Medical Checks for Children

Medical Report

Otuke, LTP

Uganda 2024

medical checks for children

Medical Report Otuke 2024 Medical Checks For Children



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### I Introduction

From the 29th of January to 2nd of February 2024 our Medical Checks for Children (MCC) team visited for the first year the Otuke region in Uganda to conduct a medical health camp. We checked and treated children aged between 0 and 8 years, free of cost at the Amunga health center care level II. The team stayed at the Freedom guesthouse a 30min drive from the check location

This year's free medical campaign of MCC was a first explorative medical mission, organized in mutual cooperation and collaboration of Link to Progress (LTP)

# Link to Progress (LTP)

Link to Progress (LTP) is a Dutch founded development organization registered in Uganda and has been in operation since 2009 serving marginalized communities in Northern and Eastern Uganda through an integrated approach, providing services including water, sanitation and hygiene (WASH), quality education, health and nutrition, livelihood and food security and environmental protection.

Northern and Eastern Uganda, the LTP area of operation, is the poorest region with the largest depth of poverty and worst inequality.

This is attributed to the 2 decades of the Lord's Resistance Army (LRA) insurgencies that forced the largest part of the population to live in internally displaced people's (IDP) camps. The war led to the loss of lives, increased physical disability, destroyed infrastructures, and affected productivity. The high need for social services such as safe and clean water supply, basic quality education, health services, and food security among others is enormous in this region.

Although the majority of the population has returned to their villages, most of the infrastructures including water supplies, sanitation facilities, schools, and health facilities were destroyed. Reconstruction and rehabilitation of the region call for collective efforts by both government, private sector, civil society, and non-governmental organization to contribute and complement each other, this provides an open door for LTPs WASH and other integrated programming.

The MCC team of 2024 consisted of Veronique Schram (nurse and mission leader), Ilse Westerbeek (pediatrician and medical mission leader) Jankees de Ridder (general practitioner), Moniek Op de Coul (pediatrician) Laurens Nieuwveld (pediatrician), Annette Hoogerbrugge (midwife and care coordinator), Jet Zwolsman (pedatric resident), Karen Goes (personal assistant), Stephanie Klein Ikkink (resident in Pediatrics), Sija van der Kraaij (sport physiotherapist).

The LTP team consisted of Juliet Arecho (country manager), Isabbella Akello (program manager), Lillian Joy Kusiima (Finance and administration officer), Doreen Imalingat (project assistant), Jolly Adongo (project assistant), Everest Adongo (project assistant) and Lazarus Odongo (project assistant, pharmacist).

### II General background

The children came mainly from two communities in the Otuke region. Families had to walk several (5-10) km to the medical camp and if they lived too far, stayed overnight at the camp in the hope to get medical care from the MCC team. The team was overruled about the extreme poverty in this neglected region. Basic conditions as access to safe water, hygiene and sanitation is limited, Education is poor and there is an underdeveloped healthcare system resulting in a child death < 5 years of around 40%. The average age of people is 40-50 years. There is a governmental level IV hospital which is around 40 km from the Amunga health care centre. In front of the level IV hospital, there is a private health clinic. Dr Collins opened the Sofia health care center in 2023. Dr Collins is pensioned medical doctor who grow up in this village and was able to work as a medical doctor in Australia there is an out-patient clinic, ultrasound, x-ray and basic laboratory tests can be done, Most common health problems in children are (chronic) malaria, undernutrition, road accidents, GE- problems, upper airway infections and social problems. There is a national immunization and anti-worm program, however most children do not receive all their immunizations. Supply of medication is not done on a regular basis to the level II, III and IV centers in this region, which means that medication are out of stock and no possibility to threat the children for diseases like pneumonia, gastro-enteritis and malaria. Although the medical facilities in Lira are better and free of cost, the families do have limited access, as transport to this hospital is too expensive. Two times a year there are child health plus days. Mobile teams try to reach the children in their homes and school to provide ant-worm treatment and immunizations.

