

Medical Checks for Children

Medical Report

Uganda Kagadi 2026



Introduction

From 2 to 6 February 2026, Medical Checks for Children (MCC) visited Kagadi for the first time. Over the course of five days, the MCC team examined and treated 724 children free of charge.

Approximately 1.5 years earlier, PUM representatives Lia van Antwerpen and Dick van Dijk approached MCC with a request to support and strengthen the Masasa Clinic, located on the outskirts of Kagadi, Uganda. This request stemmed from the urgent need to improve healthcare access in the region, where services are often difficult to reach, capacity is limited, and the overall quality of care remains insufficient.

Uganda continues to face significant socioeconomic challenges, with around 21% of the population living in poverty and an estimated 29% of children affected by malnutrition. In the rural areas surrounding Kagadi, many communities lack access to clean drinking water and adequate healthcare facilities, further exacerbating health disparities.

Access to quality healthcare is essential in the fight against poverty. Strengthening healthcare systems not only improves health outcomes for individuals and communities but also contributes to economic development and social stability in the region.

The medical checks were organized in close collaboration with Masasa Harrison, the founder of the Masasa Clinic.

The upfront cooperation of Masasa was to consist of out of the following:

- Announcement of the medical camp in the different villages, on the local radio, with Boda Boda and with a poster in several churches.
- All contacts with districts/governmental officers.
- Selection of translators/local helpers.
- Facilitating ordering medication listed by MCC.
- Arrangements for food, drinks and lodging of the MCC team.
- Transportation of the MCC team from lodge to the clinic.
- Give follow-up for the referred children: arranging hospital visits.

The MCC team consisted of twelve members from The Netherlands: Ines von Rosenstiel (medical-end-responsible mission leader, paediatrician), Dorien Jacobs (organization-end-responsible, paediatric head nurse), Anneke Landstra (paediatrician, pulmonologist) Anton te Riet Scholten (Family physician), Sophie Bouwens (family doctor resident)), Madelon Ruige (paediatrician), Karlijn Gelijns (child neurologist), Frederiek Heuver(nurse), Masja Polman (children's nurse), Ilse Tomassen, physiotherapist, Liesbeth de Boer (oncology nurse) and Yzée Laheij.(student public health). Technical equipment, medical supplies , toothbrushes and hand-knitted warm hats were brought from the Netherlands by MCC team members. Medication was ordered by Masasa in Kagadi .

The aim of this exploratory mission is to make an inventory of the health situation of the children in Kagadi District, treat the children if necessary and possible, train local healthcare professionals (and any volunteers) to further develop and sustain this medical center and to advise Masasa on the future steps to take in the meantime. In addition, we also focussed on

sickle cell testing, as well on the malaria situation, to learn more and to see if further actions or advise is required.

Medical Checks for Children on location:

During the free of costs medical checks, the children were checked following the MCC carrousel:

1. Registration of the child.
2. Measuring height and weight.
3. Blood test (haemoglobin) and urine test and/or malaria test and sickle cell test when indicated.
4. Physical examination by a medical doctor.
5. Giving medication if indicated (pharmacy).
6. Education on hygiene and tooth brushing (a toothbrush was given to each child).

Special attention was given to the transfer of knowledge on hygiene and dental care to the children and parents by use of the information provided by Aisha and Friends (www.aishaandfriends.com).

7. Enter children's files in data base.



Results Medical Camp in Kagadi District

During this exploratory medical camp in Kagadi district MCC saw in total 724 children in Masasa s clinic from villages in the surroundings. Most important findings are described below, and detailed tables of the findings are given in Annex A.

Table 1: Number of checked children per day

Location	02-02-26	03-02-26	04-02-26	05-02-26	06-02-26	Total
day 1	83	0	0	0	0	83
day 2	0	142	0	0	0	142
day 3	0	0	95	0	0	95

