

Medical Checks for Children

Medical Rapport Kenya West 2024



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Introduction

From March the 4th until March the 11th 2024 a Medical Checks for Children (MCC) team visited locations near Kisumu and Eldoret in western Kenya. Free of cost, the MCC team checked and treated 890 children aged newborn until 13 years of age.

After a explorative mission in 2010, MCC is visitint Kenya yearly for medical camps on different locations. Again, the medical checks were organized in close cooperation with the Sophia Foundation for Children (SFFC) (www.sophia-foundation.com).

Technical equipment and some of the supplies were brought from Europe by the MCC team members. Most of the medication was ordered through SFFC in Kenia. Additional local medication was purchased from the main pharmacy in Nairobi and taken with us to Kenia West.

Our special thanks go to Nopi and Tazos for their direct support during our medical camp and their help in all the necessary preparations during the year. Special thanks go to the translators and teachers.

The aim of the mission is to provide basic healthcare on locations of underprivileged children in difficult circumstances with diagnosis and treatment and acute care on the spot and referral with hospital diagnostics and treatments if necessary for the future health of the children. We monitor the hospitals referrals and the treatment in close cooperation with the Sophia Foundation in the year ahead.



Medical Checks for Children on location:

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

1. Registration of the child
2. Measuring height and weight
3. Blood test for haemoglobin
4. Physical examination
5. Giving medication and education about the correct use of it (pharmacy)
6. Education on hyginics and tooth brushing (a tooth brush was given to each child)

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Anthropometric measurements were recorded, and a finger prick sample was taken for determination of the haemoglobin (Hb) concentration. Each child was examined by a Medical Doctor. History of illnesses in the preceding four weeks was recorded. Specifically, caretakers were asked if the child had diarrhoea, an upper respiratory infection, vomiting, eating soil (pica), decreased appetite and weight loss. They were also asked if their child received treatment for any of these, and if so, from where. The data of the children were analysed through the MCC data base.

The medical checks were performed on six days at different locations in Kenia West near the cities of Kisumu at Lake Victoria and near Eldoret. The team visited Kesengei Nursery & Primeray at Kesengei; Kalamai Bay Nursery, Kimerek Nursery at Kimarek; St Peter's Kapkechui at Chipita and The new life home. We visited the nuns at the new life home for the second time and added Holy Mary as did not visit the remand home as there were only older children and we were allowed to visit the woman's prison again were toddlers until the age of 2 live with their mother in dire circumstances. We are hopefull we can build a relationship with the new head warden here and change something for the good.

At the different locations we checked beside the schoolchildren some young non-schoolgoing children from the villages.

We analysed the data to make a comparison as a group but we did not make a computer analysis on individual basis (table 1)

During the years the ratio between girls and boys is stable.

Table 1: Total children per location

Locations	09-03-24	10-03-24	11-03-24	12-03-24	13-03-24	14-03-24	Total
Kamalabei	120	0	0	0	0	0	120
Kimerek	0	206	0	0	0	0	206
Kisengei	0	0	160	0	0	0	160
St. Peters	0	0	0	195	0	0	195
Holy Family	0	0	0	0	86	0	86
Nakuru Women Prison	0	0	0	0	0	9	9
New Life	0	0	0	0	0	114	114
Total	120	206	160	195	86	123	890

Table 2: Number, age and gender distribution of the 1010 checked children at the different locations

Age	Total		Kamalabei		Kimerek		Kisengei	
	890		Total= 120		Total= 206		Total= 160	
	N	%	n	%	n	%	n	%
<=1 year	51	6%	0	0%	15	7%	13	8%
>1 en <5 years	227	26%	49	41%	48	23%	48	30%
<5 years	276	31%	49	41%	59	29%	61	38%
>=5 en <=10 years	572	64%	70	58%	136	66%	98	61%
>10 years	42	5%	1	1%	11	5%	1	1%
Gender								
Boy	440	49%	75	63%	111	54%	73	46%
Girl	448	50%	45	38%	93	45%	87	54%

