The national malaria program has published that, in the DR Congo, a child under five years suffers an average of ten episodes of malaria during one year's time and 25 to 30% of infants deaths are caused by malaria. In South Kivu, all available statistics of the Malteser programme show that malaria is diagnosed in 53% of all consultations in the health facilities and is the major cause of mortality in the health zones.

The low rate of pregnant women coming to the health facilities for antenatal care in certain regions causes a lack of protection against malaria for pregnant women. This is one reason for the augmentation of maternal deaths, abortion and premature births. During pregnancy, the malaria attacks are more frequent and more serious. The risk to develop serious malaria is two to three times higher for a pregnant woman than for others living in the same zone. malaria during pregnancy can be the acute symptomatic form or/and a chronic anemia.

Also the rate of assisted deliveries in the health facilities is still too low and the utilization of preschool service is neglected in most areas.

The malaria problem is about the same all over the regions of intervention of Malteser International. Therefore, the health zones with the lowest level of income, where the population is not able to pay for bed nets and where the highest rates of malaria and lethality of malaria had been found, have been chosen for the programme.

In harmony with the national policies, Malteser International targets in its first approach pregnant women coming to antenatal care clinics and women in the delivery ward of the health facilities; the second approach targets children who come regularly to postnatal care and vaccination.



Isolated villages



and bad road conditions

2. The health zone of Mwana

Mwana health zone is situated in the province of South Kivu in eastern DR Congo. It has a mountainous relief and the population is estimated at 122,131 habitants for 2007.

The health zone has eleven health posts, eight health centers and two hospitals. Often, the health facilities are very isolated and not accessible by road. The health posts offer the minimal package of curative and preventive service but only seven health centers and the two hospitals have a maternal ward.

The program of bed net distribution was not designed as a special action, but integrated in the existing service of the health centers to promote the preventive activities and assisted deliveries.

II. Global object

Reduction of morbidity and mortality of malaria for children under five years and pregnant women.

III. Special objects

1. 50% reduction of malaria crisis in children under five years and pregnant women.
2. A minimum of 60% of pregnant women and 30% of children under five years sleeping under bed nets.
3. Augmentation of utilisation rate of antenatal service at 80%, postnatal service at 30% and assisted deliveries at 80%.

IV. Direct beneficiaries

The programme concerns pregnant women who regularly come to the antenatal service, children under five years coming regularly to postnatal service and vaccination and women who deliver in the health facilities

The following health facilities will execute the programme.

HGR Ifendula (assisted deliveries)
CH Kakwende (assisted deliveries)
CSR Mulambi Burhini
CSR Ciburhi Luhindja
CS Ifendula
CS Kakwende
CS Karhala
CS Kimalandjala
CS Ntondo

V. Modalities of execution

V.1. Responsibilities for the programme

a. Malteser International:

Malteser International gives the bed nets to the health centres and supervises the evolution of the activity.

Also the elaboration of distribution reports, verification of utilisation and analysis of epidemiologic data is one of the responsibilities of Malteser International.

b. The central bureau of the health zone

The BCZ (Bureau Central de Zone de Santé) is the principal responsible on health zone level. It will assure the technical follow up and coordination of the programme.

c. The health facilities

The responsible of the health centre and the responsible of the maternity are forming the executing level of the programme. Together with the members of the community, they are also responsible for the follow up of the correct utilisation by home visits. The health centres give a monthly report to Malteser International.

d. Stockage of bed nets

The bed nets are stocked in the medical depot of Malteser International at Bukavu.

The health zone will make a monthly demand according to the reports of distribution. The bed nets are delivered to the health zone and stocked in the local medical depot. The participating health centers will get the nets from the local depot for free distribution.

VI. Attended results

1. Pregnant women present at the antenatal clinic and mothers at the postnatal service are well informed about the problems due to malaria and the advantages of using bed nets.
2. Educational sessions are given during antenatal and postnatal activities
3. At least 30% of the distributed bed nets are followed up with a questionnaire through home visits
4. The utilization rate of antenatal service is at 80%, for postnatal service at 30% and for assisted deliveries at 80%

VII. Conditions for distribution

- a. A pregnant woman regularly seen in antenatal service
- b. A mother who comes regularly to the postnatal and vaccination service
- c. Women who deliver at the maternity of one of the participating centers

VIII. Follow up and evaluation

Supervision and evaluation

The follow up of the programme will be included in the regular supervision programme of Malteser International and the central bureau of the health zone.

The results achieved by the distribution are analysed by Malteser International.