day 4	0	0	0	198	0	198
day 5	0	0	0	0	206	206
Total	83	142	95	198	206	724

Table 2: Highest prevalence of disease or severe disease among all children

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Underweight	96	13%	20	24%	24	17%	8	8%	22	11%	22	11%
Stunting	176	24%	24	29%	47	33%	15	16%	32	16%	58	28%
Wasting	20	3%	9	11%	4	3%	2	2%	4	2%	1	0%
Anaemia	186	26%	17	20%	39	27%	20	21%	60	30%	50	24%
AIDS	3	0%	0	0%	0	0%	0	0%	3	2%	0	0%
vitamin deficit (clinical signs)	39	5%	0	0%	0	0%	2	2%	16	8%	21	10%
Malaria (confirmed)	16	2%	0	0%	4	3%	1	1%	3	2%	8	4%
pneumonia (clinical)	9	1%	2	2%	5	4%	0	0%	1	1%	1	0%
tuberculosis (clinical)	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%
active worm infection	247	34%	20	24%	39	27%	36	38%	60	30%	92	45%
cariës n.o.s.	40	6%	7	8%	8	6%	8	8%	8	4%	9	4%
caries with pain	86	12%	12	14%	12	8%	13	14%	20	10%	29	14%
wounds n.o.s.	13	2%	1	1%	2	1%	2	2%	3	2%	5	2%
scabies	17	2%	2	2%	1	1%	4	4%	5	3%	5	2%
Tinea Capitis	67	9%	9	11%	11	8%	9	9%	25	13%	13	6%
Skin other (psoriasis etc)	19	3%	1	1%	2	1%	7	7%	5	3%	4	2%
psychomotoric retardation	30	4%	10	12%	7	5%	2	2%	4	2%	7	3%
hypertonia	17	2%	6	7%	4	3%	2	2%	3	2%	2	1%
hypotonia	14	2%	4	5%	4	3%	1	1%	3	2%	2	1%
epilepsy / convulsions	17	2%	5	6%	3	2%	2	2%	4	2%	3	1%
keratoconjunctivitis	26	4%	1	1%	3	2%	5	5%	5	3%	12	6%
Sickle Cell	19	3%	4	5%	7	5%	2	2%	4	2%	2	1%
hernia(umbilical etc)	13	2%	1	1%	3	2%	2	2%	2	1%	5	2%

Table 3: Summary of checked children age and gender

Age	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	N	%	n	%	n	%
<=1 year	171	24%	16	19%	52	37%	19	20%	44	22%	40	19%
>1 and <5 years	237	33%	24	29%	53	37%	33	35%	63	32%	64	31%
<5 years	338	47%	35	42%	85	60%	47	49%	88	44%	83	40%
>=5 and <=10 years	371	51%	48	58%	53	37%	47	49%	104	53%	119	58%
>10 years	15	2%	0	0%	4	3%	1	1%	6	3%	4	2%
Gender												
Boy	350	48%	37	45%	76	54%	39	41%	81	41%	117	57%
Girl	370	51%	46	55%	66	46%	54	57%	116	59%	88	43%

Children and caretakers of multiple villages visited the medical camp. In the announcement of the medical children of age up to 10 years were invited to come with their caretakers. Of the 724 children, 47 % was below the age of 5 years, 51% of the children was between 5 and 10 years of age. During the first two days, most patients seen were children with chronic conditions, including a significant number of children with disabilities. This pattern was primarily due to the community's understanding that the consultations were not general paediatrics check-ups but specifically targeted at children requiring medical care. Children below 5 years of age are considered to benefit most from a medical camp, so we were happy to see these young children and their parents visit the MCC medical camp.

Almost all children (97%) brought a caretaker (parent, grandmother/father, adult sister/brother). We are very pleased with this high attendance of caretakers, as an important part of the medical camp is the transfer and exchange of medical and healthcare information, from the parents to the doctors and vice versa. We learned from previous medical camps that the presence of caretakers will make the medical camp more sustainable.

The following findings can be highlighted:

- The prevalence of anaemia was 26% % for all children and 32 % for children < 5 years), compared to 51.7% in Uganda (< 5 years) and 15.5% in the Netherlands (< 5 years) (WHO, 2019).
- High prevalence of stunting (24 % in total and 35 % for < 5 years), compared to 28% in Uganda (for < 5 years), and 1.6% in the Netherlands (WHO, 2020).
- The prevalence of wasting was 3 % for both total and for < 5 years), the same as the average of 3% in Uganda (for < 5 years) and < 0.3% in the Netherlands (< 5 years) (WHO 2020).
- Prevalence of malaria was low, total 2 % confirmed possible due to seasonal effect.
- High prevalence of acute worm infection (34 %) and few children having access to a deworming program (only 33 % of children were given a deworming tablet in the past 6 months).
- Other diagnoses: pneumonia (1%), cariës with pain (12%) and various skin diseases (tinea capitis (9%), eczema (1 %), scabies (2 %)) and other skin conditions 3 %
- 7 children with potential heart problems were identified and are referred to the cardiologist for further diagnosis and treatment.

- In total 19 (3%), children were tested having sickle cell disease.
- 39 children with disabilities came to the medical camp. Children and parents were identified to benefit from further follow-up.

Most frequent treatment given to the children was deworming (23%) and 34% anti-worm treatment, 9 % iron (4 % of the children and 5 % of the mothers)), multivitamin (39%), malaria treatment (3 %), antibiotics p.o (12 %), various cremes for skin diseases (16 %).

Malnutrition

Of the children seen in the medical camp, 13% showed underweight, 24% stunting, and 3% wasting. Especially the prevalence of stunting and wasting is high. ??

Within MCC growth abnormalities were assessed by measuring and weighing all children in a standardized fashion, using the following criteria:

- Underweight = weight for age at or under the third percentile of the reference population (WHO growth curves), only children up to 10 years old. This is an indicator of malnutrition or weight loss because of disease.
- Wasting = weight for height at or under the third percentile of the reference population (WHO growth curves), only children up to 120 cm in height. This is an indicator of acute malnutrition.
- Stunting = height for age at or under the third percentile of the reference population, (WHO growth curves), only children up to 19 years of age. This is an indicator of chronic malnutrition.