Technical equipment, toothbrushes and creams for the children and some of the medical supplies were brought from the Netherlands by the team members.

Support from the local organizing committee consisted of the following (amongst others):

- Selection of the check location
- Selection of the children to be checked.
- Information transmittance to the local communities.
- Organizing all the different stations of the carousel
- Arranging plentiful and competent translators /support volunteers/ nurses
- Arranged a hotel for all MCC team members 30min drive from the check location
- Transportation of the MCC team to the check location
- Providing the drinks and food on the check location
- Giving support in ordering and delivering the medication.
- Giving support to the MCC team during the medical campaign.

### II Medical Checks for Children on location, content of the medical camp

During the week, MCC checked children at Amunga health centre II in Otuke.

	29-01-24	30-01-24	31-01-24	01-02-24	02-02-24	Total
day 1	190	0	0	0	0	190
day 2	0	207	0	0	0	207
day 3	0	0	248	0	0	248
day 4	0	0	0	245	0	245
day 5	0	0	0	0	116	116
Total	190	207	248	245	116	1006

Table 1: Number of checked children per day and geographical location

The children were seen free of cost at the MCC carousel, which consists of the following stations:

- 1. Registration
- 2. Parent/ caretaker education on hygiene, tooth brushing and hand washing
- 3. Height and weight
- 4. Blood test (haemoglobin)
- 5. Physical examination
- 6. Distribution of medication (pharmacy)
- 7. On indication: referral

After the first day we diagnosed a lot of children suffering from malaria, therefore we decided to include an extra station with malaria testing in combination with the haemoglobin bloodtest. This needed some adaptation and flexibility of the team, but together with a local nurse and diagnostic laborant we managed to test all children for Malaria from day 2 till 5. Malaria testing was done with an rapid antigen test for Plasmodium. falciparum.

	То	Total		day 1		day 2		day 3		/ 4	day 5	
	10	1006		Total= 190		Total= 207		Total= 248		245	Total= 116	
Age	Ν	%	n	%	n	%	n	%	n	%	n	%
<=1 year	134	13%	24	13%	32	15%	28	11%	35	14%	15	13%
>1 en <5 years	372	37%	60	32%	79	38%	98	40%	92	38%	43	37%
<5 years	492	49%	92	48%	105	51%	123	50%	116	47%	56	48%
>=5 en <=10 years	513	51%	98	52%	102	49%	125	50%	128	52%	60	52%
>10 years	1	0%	0	0%	0	0%	0	0%	1	0%	0	0%
Gender												
Воу	485	48%	87	46%	97	47%	120	48%	122	50%	59	51%
Girl	518	51%	102	54%	109	53%	128	52%	122	50%	57	49%

Table 2: Summary of checked children per geographical location, age and gender

#### **Data collection**

The children receive a CRF form at registration (station 1). Anthropometric measurements were recorded (station 2), and a finger prick sample was taken to determine haemoglobin

(Hb) and malaria (station 3). A clinical doctor examined each child (station 4). History of illnesses in the preceding weeks was recorded. They were also asked if their child had received prior treatment, especially deworming within the last half year and malaria treatment. We found out families do not seek medical care easily, due to poor medical health facilities, poverty and no possibilities for good transport. Furthermore, when families visit the health clinic, in many cases they did not get the best treatment or only half of the treatment was provide, as most medication was out of stock. At the end of the MCC carrousel, the data of the checked children were entered into a database, which made it possible to gain preliminary insights into the health of that day's children population every evening. Furthermore, every day the team had a short evaluation of the day to improve logistics for them next day.

### III General diagnoses and categories of ailments/treatment and referrals

In general, the children in the Otuke region live in extreme poverty. An extreme amount of children suffered from malaria (85%) and complications of malaria. Active Malaria could be treated on the spot. However, we also saw the immense impact this has on the population. The malaria numbers we found, are determined in the dry season, maybe in the wet season malaria numbers might be even higher. The people told us that sometimes malaria medication is not in stock and therefore none or half of the malaria treatment was given. Besides not treating the malaria with the risk of complications and even death, this can cause resitence to malaria treatment.