	St. Peters	Holy Family	Nakuru Women Prison	New Life
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Age	Total= 195		Total= 86		Total= 9		Total= 114	
	n	%	n	%	n	%	n	%
<=1 year	12	6%	9	10%	2	22%	0	0%
>1 en <5 years	34	17%	17	20%	5	56%	26	23%
<5 years	46	24%	26	30%	9	100%	26	23%
>=5 en <=10 years	146	75%	35	41%	0	0%	87	76%
>10 years	3	2%	25	29%	0	0%	1	1%
Gender								
Boy	104	53%	13	15%	3	33%	61	54%
Girl	91	47%	73	85%	6	67%	53	46%

This year we did try to we tried again to locate the old files of all the children which should have been seen earlier according to the school or according to the caretakers. Ofcourse this is also complicated due to human factors. We only managed to find files in 49% of the kids from previous years although more presumably we're seen.

1: Growth abnormality and malnutrition:

Overall data of growth abnormalities in the last years.

All locations	2015	2016	2017	2018	2019	2020	2022	2023	2024
underweight	17%	10%	9%	9%	8%	10%	9%	16%	13%
stunting	20 %	11%	8%	6%	5%	13%	11%	13%	11%
wasting	6%	5%	5%	13%	7%	8%	6%	7 %	9%

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 for mortality. Malnutrition is thought to account for one third of all deaths of children under five years of age (UN Millennium Developmental Goals).

Percentages of growth retardation is correlated with poverty, malnutrition, living conditions, hygiene and the prevalence of chronic diseases.

The major causes of malnutrition are poor feeding practices and or lack of food inadequate childcare. Adequate food intake and education programs addressing nutritious food need to be provided.

Therefore, we assessed growth abnormalities, 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.
- 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.
- 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.

Based on available data from Unicef (2017), prevalence of 11% for underweight, < 20% for stunting and < 5% for wasting in the Kisumu region were reported.

Analysis of the nutritional status shows significant differences among the locations visited (see table 4, 5 and six) Within the children assessed, it is unknown how many children have HIV related weight loss (wasting syndrome).

It is usually women and girls who are sent to fetch water; because of the drought, they have to walk even further, and wait for hours at boreholes.

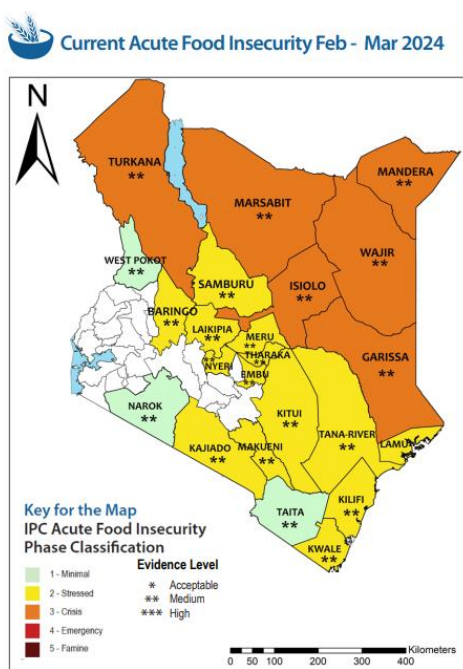
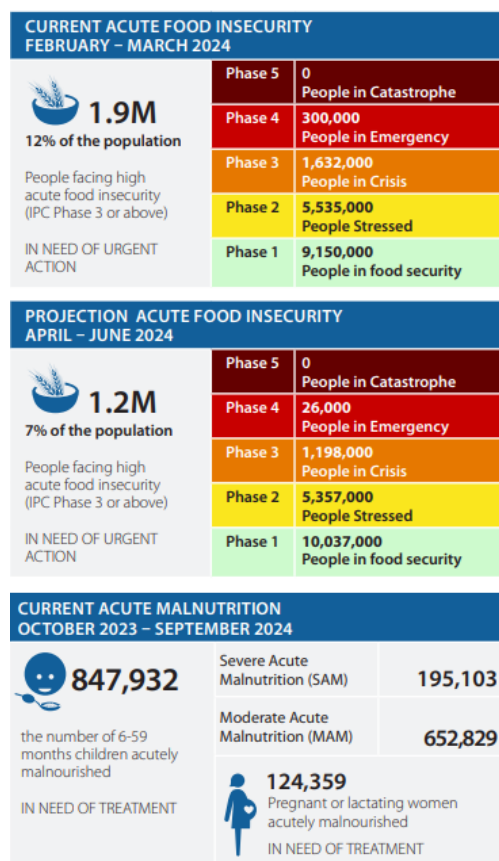
This puts them at greater risk of violence, at a time when hostilities among communities desperate to secure scarce resources, are mounting.