The statistical report of morbidity and mortality of malaria in the participating health centers will be analysed on a monthly base.



Mother with twins



Education session during postnatal service

2. Distribution in Ifendula

July 31, 2007: Bed net distribution at Ifendula Hospital

The Hospital of Ifendula is the main hospital of the health zone of Mwana. It has started the programme of mosquito net distribution in June 2007. Every woman delivering in the hospital will get a bed net before she is discharged. In June 2007, 50 bed nets were distributed at the maternity ward and another 40 during antenatal and postnatal follow-ups. In July 2007, about 200 nets in total were distributed.

The net is not simply meant as a gift to the women. The Hospital of Ifendula has a huge maternity ward and the average of deliveries per month is about 100 – 120 with a mean of 20 percent Caesarian sections. That is a very high number compared to other health zones with 10-12 percent. Many of the women in Mwana were suffering from malnutrition in their childhood. Thus, they stopped growing during the puberty. Nowadays, they have faces of grown ups but bodies of thirteen or fourteen year olds, with a height of about 1,30 or 1,40 meters and a very narrow hip bone. However, today they often do not suffer from malnutrition any more – thus, if they get pregnant, their babies develop normally. This is the cause of a widespread disproportionality between the size of the mother and the size of the baby which leads to huge complications when giving birth.



giving these first nets for free, the positive impact of mosquito nets on the health shall get visible for the villagers, so that people start buying nets themselves in the long-term.”

Therefore, to improve the health of mothers and children in Mwana, the regular distribution of mosquito nets to women who delivered in the hospital shall encourage pregnant women to go to the maternities for delivery instead of delivering traditionally at home. “Additionally, as in Mwana many people do usually not have mosquito nets, they have not yet made the experience of how these nets can reduce the number of Malaria attacks in their family”, Dr. Lothar Winkler, Medical Project Manager of Malteser International in South Kivu, explains the targets of the programme. “Thus, they are not ready to pay money for mosquito nets. By

On Tuesday, 31 July 2007, Dr. Lothar Winkler assisted the distribution of the nets at Ifendula Hospital. When he arrived at ten o'clock, the head nurse of the maternity ward was preparing the session, gathering the women who had delivered during the weekend and who were ready to be discharged - a total of 21 - in the great assembly hall of the hospital.

The session started with an educative lecture in the local language Swahili concerning Malaria and the possibilities of protection and prevention. Afterwards, the head nurse explained the advantages of using bed nets and asked the women if they had already one at home: none of them had. Then, a group of several people unpacked and unfolded one of the bed nets and demonstrated in detail how to apply and to preserve it. During the distribution itself, the name and address of each woman was noted together with the date of discharge to fix an appointment for the home visit. Community health workers will visit the beneficiaries at home to check whether they have fixed the net and whether they did it properly. Until all women had come to the front table and collected their mosquito net, one after the other, about one hour and a half had passed by. Before they left, Dr. Lothar Winkler informed the mothers: "If you come with your babies to the hospital for vaccination, you will receive another mosquito net!"



The personnel in the hospital is happy about the programme and says that the distributions already show a positive effect in frequentation of antenatal service and that people would even be ready to buy bed nets.

3. Case studies: 3 recipients

Who receives the mosquito nets? – Three beneficiaries in Mwana

Beneficiary in Ifendula Hospital, distribution 31 July 2007:

Cirezi Mwamufungizi is 31 years old and has already born ten children. The oldest is 17 years old. Thus, Cirezi got her first child with 14 years. This is nothing very uncommon in the rural areas of the DR Congo, it is, just in the opposite a normal age and rate of deliveries: girls usually get married by the age of 16; women usually go through up to ten to fifteen pregnancies. Uncommon is rather that only one of the ten children of Cirezi has died so far. Due to this, Cirezi is now mother of four girls and four boys and just yesterday delivered another boy in Ifendula Hospital. Today, she received a mosquito net to protect herself and the newborn child from malaria which she, as most people here, has already had plenty of times. As there is no real income for most of the families in the rural areas and as cultivating manioc and other plants serves only to feed the own family, a mosquito net which costs about four Dollars is something very expensive to Cirezi. Also, the next possibility to buy a mosquito net is several hours of walk by foot down in the city of Bukavu, whereas in the whole health zone of Mwana mosquito nets are not sold. When we ask Cirezi how many more children she would like to receive, she laughs shyly, not really understanding the question: "As many as God sends." This is nothing a woman usually decides upon in the rural areas of South Kivu.