Healthcare is failing in this aera, and we see an enormous need for prevention of malaria. The Government just enrolled the campaign under the net and gave some mosquito nets to the families. However, more awareness and support is needed for implementation of malaria prevention.

# Background Malaria (WHO)

Malaria is a life-threatening disease spread to humans by some types of mosquitoes. It is mostly found in tropical countries. It is preventable and curable. The infection is caused by a parasite and does not spread from person to person. Symptoms can be mild or life-threatening. Mild symptoms are fever, chills and headache. Severe symptoms include fatigue, confusion, seizures, and difficulty breathing. Infants, children under 5 years, pregnant women, travellers and people with HIV or AIDS are at higher risk of severe infection. Malaria can be prevented by avoiding mosquito bites and with medicines. Treatments can stop mild cases from getting worse. Malaria mostly spreads to people through the bites of some infected female Anopheles mosquitoes. The first symptoms may be mild, similar to many febrile illnesses, and difficulty to recognize as malaria. Left untreated, *P. falciparum* malaria can progress to severe illness and death within 24 hours. There are 5 *Plasmodium* parasite species that cause malaria in humans and 2 of these species – *P. falciparum* and *P. vivax* – pose the greatest threat. *P. falciparum* is the deadliest malaria parasite and the most prevalent on the African continent. *P. vivax* is the

dominant malaria parasite in most countries outside of sub-Saharan Africa. The other malaria species which can infect humans are *P. malariae, P. ovale* and *P. knowlesi*.

The most common early symptoms of malaria are fever, headache and chills. Symptoms usually start within 10–15 days of getting bitten by an infected mosquito.

Symptoms may be mild for some people, especially for those who have had a malaria infection before. Because some malaria symptoms are not specific, getting tested early is important.

Some types of malaria can cause severe illness and death. Infants, children under 5 years, pregnant women, travellers and people with HIV or AIDS are at higher risk. Severe symptoms include:

- extreme tiredness and fatigue
- impaired consciousness
- multiple convulsions
- difficulty breathing
- dark or bloody urine
- jaundice (yellowing of the eyes and skin)
- abnormal bleeding.

People with severe symptoms should get emergency care right away. Getting treatment early for mild malaria can stop the infection from becoming severe.

### Disease burden

According to the latest <u>World malaria report</u>, there were 249 million cases of malaria in 2022 compared to 244 million cases in 2021. The estimated number of malaria deaths stood at 608 000 in 2022 compared to 610 000 in 2021.

The WHO African Region continues to carry a disproportionately high share of the global malaria burden. In 2022 the Region was home to about 94% of all malaria cases and 95% of deaths. Four countries in the African Region – Nigeria (26.8%), the Democratic Republic of the Congo (12.3%), **Uganda (5.1%)** and Mozambique (4.2%) – accounted for nearly half of all malaria cases globally Children under 5 years of age accounted for about 78% of all malaria deaths in the Region.

# Prevention

Malaria can be prevented by avoiding mosquito bites and by taking medicines. Lower the risk of getting malaria by avoiding mosquito bites:

- Use mosquito nets when sleeping in places where malaria is present
- Use mosquito repellents (containing DEET, IR3535 or Icaridin) after dusk
- Use coils and vaporizers.
- Wear protective clothing.
- Use window screens.

Vector control is a vital component of malaria control and elimination strategies as it is highly effective in preventing infection and reducing disease transmission. The 2 core interventions are insecticide-treated nets (ITNs) and indoor residual spraying (IRS).

Progress in global malaria control is threatened by emerging resistance to insecticides among Anopheles mosquitoes. As described in the latest World malaria report, other threats to ITNs include insufficient access, loss of nets due to the stresses of day-to-day life outpacing replacement, and changing behaviour of mosquitoes, which appear to be biting early before people go to bed and resting outdoors, thereby evading exposure to insecticides.