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. 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.

During the medical camp, nutritional advice was provided to all children and their caregivers, with emphasis on increasing vegetable and fruit intake to support growth and prevent deficiencies. Caregivers were encouraged to include locally available leafy vegetables such as amaranth (dodo), spinach (sukuma wiki), pumpkin leaves, and cabbage in daily meals. In addition, fruits rich in vitamin C, including papaya, guava, oranges, and lemons or limes, were recommended to help strengthen immunity and overall health. Due to a lack of good translators, it was difficult to convey this message properly.

Table 4: Prevalence of weight/age at or under P3 (underweight) per geographical location by age and gender

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Underweight	96	13%	20	24%	24	17%	8	8%	22	11%	22	11%
No underweight	620	86%	63	76%	118	83%	86	91%	171	86%	182	88%
Unknown	7	1%	0	0%	0	0%	0	0%	5	3%	2	1%
Underweight children per age												
<=1 year	20	12%	0	0%	10	19%	2	11%	4	9%	4	10%
>1 and <5 years	42	18%	8	33%	8	15%	6	18%	13	21%	7	11%
<5 years	56	17%	12	34%	14	16%	7	15%	13	15%	10	12%

>=5 and <=10 years	39	11%	8	17%	9	17%	1	2%	9	9%	12	10%
>10 years	1	10%	0	0%	1	25%	0	0%	0	0%	0	0%
Underweight children per gender												
Boy	51	53%	9	45%	16	67%	4	50%	11	50%	11	50%
Girl	45	47%	11	55%	8	33%	4	50%	11	50%	11	50%

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

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Stunting	176	24%	24	29%	47	33%	15	16%	32	16%	58	28%
No stunting	532	73%	59	71%	94	66%	73	77%	160	81%	146	71%
Unknown	15	2%	0	0%	1	1%	6	6%	6	3%	2	1%
Stunting children per age												
<=1 year	58	34%	6	38%	21	40%	6	32%	9	20%	16	40%
>1 and <5 years	91	38%	12	50%	24	45%	10	30%	17	27%	28	44%
<5 years	119	35%	15	43%	34	40%	14	30%	20	23%	36	43%
>=5 and <=10 years	54	15%	9	19%	13	25%	1	2%	11	11%	20	17%
>10 years	3	21%	0	0%	0	0%	0	0%	1	17%	2	50%
Stunting children per gender												
Boy	100	57%	13	54%	31	66%	5	33%	19	59%	32	55%
Girl	76	43%	11	46%	16	34%	10	67%	13	41%	26	45%

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

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Wasting	20	3%	9	11%	4	3%	2	2%	4	2%	1	0%
No wasting	532	73%	74	89%	123	87%	79	83%	123	62%	133	65%
Unknown	171	24%	0	0%	15	11%	13	14%	71	36%	72	35%
Wasting children per age												
<=1 year	7	4%	4	25%	2	4%	1	5%	0	0%	0	0%
>1 and <5 years	7	3%	3	13%	1	2%	1	3%	2	3%	0	0%
<5 years	13	4%	6	17%	3	4%	2	4%	2	2%	0	0%

>=5 and <=10 years	7	3%	3	6%	1	3%	0	0%	2	5%	1	2%
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Wasting children per gender												
Boy	8	40%	5	56%	2	50%	0	0%	1	25%	0	0%
Girl	12	60%	4	44%	2	50%	2	100%	3	75%	1	100%



Common Childhood Diseases and Clinical Management

In Uganda, the major causes of illness and under-five mortality among children include malaria, anaemia, diarrhoeal disease, acute respiratory infections (including pneumonia), malnutrition, and related complications. National survey data indicate- malaria parasitaemia prevalence around 40–60% in high transmission areas, severe/moderate anaemia in approximately 25–45%, diarrhoea in about 20–30%, and moderate/severe malnutrition in 15–45% of young children, contributing significantly to mortality risk. <https://pubmed.ncbi.nlm.nih.gov/30923753/>

At our MCC's five-day medical camp, we encountered less children with anaemia due to a seasonal effect of malaria in comparison to other MCC Uganda missions. Following MCC clinical handbook protocol, children were treated or referred appropriately: antimalarial therapy per WHO guidelines, anaemia management including referral for severe cases, antibiotic therapy were indicated for bacterial infections, maintenance treatment for sickle cell disease and supportive care for dehydration or nutritional concerns. During our MCC clinic, caregivers frequently reported prior use of local herbal remedies for their children's symptoms.

Anaemia

26 % of the checked children was suffering from anaemia) and 4 children had severe anaemia (Hb < 5 mmol).