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With hundreds of thousands of Kenyans forced to move in search of survival, vulnerable women and girls have little to no access to critical health facilities or protection and support services – at the very time they need them the most.

There is evidence that gender-based violence, female genital mutilation, and child marriage have risen since the drought, as families marry off their girls to pay for food or cattle.

The cumulative impacts of the above-average seasonal rains from October to December 2023 resulted in flooding, causing the loss of livestock, destruction of infrastructure, property, and farmland. Many households were displaced due to the flash floods. Despite the availability of local production, food prices are still high, mostly driven by high demand and high marketing costs due to high fuel prices and the high cost of cross-border imports, especially as the local currency continues to depreciate. Conflicts, both human-wildlife and resource-based, were documented in various counties, predominantly impacting pastoral communities. These conflicts resulted in the loss of livestock and hindered farmers' access to their fields, consequently affecting agricultural production and overall productivity.



This diagrams show how malnutrition spreads. We only can assume that because we do not visit the desert areas in the north, our children are still lucky and even without rain there was some food in combination with the foodprogramme to help them.

Table 4 Prevalence of Weight/age (Underweight) on or below P3 per GEOGRAPHICAL LOCATION by AGE and GENDER

	Total		Kimerek		Kalambei		Kesengei	
	1010		Total= 1174		Total= 1191		Total= 1161	
	N	%	n	%	n	%	n	%
Underweight	160	16%	12	7%	48	25%	29	18%
No underweight	811	83%	161	93%	142	74%	131	82%
Unknown	35		0		0		1	

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Underweight children per age								
<=1 year	3	9%	0	0%	0	0%	2	29%
>1 and <5 years	42	19%	5	13%	10	21%	8	19%
<5 years	45	18%	5	10%	10	20%	10	19%
>=5 and <=10 years	113	16%	7	6%	38	27%	19	18%
>10 years	2	11%	0	0%	0	0%	0	0%
Underweight children per gender								
Boy	78	49%	5	42%	26	54%	13	45%
Girl	82	51%	7	58%	22	46%	16	55%

	St Peter		Holy Family		Nakuru Remand		New Life	
	Total=	217	Total=	52	Total=	36	Total=	179
	n	%	n	%	n	%	n	%
Underweight	24	11%	14	27%	0	0%	33	18%
No underweight	193	89%	38	73%	2	100%	144	80%
Unknown	0		0		34		0	0%
Underweight children per age								
<=1 year	0	0%	1	20%	0	0%	0	0%
>1 and <5 years	6	12%	9	41%	0	0%	4	24%
<5 years	6	12%	10	34%	0	0%	4	24%
>=5 and <=10 years	17	11%	4	17%	0	0%	28	18%
>10 years	1	14%	0	0%	0	0%	1	20%
Underweight children per gender								
Boy	12	50%	1	7%	0	0%	21	22%
Girl	12	50%	13	93%	0	0%	12	14%

Table 5 Prevalence of Height/age (Stunting) on or below P3 per GEOGRAPHICAL LOCATION by AGE and GENDER