### Malaria vaccine

Since October 2021, WHO has recommended broad use of the RTS,S/AS01 malaria vaccine among children living in regions with moderate to high *P. falciparum* malaria transmission. The vaccine has been shown to significantly reduce malaria, and deadly severe malaria, among young children. In October 2023, WHO recommended a second safe and effective malaria vaccine, R21/Matrix-M. The availability of two malaria vaccines is expected to make broad-scale deployment across Africa possible.

# Epilepsy

We saw many children with epilepsy/seizures, psychomotor retardation and contractions. Epilepsy, a chronic disease of the central nervous system, is characterized by abnormal brain electrical activity leading to seizures, stereotyped behavioural alterations and occasionally loss of awareness. Seizures and other status epilepticus are common neurological manifestations in children with malaria, especially those with cerebral malaria. However, a significant proportion of these manifestations may be simple febrile seizures Epilepsy is a highly prevalent neurological disorder in LMIC, especially in malaria-endemic areas; however, a definitive causative relationship is yet to be established. The results of this systematic review and meta-analysis are consistent with a previous study (Christensen and Eslick, <u>2015</u>), indicating a significant positive association between malaria infection and epilepsy, particularly for patients who survived CM.

We would recommend further treatment of the chronic epilepsy with chronic medication and treatment and pain relief with support of physiotherapists for the children with cerebral palsy and contractions. LTP already has a community program for families with children with psychomotor retardation. LTP will follow up this families, also the families who did not join the social program yet.

	То	tal	day	<sup>,</sup> 1	day	2	day	/ 3	day	4	day	y 5
	10	06	Total=	190	Total=	207	Total=	248	Total=	245	Total=	116
	Ν	%	n	%	n	%	n	%	n	%	n	%
Underweight	77	8%	21	11%	13	6%	21	8%	13	5%	9	8%
Stunting	123	12%	33	17%	30	14%	18	7%	26	11%	16	14%
Wasting	41	4%	6	3%	8	4%	15	6%	8	3%	4	3%
Anaemia	472	47%	118	62%	107	52%	110	44%	92	38%	45	39%
HIV pos.	9	1%	6	3%	1	0%	1	0%	1	0%	0	0%
AIDS	3	0%	1	1%	2	1%	0	0%	0	0%	0	0%
vitamin deficit (clinical signs)	322	32%	35	18%	87	42%	66	27%	81	33%	53	46%
Malaria (confirmed)	752	75%	68	36%	161	78%	201	81%	218	89%	104	90%
pneumonia (clinical)	18	2%	2	1%	3	1%	7	3%	5	2%	1	1%
Neuromusc other	6	1%	1	1%	1	0%	2	1%	2	1%		
epilepsy / convulsions	29	3%	9	5%	9	4%	4	2%	6	2%	1	1%
BHR/asthma	15	1%	4	2%	4	2%	1	0%	4	2%	2	2%
gardia (suspected)	21	2%	2	1%	8	4%	9	4%	2	1%	0	0%
dysenteria	51	5%	10	5%	5	2%	20	8%	13	5%	3	3%
active worm infection	200	20%	24	13%	26	13%	47	19%	63	26%	40	34%
cariës n.o.s.	299	30%	47	25%	59	29%	82	33%	75	31%	36	31%
caries with pain	188	19%	34	18%	36	17%	37	15%	58	24%	23	20%
eczema n.o.s.	32	3%	5	3%	5	2%	12	5%	8	3%	2	2%
dermatomycosis	57	6%	4	2%	17	8%	16	6%	12	5%	8	7%
Impetigo/furunculosis	14	1%	1	1%	7	3%	2	1%	4	2%	0	0%
scabies	37	4%	7	4%	7	3%	7	3%	14	6%	2	2%
Tinea Capitis	146	15%	11	6%	30	14%	42	17%	36	15%	27	23%
wounds infected,	20	2%	0	0%	4	2%	7	3%	8	3%	1	1%
physiological murmer	17	2%	5	3%	3	1%	6	2%	0	0%	3	3%
pathological murmur (suspected)	10	1%	1	1%	4	2%	4	2%	1	0%	0	0%
keratoconjunctivitis	51	5%	11	6%	5	2%	14	6%	13	5%	8	7%
eye other	30	3%	3	2%	10	5%	7	3%	8	3%	2	2%
Sickle Cell	4	0%	3	2%	0	0%	1	0%	0	0%	0	0%
inguinal hernia	10	1%	6	3%	1	0%	2	1%	1	0%	0	0%
urogen other	14	1%	3	2%	2	1%	4	2%	1	0%	4	3%
hernia(umbilical etc)	21	2%	4	2%	3	1%	5	2%	8	3%	1	1%