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, but also

deficiencies in folate, vitamins B12 and A are also important causes. Furthermore, infectious diseases as malaria, tuberculosis, HIV and parasitic infections are common causes. Iron deficiency anaemia has also been shown to affect cognitive and physical development in children and reduce productivity in adults.

In the villages in Kagadi, the moderate prevalence might be due several factors, , the high incidence of acute worm infection (34 %) ,the possible prevalence of sickle trait and disease (3 %) (and low coverage by a deworming program), and the lack of important vitamins and minerals from fruit and vegetables in the diet.

Table 7: Prevalence of anemia by age and gender

	Total		day 1		day 2		Total=		95		Total=	
	724		Total= 83		Total= 95		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Anemia	186	26%	17	20%	39	27%	20	21%	60	30%	50	24%
No anemia	531	73%	66	80%	103	73%	74	78%	136	69%	152	74%
Unknown	6	1%	0	0%	0	0%	0	0%	2	1%	4	2%
Hb <5,0 mmol	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Anemia per age												
<=1 year	73	43%	5	31%	19	37%	8	42%	21	48%	20	50%
>1 and <5 years	65	27%	8	33%	12	23%	7	21%	21	33%	17	27%
<5 years	108	32%	10	29%	24	28%	13	28%	33	38%	28	34%
>=5 and <=10 years	75	20%	7	15%	14	26%	7	15%	26	25%	21	18%
>10 years	3	20%	0	0%	1	25%	0	0%	1	17%	1	25%
Anemia per gender												
Boy	104	56%	11	65%	23	59%	8	40%	30	50%	32	64%
Girl	82	44%	6	35%	16	41%	12	60%	30	50%	18	36%

Diagnostic Collaboration and Screening

During the medical camp, MCC and Masasa Clinic collaborated to provide comprehensive testing, including HIV, H. pylori, typhoid fever, and syphilis (Masasa Clinic), alongside malaria and sickle cell testing conducted by MCC. An additional station for children with low hemoglobin allowed targeted screening to distinguish anemia caused by malaria or sickle cell disease, enabling prompt management and referral when needed.

H. pylori, Syphilis, Typhoid, HIV, and Gastroenteritis

Symptomatic children with H. pylori were treated with a 14-day eradication regimen. Two children tested positive for syphilis and received intravenous penicillin; caregiver counseling addressed common misconceptions. Typhoid fever screening and treatment with oral azithromycin were provided where indicated. HIV testing was negative in all cases, and children with viral gastroenteritis were managed conservatively with ORS and caregiver guidance.

Table 8: Diagnostics performed during the medical camp

Diagnostics	Total number	Result
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		Negative	Positive
HIV	3	3	0
Helicobacter pylori	11	6	5
Sickle cell	20	12	8
Syphilis	11	11	0
Typhoid	2	1	1
Malaria	46	30	16

Malaria

During the medical camp, a moderate prevalence of malaria was observed (2 %). MCC malaria testing focused on febrile children with anaemia who had not been tested in the preceding days. Children testing positive were promptly treated on site with antimalarial medication, and caregivers received education on preventive measures, including hydration, mosquito protection, and early recognition of symptoms. While lower malaria positivity rates can be expected around February compared to previous MCC Uganda missions, transmission remains year-round due to local irrigation, vector reservoirs, and susceptible populations, with higher incidence typically occurring during the rainy months (April–May and October–November)."

Table 9: Prevalence of malaria by age and gender

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Malaria	16	2%	1	1%	4	3%	2	2%	1	1%	8	4%
No malaria	30	4%	5	6%	6	4%	4	4%	5	3%	10	5%
Unknown	675	93%	77	93%	131	92%	88	93%	191	96%	188	91%
Malaria per age												
<=1 year	3	2%	0	0%	1	2%	1	5%	0	0%	1	3%
>1 and <5 years	2	1%	0	0%	0	0%	0	0%	0	0%	2	3%
<5 years	4	1%	0	0%	1	1%	1	2%	0	0%	2	2%
>=5 and <=10 years	11	3%	1	2%	3	6%	1	2%	0	0%	6	5%
>10 years	1	7%	0	0%	0	0%	0	0%	1	17%	0	0%
Malaria per gender												
Boy	10	63%	1	100%	3	75%	1	50%	0	0%	5	63%
Girl	6	38%	0	0%	1	25%	1	50%	1	100%	3	38%

Sickle cell

During the medical camp, we served 19 children with SCD, of which 8 children were identified with a new diagnosis of sickle cell disease in Kagadi District.