Beneficiary in Ciburhi Luhindja, distribution on Monday, 30 July 2007:

Mapendo Kasole is 20 years old and delivered her first child just yesterday, a little girl who has no name so far as the name is traditionally given by the husband who is not in the hospital. Whether she has a favourite name? The answer is just a disbelieving laughter, and a shaking of the head: no, she has no idea. This is nothing a woman has to decide on. Mapendo lives ten kilometers from the Reference Health Centre of Ciburhi Luhindja, in the village of Kalambagi, that means she had to walk for two hours by foot through the mountains of South Kivu to reach the health center. As it was her first child, Mapendo was very nervous and afraid of leaving her home too late: many women and children die on the way because they leave their homes too late to reach the maternity before the beginning of the delivery. Nobody can help them with a complicated delivery in the midst of the mountains. Thus, Mapendo came very early. Two months before the birth, she arrived at the maternity of Ciburhi Luhindja. This is not a problem as each maternity has a facility to stay several weeks before the delivery for women from far away, to make sure they do not leave their villages too late. After her return, Mapendo will immediately have to work on the field cultivating manioc, beans and maize, the typical work of the women here, and her grandmother or her mother-in-law will help her with the baby. Mapendo knows about the importance of mosquito nets, but she has no possibility to buy one. Today, on Monday July 30, 2007, one day after her delivery, she received her first one. The whole family - that is herself, her husband and the baby - will find protection under it. The Health Centre of Ciburhi Luhindja counts between 55-70 deliveries each month and 100-150 malaria cases. Up to now, it has distributed 110 mosquito nets.



Beneficiary in Mulambi Burhini, distribution first week of July:

Shabo Shabani and his wife **Nankafu Shabo** were among the first beneficiaries in the Reference Health Centre of Mulambi Burhini. After the delivery of their fifth child on 3 July 2007, in the maternity



of Mulambi Burhini, they received a mosquito net before leaving the health centre. Now they have three sons and two daughters. Shabo Shabani is an exception: he already has one mosquito net at home. He bought it five months ago. Because he had one child falling ill every two months in average, he knew about the importance of mosquito nets. He saved money from his monthly income of 20 dollars to buy a four dollar mosquito net down in Bukavu. It was not easy for him to get the money: he only works occasionally on a daily basis for the church. At the moment, he digs fish ponds, and he hopes that the parish will have another task for him afterwards. Now he is very happy about the second mosquito net he received for free: "With the first mosquito net I could already see an improvement of our situation, and our newborn baby Germain is already four weeks old now and has not yet had malaria", he explains. Now he himself, his wife (who during the visit is out, working on the fields where they cultivate manioc, beans, sweet potatoes and bananas for the family) and two of the children sleep under one mosquito net, and the other three children sleep under the second one. To sleep more comfortable, he even wants to buy a third one as soon as possible, so that the children can sleep in two different beds.

Bed net distribution in the health zone of Mwana (June 2007 – January 2008)

Post distribution report

Between June 2007 and January 2008 in the health zone of Mwana a total of 6.802 bed nets have been distributed in two hospitals and seven health centers with a maternity ward. The rest of 192 bed nets were used to equip the maternity wards, so that every woman is protected during her stay at the centre.

1.558 bed nets have been distributed to women consulting the prenatal service, 2.368 have been given to women after assisted delivery in the hospital or health center and 2.876 to children that have completed their vaccination.

1.577 home visits have been made by the community health workers for checking the correct utilization of the bed nets and also to see, if the family is really using the net and in a correct way.. The bed nets have been found in the homes of the families in 98% and were used in a correct way in 93% of the cases.

In the beginning the rate of correct utilization was bit lower (88%) but at the end of the distribution period it reached nearly 100%.

The activity of bed net distribution was very much appreciated by the population and they wished that it could continue for a much longer period. But it was meant to be an introduction to help the population to get used to bed nets. Now there will be another partner with another program.

Now bed nets will be available in every health centre for a very low price of 0.5 USD. We hope that with the free distribution during the last seven months the population is sufficiently sensitized and know the advantages of the utilization of bed nets so that they accept the new program.