Table 3: Highlighted disease prevalence	among all children per	day (most frequent/most severe)
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		-	-									
	То	otal	day	<sup>,</sup> 1	day	2	do	ay 3	day	4	d	lay 5
	10	006	Total=	190	Total=	207	Total= 248		Total=	245	Total= 116	
	Ν	%	n	%	n	%	n	%	n	%	n	%
Underweight	77	8%	21	11%	13	6%	21	8%	13	5%	9	8%
No underweight	928	92%	169	89%	194	94%	226	91%	232	95%	107	92%
Unknown	1	0%	0	0%	0	0%	1	0%	0	0%	0	0%
Underweight childre	en per	age										
<=1 year	17	13%	3	13%	2	6%	6	21%	4	11%	2	13%
>1 en <5 years	33	9%	4	7%	4	5%	13	13%	8	9%	4	9%

<5 years	45	9%	8	9%	6	6%	15	12%	11	9%	5	9%	
>=5 en <=10 years	32	6%	13	13%	7	7%	6	5%	2	2%	4	7%	
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	
Underweight children per gender													
Воу	39	51%	10	48%	3	23%	14	67%	4	31%	8	89%	
Girl	37	48%	11	52%	10	77%	7	33%	8	62%	1	11%	

 Table 5: Prevalence of length/age at or under P3 (stunting) per day by age and gender

	Te	otal	day	/ 1	da	y 2	day	/ 3	day	<b>4</b>	da	y 5
	1	006	Total=	190	Total=	207	Total=	248	Total=	245	Total=	116
	Ν	%	n	%	n	%	n	%	n	%	n	%
Stunting	123	12%	33	17%	30	14%	18	7%	26	11%	16	14%
No stunting	883	88%	157	83%	177	86%	230	93%	219	89%	100	86%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Stunting children per	r age											
<=1 year	30	22%	9	38%	10	31%	2	7%	7	20%	2	13%
>1 en <5 years	66	18%	9	15%	18	23%	12	12%	17	18%	10	23%
<5 years	87	18%	19	21%	24	23%	12	10%	22	19%	10	18%
>=5 en <=10 years	36	7%	14	14%	6	6%	6	5%	4	3%	6	10%
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Stunting children per	r gend	er										
Воу	59	48%	14	42%	14	47%	9	50%	13	50%	9	56%
Girl	63	51%	18	55%	16	53%	9	50%	13	50%	7	44%

Table 6: Prevalence of weight/length at or under P3 (wasting) per day by age and gender