Sickle cell disease is a chronic genetic condition causing anaemia and other complications. In Uganda, about 13% of children carry the sickle cell gene, with an estimated 0.7% affected;

During our week medical camp all children testing positive for sickle cell disease and the ones with already know diagnosis SCD were initiated on maintenance folic acid supplementation, caretakers received education on adequate hydration, pain management, and infection prevention, and the children were provided amoxicillin for infections when indicated. This

foundational approach aims to improve knowledge about the disease, symptom control and reduce complications, while supporting follow-up through local health service

Deworming

Only a small percentage of children (33%) had received deworming in the past six months, and many (247 children (34%) showed signs of acute worm infection, which contributes to malnutrition, anaemia, and impaired growth. MCC provided deworming to all eligible children and delivered education on hand hygiene to prevent reinfection, using materials developed with Aisha & Friends

Table 10 : Prevalence preventive anti-worm treatment in the last half-year per geographical location by age and gender

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Anti-worm	239	33%	19	23%	36	25%	31	33%	78	39%	75	36%
No anti-worm	483	67%	64	77%	106	75%	62	65%	120	61%	131	64%
Anti-worm per age												
>1 and <5 years	80	34%	7	29%	17	32%	9	27%	27	43%	20	31%
<5 years	86	25%	7	20%	18	21%	9	19%	28	32%	24	29%
>=5 and <=10 years	146	39%	12	25%	18	34%	22	47%	46	44%	48	40%
>10 years	7	47%	0	0%	0	0%	0	0%	4	67%	3	75%

Syphilis – Screening (Masasa clinic) and Community Perceptions

Syphilis was frequently noted as a caregiver concern, though misinformation is common, with many rashes or ulcers or fever misattributed to congenital infection. Several children were tested, two were positive and referred for intravenous penicillin, while most cases were benign, allowing for parental reassurance after counselling

Cerebral Palsy

During the first two days of screening, 31 children were identified with cerebral palsy, hypotonia, or epilepsy-like symptoms, (in many cases due to birth trauma) highlighting a higher local prevalence than in high-income countries. MCC and Masasa Clinic explored community-based support, including paediatric physiotherapy, access to antiepileptics, and follow-up programs, while three donated wheelchairs from MCC provided immediate mobility support for affected children. For the 17 children with epilepsy, the pediatric neurologist proposed medication plans for the Masasa Clinic, including phenobarbital syrup and 100 mg carbamazepine, as the available anti-epileptic drugs were intended for adults only

Heart Conditions in Children

Congenital heart disease affects an estimated 8–12 per 1,000 live births in Uganda, but rural children often face delayed diagnosis and limited access to specialist care. At the MCC clinic, seven children with pathological murmurs and one teenager with clubbing due to chronic hypoxemia were referred to the Uganda Heart Institute/Mulago, though families may face financial and travel barriers to timely evaluation and treatment.



Musculoskeletal and Craniofacial Conditions

Several (5) children presented with foot deformities from injections, leg length discrepancies, and burn-related contractures, while two children with cleft lip/palate were evaluated and counselled on realistic outcomes and referral options. Comprehensive cleft care is centralized in specialized hospitals like CoRSU in Kisubi/Entebbe, and the 10-day-old, malnourished infant with cleft palate received focused nutritional support

Skin problems

In 17 children under five, scabies caused intense itching and lesions and was treated with topical or oral scabicide therapy, with caregivers counselled on hygiene and contact management. Tinea capitis was common 67 children (9%) and socially stigmatizing; due to limited oral antifungals, management focused on education, stigma reduction, and topical treatment.

Eye problems

Eye irritation and keratoconjunctivitis are less common in Ugandan children than on our prior medical missions to South Africa, particularly affecting those aged 0–4 years. At the MCC camp, 8 children with conjunctivitis were evaluated and treated as needed, including provision of chloramphenicol eye drops and 26 somewhat older children with keratoconjunctivitis received sun-protective sunglasses to reduce discomfort.

Dental problems

During this exploratory mission, due to limited resources and logistical constraints, we were able to provide only minimal attention to dental care. Twelve percent of children (86) with caries-related pain were referred to the local dentist at the Masasa Clinic. During our medical camp many children had visible dental plaque, indicating poor established oral hygiene practices. During the medical camp, we provided education on dental hygiene and distributed toothbrushes to all children.

Helicobacter Pylori/ stomach ulcers

The prevalence of *Helicobacter pylori* infection and stomach ulcers in children is substantially higher in Uganda (40–63%) than in the Netherlands (10–20%) and the clinical presentation differs between these populations. During the Medical Check-up Camp, we observed a notable number of slightly older children, aged between 8 and 12 years, presenting with prolonged upper abdominal pain and decreased appetite. In some cases, this was

accompanied by weight loss. These children were referred for further testing at the Masasa Clinic. The diagnosis was based on non-invasive tests, and treatment prioritized for symptomatic children with ulcers with triple therapy.

Children in Uganda are more likely to develop peptic ulcer disease and related complications due to higher infection rates and earlier acquisition. Risk factors included poor sanitation, crowded living conditions, and limited access to clean water, which contribute to both higher prevalence and earlier onset of infection.

Referrals to hospital and special needs children

During the medical camp 1 child was immediately brought to the hospital due to severe anaemia in sickle cell crisis (Hb 3,1 mmol/l) for blood transfusion.