	Total		Kimerek		Kalambei		Kesengei	
	1010		Total= 1174		Total= 9191		Total= 1161	
	N	%	n	%	n	%	n	%
Stunting	132	13%	15	9%	30	16%	15	9%
No stunting	854	86%	158	91%	161	84%	146	91%
Unknown	20		0		0		0	
Stunting children per age								
<=1 year	7	21%	0	0%	1	20%	1	14%
>1 and <5 years	48	22%	8	21%	7	15%	6	14%
<5 years	52	21%	9	19%	8	16%	7	13%
>=5 and <=10 years	70	10%	6	5%	22	16%	7	6%
>10 years	11	31%	0	0%	0	0%	1	100%
Stunting children per gender								
Boy	70	53%	9	60%	17	57%	8	53%
Girl	62	47%	6	40%	13	43%	7	47%

	St Peter		Holy Family		Nakuru Remand		New Life	
	Total=	217	Total=	52	Total=	36	Total=	179
	n	%	n	%	n	%	n	%
Stunting	27	13%	16	31%	5	29%	24	13%
No stunting	189	88%	36	69%	12	71%	152	85%

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Unknown	1		0		19		0	0%
Stunting children per age								
<=1 year	5	56%	0	0%	0	0%	0	0%
>1 and <5 years	13	27%	12	55%	0	0%	2	12%
<5 years	14	27%	12	41%	0	0%	2	12%
>=5 and <=10 years	13	8%	4	17%	0	0%	18	11%
>10 years	1	14%	0	0%	5	29%	4	80%
Stunting children per gender								
Boy	14	52%	3	19%	5	100%	14	15%
Girl	13	48%	13	81%	0	0%	10	12%

Table 6 Prevalence of Weight/height (Wasting) on or below P3 per GEOGRAPHICAL LOCATION by AGE and GENDER

	Total		Kimerek		Kalambei		Kesengei	
	1010		Total= 1174		Total= 9191		Total= 1161	
	N	%	n	%	n	%	n	%
Wasting	66	7%	4	2%	23	12%	23	16%
No wasting	826	88%	169	97%	142	77%	123	84%
Unknown	73		0		6		15	
Wasting children per age								
<=1 year	0	0%	0	0%	0	0%	0	0%
>1 and <5 years	18	8%	1	3%	7	15%	7	17%
<5 years	18	7%	1	2%	7	14%	7	13%
>=5 and <=10 years	48	7%	3	2%	16	12%	16	17%
>10 years	0	0%	0	0%	0	0%	0	0%
Wasting children per gender								
Boy	24	36%	1	25%	11	48%	6	26%
Girl	42	64%	3	75%	12	52%	17	74%

	St Peter		Holy Family		Nakuru Remand		New Life	
	Total= 217		Total= 52		Total= 36		Total= 179	
	n	%	n	%	n	%	n	%
Wasting	10	5%	3	6%	0	0%	3	2%
No wasting	168	84%	49	94%	1	100%	174	98%
Unknown	16		0		35		1	1%
Wasting children per age								
<=1 year	0	0%	0	0%	0	0%	0	0%
>1 and <5 years	1	2%	1	5%	0	0%	1	6%
<5 years	1	2%	1	3%	0	0%	1	6%
>=5 and <=10 years	9	6%	2	9%	0	0%	2	1%
>10 years	0	0%	0	0%	0	0%	0	0%
Wasting children per gender								
Boy	4	40%	0	0%	0	0%	2	2%
Girl	6	60%	3	100%	0	0%	1	1%

Over the years there seems to be a positive trend towards less growth disorders. As always these conclusions must be made with the greatest of care as the population we see differs each year and only half of all children were seen in the previous year.

Of the all the small kids seen in the Holy Mary more than half had severe malnutrition (40% stunting, 30% stunting in the last year). The reality of growing up in these conditions is harsh and we do realize that interventions are problematic due to strict regulations and control. We hope that the SFFC will be able to

reach out into the secluded community and provide these vulnerable babies with a bit of extra nutrition to help them grow.