		-	-						-	-		
	To	otal	day	<i>י</i> 1	da	y 2	day	' 3	day	<b>4</b>	da	y 5
	1	006	Total=	190	Total=	207	Total=	248	Total=	245	Total=	116
	Ν	%	n	%	n	%	n	%	n	%	n	%
Wasting	41	4%	6	3%	8	4%	15	6%	8	3%	4	3%
No wasting	703	70%	143	75%	152	73%	164	66%	164	67%	80	69%
Unknown	262	26%	41	22%	47	23%	69	28%	73	30%	32	28%
Wasting children per	age											
<=1 year	11	8%	1	4%	1	3%	5	18%	3	9%	1	7%
>1 en <5 years	17	5%	1	2%	6	8%	7	7%	1	1%	2	5%
<5 years	23	5%	2	2%	6	6%	9	7%	4	3%	2	4%
>=5 en <=10 years	18	7%	4	7%	2	4%	6	11%	4	7%	2	7%
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Wasting children per	gend	er										
Воу	22	54%	2	33%	4	50%	9	60%	4	50%	3	75%
Girl	18	44%	4	67%	4	50%	6	40%	3	38%	1	25%

Table 7: Prevalence of anaemia per day by age and gender

To	otal	l day 1			y 2	day	<b>′</b> 3	day	<b>4</b>	day 5	
1006		Total= 190		Total=	207	Total=	248	Total=	245	Total=	116
N %		n	%	n	%	n	%	n	%	n	%

Anaemia	472	47%	118	62%	107	52%	110	44%	92	38%	45	39%
No anaemia	528	52%	69	36%	97	47%	138	56%	153	62%	71	61%
Unknown	6	1%	3	2%	3	1%	0	0%	0	0%	0	0%
Hb <5,0 mmol	53	5%	23	12%	13	6%	9	4%	3	1%	5	4%
Anaemia per age												
<=1 year	60	45%	19	79%	13	41%	7	25%	10	29%	11	73%
>1 en <5 years	161	43%	35	58%	35	44%	34	35%	36	39%	21	49%
<5 years	222	45%	62	67%	45	43%	42	34%	43	37%	30	54%
>=5 en <=10 years	250	49%	56	57%	62	61%	68	54%	49	38%	15	25%
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Anaemia per gende	r											
Воу	238	50%	56	47%	55	51%	55	50%	46	50%	26	58%
Girl	232	49%	61	52%	51	48%	55	50%	46	50%	19	42%

Table 8: Prevalence preventive anti-worm treatment in the last half-year per day by age and gender

	To	otal	day	/ 1	da	y 2	day	/ 3	day	/ 4	da	y 5
	1	006	Total= 190		Total= 207		Total= 248		Total= 245		Total= 116	
	Ν	%	n	%	n	%	n	%	n	%	n	%
Anti-worm	400	40%	116	61%	87	42%	81	33%	78	32%	38	33%
No anti-worm	606	60%	74	39%	120	58%	167	67%	167	68%	78	67%
Antiworm per age												
>1 en <5 years	140	38%	38	63%	32	41%	32	33%	21	23%	17	40%
<5 years	170	35%	52	57%	40	38%	35	28%	24	21%	19	34%
>=5 en <=10 years	230	45%	64	65%	47	46%	46	37%	54	42%	19	32%
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

### Malnutrition

We did not see much children with underweight, stunting or wasting, however almost all children were malnourished and showed severe clinical symptoms of vitamin deficiency: such as distend abdomen and skin disorders.

Malnutrition is thought to account for one third of all deaths of children under five (UN Millennium Development Goals). Malnutrition has been related to poor cognitive and school performance. There is strong evidence to suggest that malnutrition places children under the age of 5 at increased risk of death. The main factors contributing to malnutrition are rural poverty, lack of sanitation, poor living conditions and a lack of energy, protein intake, iron and multivitamins.

We think that the poor nutrition state of the children checked is due to poverty with low variety in diet mainly consisting of carbohydrates and even more during the dry season when fruits and vegetables are less likely to be available, like mango, pineapple and watermelon.

#### Anaemia

47% of the checked children was suffering from anaemia with 5% of the children who had severe anaemia.