8 children were referred to the cardiologist, 3 to the eye doctor, 5 to the urologist, 2 to the ENT doctor and 4 for diagnostics to the neurologist, 5 to the orthopaedic or plastic surgeon for further diagnosis and treatment. At the beginning of our screening week, we developed a referral list indicating where children with underlying pathologies could best be directed for further care. However, discussions with parents highlighted significant financial and transportation barriers. This underscores our recommendation to Masasa to establish strategic partnerships to help address these challenges and improve access to care.



Specialty / Condition	Number of Children	Examples / Notes
CP (Cerebral Palsy) / CP Program	27	Mental retardation, contractures, malnutrition
Physiotherapy (Hypotonia / Hypertonia / Down Syndrome)	8	Neurological disease
ENT (Ear, Nose, Throat)	2	Kissing tonsils, hearing loss
Ophthalmology / Eye Problems	3	Keratoconjunctivitis, strabismus, vision problems
Orthopedics / Orthopedic Surgery	5	Clubfeet, ankle deformities, knee tumor
Pediatric Ophthalmology	1	Hemangioma on eyelid
SCD Program (Sickle Cell Disease)	8	—
Social Work / Mental / Developmental Issues	3	Slow learner, mental health problems, FAS

Specialty / Condition	Number of Children	Examples / Notes
Surgery / General Surgery	2	Cheilognathoschisis, umbilical hernia
Urology	5	Bladder issues, urethral stricture, urethral stenosis, phimosis, hydrocele
Other / Unknown	2	

Recommendations and conclusion

Based on the larger crowds during the last two days of the medical camp and the observations made, it seems that there is certainly a need for accessible and high-quality healthcare for children in Kagadi district. Several recommendations can be made for the future.

1. Deworming

Although deworming programs exist in Uganda, many children are not reached; in Kagadi district, only 33 % of children over one year received the recommended semi-annual preventive treatment. Deworming should be established as a standard practice within the Masasa clinic and integrated into the community health care, alongside improvements in hygiene, sanitation, health education, and access to safe drinking water to help reduce intestinal worm-related morbidity, anaemia, and malnutrition

2. Nutrition

Kagadi is considered the food basket of Uganda, yet high rates of stunting, wasting, and anaemia persist due to limited access to nutritious foods at the household level. The Masasa clinic can play a key role in promoting nutrition education, emphasizing the benefits of vitamins from fruits and vegetables, and supporting initiatives to encourage healthier eating habits in the community

3. Hygiene and dental care

The prevalence of dental caries can be reduced through education on dental care and hygiene. These topics can be addressed by the local dentist at the Masasa clinic, using educational materials developed by Aisha & Friends and MCC, and incorporated into ongoing village health programs

4. Special needs children

For the disabled children, further follow-up is considered necessary, as there is lack of care for this specific group of children, and in addition support and training of the parents. The children with cerebral palsy often had multiple comorbidities, such as epilepsy, hearing and vision impairments, gastroesophageal reflux, and malnutrition, yet they rarely receive adequate pain management or symptomatic care. Masasa plans to establish a comprehensive CP program that will include family counselling, access to physiotherapy, and provision of antiepileptic medications through the local pharmacy. The MCC team donated three wheelchairs on site for this group of children and advised Masasa to establish contact with relevant organizations, including the NGO Katalemwa Cheshire Home for Rehabilitation Services, Mukisa Foundation Uganda—which provides community and family support—and the Uganda National Association of Cerebral Palsy (UCPNA/UNAC).

5. Sickle cell disease

In the Masasa clinic, initial approaches for children with suspected haematological issues could include point of -care haemoglobin testing and sickle cell screening, combined with initiation of folic acid supplementation and linkage to a regional sickle cell program for ongoing care. Establishing regular follow-up-, parental education on recognizing complications (e.g., pain

crises, fever, dehydration), and access to preventive measures such as malaria prophylaxis and vaccination could further strengthen care. The MCC team has decided to donate a HemoCue 301 device along with cuvettes to the clinic to support the initiation of haemoglobin testing.

6. Next medical camp

MCC concludes that there is a clear need to continue medical camps in Kagadi District, while recognizing that future missions would benefit from establishing strategic partnerships in advance to optimize organization, resource allocation, and patient care.

During the mission, collaboration with Ugandan parents, children, and interpreters highlighted important cultural nuances: communication tended to be more indirect, with softer tones and less frequent direct eye contact, reflecting local norms of respect rather than disengagement. Differences in perceptions of time and scheduling were also observed, with local approaches being more flexible compared to the structured, time-oriented Dutch style. Awareness of these cultural distinctions proved essential for fostering mutual understanding and maintaining respectful and effective collaboration.

Critical observations regarding local capacity and sustainability included structural limitations such as limited nursing staff, gaps in strategic partnerships, and insufficient supporting infrastructure, which constrained the clinic's effectiveness and families' access to care. Strengthening local capacity through additional staff, adult translators, and well-established community and institutional linkages would enhance sustainable collaboration and future outreach. Despite these challenges, the mission made a meaningful impact, bringing both care and hope to families.