During the medical check-ups of this year, we paid again attention to issues of hygiene and nutritional advice. For babies, we advised exclusive breastfeeding up to six months and then start with the introduction of additional foods.

On the schools that are in the feeding program of the SFFC, each month dry foods are given. Fruit and vegetables are locally purchased and depend on the availability and the season. Also we know that if the schools accept more children as was the case in St. Peter's the amount of food is divided between more children. Most of the children get their first meal of the day at school, 11 am porridge and somewhere around noon lunch. The amount of food the children receive at home for dinner could vary widely.

It is evident from these data that the children in the prison and the nuns are the vulnerable ones; often orphans with an unknown future or now still with mama in prison until they are around 2 years old and have to leave prison to go to relatives with an unknown future.

We do realize that our numbers show less severe malnutrition than other medical camps. Of course there are locations that we visit during the years where the feeding program results in better results. But every year in the newcomer classes we identify children, reach new parents and try to make a change. Also we aim to include new locations every year to



2: Anaemia:

Overall data of anaemia in the last years.

Overall	2015	2016	2017	2018	2019	2020	2022	2023	2024
Anaemia yes	37%	39%	45%	27%	29%	44%	29%	25%	31%
Hb < 5		2%	1%	1%	1%	1%	1%	1%	1%

Anemia is the most prevalent micronutrient disorder in the world. In Kenya, no national policy has been implemented so far to provide iron supplements to pregnant women or young children.

While iron deficiency is frequently the primary factor contributing to anaemia, it is important to recognise that the control of anaemia requires a multi-faceted approach.

In addition to iron deficiency, infectious diseases such as worm infections, other chronic infections, particularly HIV-AIDS and tuberculosis, as well as other nutritional deficiencies, and as side effects of ART medication in HIV positive children.

It is unknown how many children with abdominal problems have iron deficiency anaemia and a coexisting H. pylori infection. From literature it is known that one should suspect an infection with H. pylori when the iron deficiency anaemia is refractory to iron administration.

This year the prevalence was stable compared to previous years. This is certainly biased due to the fact that we see a selected population whom is cared for.

Table 7: Prevalence of anaemia per geographical location by age and gender

	Total		Kamalabei		Kimerek		Kisengei	
	890		Total= 120		Total= 206		Total= 160	
	N	%	n	%	n	%	n	%
Anaemia	274	31%	28	23%	70	34%	44	28%
No anaemia	597	67%	91	76%	130	63%	112	70%
Unknown	15	2%	1	1%	5	2%	4	3%
Hb <5,0 mmol	4	0%	0	0%	0	0%	4	3%
Anaemia per age								
<=1 year	14	33%	1	100%	1	8%	2	29%
>1 en <5 years	56	36%	8	33%	14	34%	14	42%
<5 years	71	37%	12	35%	15	29%	15	43%
>=5 en <=10 years	185	29%	16	19%	55	36%	27	23%
>10 years	18	26%	0	0%	0	0%	2	40%
Anaemia per gender								
Boy	152	55%	16	57%	43	61%	24	55%
Girl	122	45%	12	43%	27	39%	20	45%

	St. Peters		Holy Family		Nakuru Women Prison		New Life	
	Total= 195		Total= 86		Total= 9		Total= 114	
	n	%	n	%	n	%	n	%
Anaemia	62	32%	31	36%	6	67%	33	29%
No anaemia	132	68%	52	60%	3	33%	77	68%
Unknown	1	1%	1	1%	0	0%	3	3%
Hb <5,0 mmol	0	0%	0	0%	0	0%	0	0%
Anaemia per age								
<=1 year	5	45%	0	0%	0	0%	5	50%
>1 en <5 years	15	36%	0	0%	0	0%	5	38%
<5 years	19	39%	0	0%	0	0%	10	45%
>=5 en <=10 years	38	32%	23	39%	4	57%	22	24%
>10 years	5	17%	8	32%	2	100%	1	50%
Anaemia per gender								
Boy	34	55%	15	48%	4	67%	16	31%
Girl	28	45%	16	52%	2	33%	17	27%

We treated the children with anaemia (and their mothers if they were breast fed) with supplements for three months. If we suspected a vitamin deficit and/or a infection we gave multivitamins instead of iron supplements.