It is estimated that globally 60,2% of children in the African Region are anaemic (WHO 2019). Anaemia is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal. Haemoglobin is needed to carry oxygen and if you have too few or abnormal red blood cells, or not enough haemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body's tissues. This results in symptoms such as fatigue, weakness, dizziness and shortness of breath, among others. The most common causes of anaemia include nutritional deficiencies, particularly iron deficiency, though deficiencies in folate, vitamins B12, haemoglobinopathies; and infectious diseases, such as malaria, tuberculosis, HIV and parasitic infections. The checked children with severe anemia may suffer from a combination of the above mentioned causes, however as sicklecell disease was reported in this aera and homozygote sicklecell disease may have treatment implications. Moreover children with homozygote sicklecell who are infected with malaria may suffer from more complications

Anaemia is an indicator of both poor nutrition and poor health. It is problematic on its own, but it can also impact other global nutritional concerns such as malnutrition, low birth weight due to lack of energy to exercise. School performance in children and reduced work productivity in adults due to anaemia can have further social and economic impacts for the individual and family. An additional intervention is to be sure children join a 6 months deworm program. On the spot we dewormed all children who did not receive anti-worm treatment the last 3 months and we treated the children with anaemia multivatimins or iron supplements for three months

	Total 1006		day 1		day 2		day 3		day 4		day 5	
			Total= 190		Total= 207		Total= 248		18 Total= 245		Total= 116	
	Ν	%	n	%	n	%	n	%	n	%	n	%
ferro	401	40%	81	43%	99	48%	92	37%	83	34%	46	40%
mother iron	18	2%	8	4%	5	2%	1	0%	2	1%	2	2%
multivitamins	256	25%	47	25%	42	20%	70	28%	75	31%	22	19%
anti-worm	684	68%	123	65%	157	76%	173	70%	163	67%	68	59%
acute worm	221	22%	35	18%	30	14%	54	22%	63	26%	39	34%
anti-lice	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%
anti-scabies	36	4%	9	5%	5	2%	6	2%	13	5%	3	3%
niclosamide	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%
praziquantel	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%
scabies soap	2	0%	1	1%	1	0%	0	0%	0	0%	0	0%
amoxicillin	20	2%	4	2%	6	3%	2	1%	6	2%	2	2%
augmentin	21	2%	1	1%	5	2%	5	2%	7	3%	3	3%
2e lijns antibiotica	17	2%	2	1%	3	1%	5	2%	7	3%	0	0%
malaria treatment	715	71%	59	31%	142	69%	193	78%	218	89%	103	89%
ivermectine for lice	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
paracetamol	46	5%	6	3%	10	5%	17	7%	11	4%	2	2%
inhaler	13	1%	2	1%	5	2%	3	1%	2	1%	1	1%
metranidazol	75	7%	12	6%	16	8%	31	13%	13	5%	3	3%
co-trimoxazol	11	1%	0	0%	3	1%	2	1%	3	1%	3	3%
ceftriaxon	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
AB urine infection	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
ORS	4	0%	4	2%	0	0%	0	0%	0	0%	0	0%
eardrops	6	1%	0	0%	2	1%	1	0%	3	1%	0	0%
nystatine	3	0%	2	1%	1	0%	0	0%	0	0%	0	0%
mupirocine=	6	1%	1	1%	0	0%	2	1%	2	1%	1	1%
hydrocortisone	33	3%	5	3%	4	2%	11	4%	11	4%	2	2%
dactarin cream	91	9%	6	3%	14	7%	11	4%	29	12%	31	27%
dactacort cream	11	1%	0	0%	3	1%	6	2%	1	0%	1	1%
iodine	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
fusidin cream	17	2%	0	0%	7	3%	5	2%	3	1%	2	2%
sudo cream	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
neutral cream	46	5%	10	5%	10	5%	16	6%	3	1%	7	6%
griseofulvine	69	7%	8	4%	33	16%	21	8%	6	2%	1	1%
eyedrops	78	8%	11	6%	20	10%	18	7%	18	7%	11	9%
AB urine infection	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Table 9: Treatment among all children per geographical location