ZS Mwana Distribution

		June				July				August				September			
		CPN	CPS	Acc.	TOTAL	CPN	CPS	Acc.	TOTAL	CPN	CPS	Acc.	TOTAL	CPN	CPS	Acc.	TOTAL
HGR	Ifendula			120	120			96	96			100	100			96	96
CH	Kakwende	18		133	151			125	125			110	110	30	15	136	181
	Mulambi																
CSR	Burhini	10	39	5	54	8	52	15	75	30	60	10	100	70	50	25	145
CSR	Chibuei Luinja	50	60	20	130	25	65	35	125	30	76	30	136	75	120	52	247
CS	Ifendula		40		40	33	53		86	43	57		100	55	63		118
CS	Kakwende	4	26		30	10	65		75	15	60		75	32	70		102
CS	Karhala	20	25		45	12	45		57	15	109		124	21	133		154
CS	Kimalandjala	22	28		50	19	27	4	50	15	8	3	26	20	66	4	90
CS	Ntondo	2	7	1	10	5	15		20	9	40	2	51	10	30		40
		126	225	279	630	112	322	275	709	157	410	255	822	313	547	313	1173

		October				November				December				January			
		CPN	CPS	Acc.	TOTAL	CPN	CPS	Acc.	TOTAL	CPN	CPS	Acc.	TOTAL	CPN	CPS	Acc.	TOTAL
HGR	Ifendula			82	82			112	112			109	109			105	105
CH	Kakwende	43	26	118	187			128	128	35	67	120	222			125	125
CSR	Mulambi Burhini	50	30	10	90	50	30	33	113	50	35	30	115	12	73	35	120
CSR	Chibuei Luinja	25	155	45	225	35	78	42	155	114	102	50	266	53	95	56	204
CS	Ifendula	35	15		50	41	59		100	26	17	7	50	20	54		74
CS	Kakwende	30	84		114	33	28		61	32	12	9	53	35	12	3	50
CS	Karhala	12	8		20	12	8		20	9	11		20	10	25		35
CS	Kimalandjala	15	53	2	70	11	73	5	89	16	85	4	105	15	29		44
CS	Ntondo	8	32	2	42	7	23		30	6	43	1	50	10	10	13	33
		218	403	259	880	189	299	320	808	288	372	330	990	155	298	337	790

Results of home visits

		June			July			August			September		
		Home visits	% of bednets found in use	% of bednets used correctly	Home visits	% of bednets found in use	% of bednets used correctly	Home visits	% of bednets found in use	% of bednets used correctly	Home visits	% of bednets found in use	% of bednets used correctly
HGR	Ifendula	15	99%	85%	14	98%	86%	83	99%	90%	58	99%	92%
CH	Kakwende	7	100%	86%	10	95%	88%	6	98%	91%	15	97%	92%
	Mulambi												
CSR	Burhini	10	100%	90%	50	100%	98%	50	96%	95%	70	97%	98%
CSR	Chibuei Luinja	51	98%	88%	42	99%	90%	4	97%	95%	50	98%	97%
CS	Ifendula	10	97%	85%	19	98%	89%	10	98%	90%	45	99%	91%
CS	Kakwende	5	100%	90%	10	98%	89%	22	98%	91%	50	99%	90%
CS	Karhala	12	90%	82%	8	92%	87%	16	94%	89%	9	93%	89%
CS	Kimalandjala	15	92%	86%	15	93%	86%	2	92%	85%	11	93%	86%
CS	Ntondo	3	100%	98%	4	100%	98%	4	99%	96%	10	99%	96%
		128	97%	88%	172	97%	90%	197	97%	91%	318	97%	92%

		October			Novembre			Décembre			Janvier		
		Home visits	% of bednets found in use	% of bednets used correctly	Home visits	% of bednets found in use	% of bednets used correctly	Home visits	% of bednets found in use	% of bednets used correctly	Home visits	% of bednets found in use	% of bednets used correctly
HGR	Ifendula	21	98%	91%	20	97%	89%	25	98%	91%	21	97%	92%
CH	Kakwende	82	98%	89%	52	96%	90%	18	99%	99%	20	99%	99%
	Mulambi												
CSR	Burhini	60	99%	92%	28	100%	96%	44	100%	99%	49	100%	100%
CSR	Chibuei Luinja	43	97%	98%	25	95%	96%	20	98%	97%	20	98%	97%
CS	Ifendula	15	95%	90%	10	100%	100%	15	97%	100%	12	99%	98%
CS	Kakwende	29	99%	87%	12	99%	92%	10	99%	95%	8	98%	89%
CS	Karhala	5	98%	98%	7	100%	100%	11	100%	100%	10	98%	91%
CS	Kimalandjala	7	98%	96%	6	100%	98%	9	100%	100%	9	100%	98%
CS	Ntondo	10	100%	95%	10	98%	97%	8	100%	100%	11	100%	100%
		272	98%	93%	170	98%	95%	160	99%	98%	160	99%	96%