In the short term, contact will be established with PUM and the MCC Board to discuss these critical points and explore how PUM expertise could support the development of local capacity, operational foundations, and sustainable partnerships for future missions.

We are deeply grateful for the efforts of Masasa, his family, the local pharmacist, midwife, the laboratory assistant and the team of translators and helpers, without whom this mission could not have been carried out. Equally, we thank the parents for placing their trust in us to examine and treat their children, which was essential to the success and impact of the mission. As one parent aptly expressed, "MCC has not only brought care, but also hope," underscoring the meaningful difference this mission made despite operational challenges.

Paediatricians Ines von Rosenstiel, Madelon Ruige and Anneke Landstra



Appendix

Table 11 : Child with caretaker at the day of the check

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
No	29	4%	0	0%	2	1%	0	0%	13	7%	14	7%
Yes	687	95%	82	99%	140	99%	94	99%	184	93%	187	91%
Teacher	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%

Table 12: Disease prevalence among all children

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
Underweight	96	13%	20	24%	24	17%	8	8%	22	11%	22	11%
Stunting	176	24%	24	29%	47	33%	15	16%	32	16%	58	28%
Wasting	20	3%	9	11%	4	3%	2	2%	4	2%	1	0%
Anaemia	186	26%	17	20%	39	27%	20	21%	60	30%	50	24%
AIDS	3	0%	0	0%	0	0%	0	0%	3	2%	0	0%
Malaria (suspected)	4	1%	2	2%	0	0%	0	0%	2	1%	0	0%
vitamin deficit (clinical signs)	39	5%	0	0%	0	0%	2	2%	16	8%	21	10%
Bilharzia	2	0%	1	1%	0	0%	0	0%	1	1%	0	0%
Malaria (confirmed)	16	2%	0	0%	4	3%	1	1%	3	2%	8	4%
syndrome n.o.s.	3	0%	0	0%	2	1%	0	0%	0	0%	1	0%
pneumonia (clinical)	9	1%	2	2%	5	4%	0	0%	1	1%	1	0%
pneumonia (X-ray confirmed)	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%
tuberculosis (clinical)	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%
bronchitis	3	0%	0	0%	2	1%	0	0%	0	0%	1	0%
BHR/asthma	5	1%	1	1%	0	0%	3	3%	1	1%	0	0%
Respir. Other	7	1%	4	5%	1	1%	1	1%	1	1%		
gardia (suspected)	1	0%	0	0%	1	1%	0	0%	0	0%	0	0%
dysentery	4	1%	1	1%	1	1%	0	0%	1	1%	1	0%

dehydration : acute diarrhoea	2	0%	0	0%	0	0%	0	0%	1	1%	1	0%
dehydration : chronic diarrhoea	2	0%	0	0%	1	1%	0	0%	1	1%	0	0%
diarrhoea without dehydration	6	1%	1	1%	0	0%	0	0%	1	1%	4	2%
constipation	7	1%	2	2%	0	0%	0	0%	1	1%	4	2%
active worm infection	247	34%	20	24%	39	27%	36	38%	60	30%	92	45%
GI other	10	1%	4	5%	1	1%	1	1%	4	2%		
otitis media acuta	4	1%	2	2%	0	0%	1	1%	1	1%	0	0%
otitis media with effusion	5	1%	2	2%	1	1%	0	0%	2	1%	0	0%
otitis externa	4	1%	2	2%	1	1%	0	0%	0	0%	1	0%
(adeno)tonsillitis	4	1%	0	0%	1	1%	0	0%	3	2%	0	0%
candida stomatitis	3	0%	0	0%	1	1%	0	0%	2	1%	0	0%
hearing impairment	8	1%	2	2%	2	1%	0	0%	2	1%	2	1%
other	8	1%	2	2%	3	2%	0	0%	2	1%	1	0%
cariës n.o.s.	40	6%	7	8%	8	6%	8	8%	8	4%	9	4%
pain n.o.s	4	1%	1	1%	1	1%	1	1%	1	1%	0	0%
caries with pain	86	12%	12	14%	12	8%	13	14%	20	10%	29	14%
wounds n.o.s.	13	2%	1	1%	2	1%	2	2%	3	2%	5	2%
eczema n.o.s.	9	1%	1	1%	4	3%	0	0%	0	0%	4	2%
dermatomycosis	7	1%	1	1%	1	1%	3	3%	0	0%	2	1%
Impetigo/furunculosis	8	1%	0	0%	0	0%	2	2%	2	1%	4	2%
lice	4	1%	0	0%	1	1%	1	1%	2	1%	0	0%
scabies	17	2%	2	2%	1	1%	4	4%	5	3%	5	2%
Tinea Capitis	67	9%	9	11%	11	8%	9	9%	25	13%	13	6%
wounds infected,	6	1%	0	0%	3	2%	0	0%	1	1%	2	1%
Burn wound fresh	3	0%	1	1%	1	1%	0	0%	1	1%	0	0%
Skin other (psoriasis etc)	19	3%	1	1%	2	1%	7	7%	5	3%	4	2%
psychomotoric retardation	30	4%	10	12%	7	5%	2	2%	4	2%	7	3%
hypertonia	17	2%	6	7%	4	3%	2	2%	3	2%	2	1%
hypotonia	14	2%	4	5%	4	3%	1	1%	3	2%	2	1%
epilepsy / convulsions	17	2%	5	6%	3	2%	2	2%	4	2%	3	1%
migraine/headache	7	1%	0	0%	0	0%	1	1%	0	0%	6	3%