	Total 1006		day 1		day 2		day 3		day 4		day 5	
			Total= 190		Total= 207		Total= 248		Total= 245		Total= 116	
	Ν	%	n	%	n	%	n	%	n	%	n	%
Dentist	102	10%	15	8%	14	7%	18	7%	35	14%	20	17%
Specialist in												
hospital	82	8%	28	15%	19	9%	15	6%	16	7%	4	3%
Revisit	14	1%	8	4%	4	2%	1	0%	0	0%	1	1%
Social program	9	1%	2	1%	2	1%	1	0%	3	1%	1	1%
Diagnostics												
(HIV/TB)	11	1%	3	2%	3	1%	4	2%	0	0%	1	1%
Nieuwendijk	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%
Further diagnosis												
Sickle cell	51	5%	21	11%	13	6%	9	4%	3	1%	5	4%
Fysiotherapist	11	1%	5	3%	3	1%	2	1%	0	0%	1	1%

Table 10: Follow-up of all children per geographical location

### Social problems

We noticed an extreme poverty together with social problems due to this poverty but probably also due to the history of violence in the region. Children are left alone by their parents and some young children suffer alcoholism. LTP are already identyfied these problems and social programs are enrolled to support the families.

### IV Education and prevention

One of the most important tasks of MCC is to encourage the continuation of health education of the village children. Nutritious foods, deworming, as well as hygiene, should be key components of structural health promotion in the community. Based on WHO estimates, 25% of the global burden of disease is due to preventable environmental exposures, with the greatest burden to children in lowincome and developing countries. For this reason, it was MCC's task to help create sustainable health knowledge in the communities visited.

Ways of improving personal hygiene and sanitation through hand washing, nail trimming, wearing of shoes/boots and use of a latrine and clean water supplies were encouraged, with bearing the deplorable housing conditions of many families and the environmental hazards in mind.

### Dental problems

We identified 49% of the children with dental problems. This underlies the need for good dental programs.

### V Summary and future

During this explorative mission we saw that LTP is a very well-organized organization who acknowledged the poverty of this neglected aera.

LTP contributes to

- Reduction in the prevalence of water-related diseases through increased access to safe water, hygiene and sanitation facilities improved education standards especially quality learning environment for children in vulnerable communities of Uganda.
- Improve the livelihood resilience of smallholder farmers, women, youth, and people with disabilities.
- Improved conservation and protection of natural resources

Besides above-mentioned points we think that the MCC medical checks ups will help in identifying the main health problems of the children. MCC can give treatment on the spot of "basic" health problems such as malaria, pneumonia, skininfections and anemia. Furthermore MCC provides education on main subjects as hygiene, handwashing and tootbrushing and besides that also focus on education about malaria.

We noticed that general healthcare is failing in this aera, and we see an enormous need for prevention of malaria. The Government just enrolled the campaign under the net and gave some mosquito nets to the families. However, more awareness and support is needed for implementation of malaria prevention.

### RECOMMENDATIONS

We advise that (loca)I authorities, medical clinics, doctors and nurses in collaboration with LTP to draw a plan in how to decrease the amount of malaria cases.

Some other suggestions are:

- We recommend deworming of all the children every 6 months.
- We recommend to support families with children who have epilepsy and/or neuromuscular diseases
- We recommend to support families/ children who grow up without the care of adult parents/caretakers
- We recommend to implant school lunch programs to provide a healty lunch containing the supplements needed for a healthy growth and to increase Hb levels.

#### Words of thank

The whole team during the checks consisted of the LTP team and the Dutch team members accompanied by a daily of support of volunteers/translators and drivers. The MCC team was very happy and greatfull with the cooperation with the local organizer LTP, and the active, direct support and enthusiasm of the local volunteers, doctors, pharmacist and nurses who gave MCC the opportunity to work in the Otuke region and to facilitate all aspects of the medical campaign. A special thanks to Juliette and Isabella who preared and arranged the medical mission. And Lazarus to run our pharmacy. They've helped to make this mission an utmost success and we could not have performed our work without their presence and hard work