Neuromusc other	7	1%	4	5%	1	1%	1	1%	1	1%		
physiological murmur	5	1%	0	0%	1	1%	0	0%	2	1%	2	1%
pathological murmur (suspected)	7	1%	2	2%	2	1%	0	0%	0	0%	3	1%
Cardio other	1	0%	1	1%	0	0%	0	0%				
refractory problem	3	0%	0	0%	0	0%	1	1%	1	1%	1	0%
strabismus	2	0%	0	0%	2	1%	0	0%	0	0%	0	0%
keratoconjunctivitis	26	4%	1	1%	3	2%	5	5%	5	3%	12	6%
amblyopia	1	0%	0	0%	0	0%	1	1%	0	0%	0	0%
eye other	8	1%	0	0%	4	3%	1	1%	2	1%	1	0%
Sickle Cell	19	3%	4	5%	7	5%	2	2%	4	2%	2	1%
gyn other	4	1%	0	0%	0	0%	0	0%	3	2%	1	0%
urinary infection	3	0%	0	0%	0	0%	1	1%	2	1%	0	0%
urogen other	5	1%	2	2%	0	0%	0	0%	2	1%	1	0%
nefro other	2	0%	0	0%	1	1%	0	0%	1	1%	0	0%
skeletal other	8	1%	1	1%	4	3%	0	0%	1	1%	2	1%
hernia(umbilical etc)	13	2%	1	1%	3	2%	2	2%	2	1%	5	2%
abdomen other	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%

Table 13 : Treatment among all children per geographical location

	Total		day 1		day 2		day 3		day 4		day 5	
	724		Total= 83		Total= 142		Total= 95		Total= 198		Total= 206	
	N	%	n	%	n	%	n	%	n	%	n	%
ferro	26	4%	2	2%	3	2%	2	2%	7	4%	12	6%
mother iron	38	5%	2	2%	8	6%	5	5%	11	6%	12	6%
multivitamins	282	39%	32	39%	57	40%	30	32%	92	46%	71	34%
anti-worm	168	23%	31	37%	35	25%	24	25%	46	23%	32	16%
acute worm	244	34%	21	25%	37	26%	35	37%	60	30%	91	44%
anti-scabies	18	2%	3	4%	0	0%	4	4%	5	3%	6	3%
scabies soap	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%
amoxicillin	46	6%	10	12%	14	10%	4	4%	11	6%	7	3%
augmentin	11	2%	2	2%	3	2%	1	1%	4	2%	1	0%
2e lijns antibiotica	13	2%	0	0%	2	1%	2	2%	4	2%	5	2%
malaria treatment	21	3%	2	2%	4	3%	1	1%	3	2%	11	5%
paracetamol	90	12%	8	10%	9	6%	18	19%	27	14%	28	14%
inhaler	3	0%	1	1%	0	0%	1	1%	1	1%	0	0%
metranidazol	4	1%	0	0%	1	1%	0	0%	1	1%	2	1%
co-trimoxazol	5	1%	2	2%	0	0%	1	1%	1	1%	1	0%
ORS	7	1%	2	2%	0	0%	0	0%	2	1%	3	1%
eardrops	4	1%	1	1%	0	0%	1	1%	0	0%	2	1%
nystatine	2	0%	0	0%	1	1%	0	0%	1	1%	0	0%
Mupirocin/Bactroban	7	1%	1	1%	1	1%	3	3%	0	0%	2	1%
hydrocortisone cream	7	1%	0	0%	3	2%	0	0%	1	1%	3	1%
dactarin cream	60	8%	5	6%	4	3%	12	13%	29	15%	10	5%
dactacort cream	2	0%	1	1%	1	1%	0	0%	0	0%	0	0%
iodine	1	0%	0	0%	0	0%	0	0%	0	0%	1	0%
fusidin cream	17	2%	0	0%	2	1%	1	1%	6	3%	8	4%
sudo cream	3	0%	1	1%	1	1%	0	0%	1	1%	0	0%
neutral cream	27	4%	2	2%	6	4%	6	6%	9	5%	4	2%
griseofulvine	14	2%	2	2%	6	4%	0	0%	0	0%	6	3%
eyedrops	16	2%	1	1%	4	3%	4	4%	2	1%	5	2%