3: Worm treatment:

Overall data of profylactic antiwormtreatment for all locations in the last 3 years.

All locations prophylaxis	2015	2016	2017	2018	2019	2020	2022	2023	2024
Worm treatment: yes	81%	72%	67%	0%	15%	2%	65%	3%	67%
Worm treatment: no	19%	28 %	37%	100%	85%	98%	35%	97%	33%

A strong relationship exists between a Helminth, an *Ascaris Lumbricoides*, a Hookworm, a *Taenia Trichiura* or *Saginata* (tapeworm) infection and anaemia. In studies *Ascaris* prevalence percentage is 19.3% and hookworm 7.6%. The incidence/prevalence of *Taenia Saginata* (tape worm) is not known.

In the last years a de-worming program was established in Kenya where there is a high prevalence of these infections in (school-aged) children yet. Official data show a coverage of this de-worming program of 80%.

If there was a clinical suspicion of an active worm infection or anemnetic clues of a gardia infection, children were treated either with albendazol for na active worm infection or with a course of metronidazol for a suspected gardia infection. We did not treat children below 2 years with prophylactic antiwormtreatment following the international guidelines on the subject.

The clinical diagnosis of worm related illnesses remains a clinical challenge as most children do their need in lantrine pits that are dark and parents usually do not check the stool.

This year the distribution of conducted by the Sophia foundation during there routine visits to the areas which showed results! We hope this effort can be made in the future to al the locations that we visit during our medical camps.

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

	Total		Kamalabei		Kimerek		Kisengei	
	890		Total= 120		Total= 206		Total= 160	
	N	%	n	%	n	%	n	%
Anti-worm	596	67%	117	98%	189	92%	132	83%
No anti-worm	291	33%	3	3%	15	7%	28	18%
Anti-worm per age								
>1 en <5 years	138	61%	47	96%	41	85%	35	73%
<5 years	146	53%	47	96%	47	80%	36	59%
>=5 en <=10 years	434	76%	69	99%	131	96%	95	97%
>10 years	16	38%	1	100%	11	100%	1	100%

	St. Peters		Holy Family		Nakuru Women Prison		New Life	
	Total= 195		Total= 86		Total= 9		Total= 114	
	n	%	n	%	n	%	n	%
Anti-worm	157	81%	0	0%	1	11%	0	0%
No anti-worm	37	19%	86	100%	8	89%	114	100%
Anti-worm per age								
>1 en <5 years	15	44%	0	0%	0	0%	0	0%
<5 years	15	33%	0	0%	1	11%	0	0%
>=5 en <=10 years	139	95%	0	0%	0	0%	0	0%
>10 years	3	100%	0	0%	0	0%	0	0%

Health education on the spot was aimed at increasing awareness of worm transmission, the divers problems caused by intestinal helminth and the importance of bi-annual de-worming every six months. At all the visited schools we tried to explain to the teachers and people in charge why this deworming is so important for the children.



4: Pneumonia: (45/890 5% vs, 2% the year before) (see table appendix)

"Pneumonia", "coughing", "fast/difficult breathing", "chest indrawing" and "inability to suck milk" are the key words used by care-takers indicating a (severe) ARI (fever with tachypnoe).

The 45 children with a severe acute respiratory infection (ARI) were treated with appropriate antimicrobials and home treatment advice. We saw 5 children with asthma/bronchitis. If needed these children were treated with ventolin on the spot and were given instructions about the use of inhalers. In most of these cases we arranged a home visit by the Sophia foundation to check the situation (cooking inside etc) and monitor if the inhalations are used correctly.

5: Cardial problems: (19/890, 2%) (see table appendix)

Mitral regurgitation or ventricular atrial septal defects being the most common heart problems in the third world. For this condition no treatment is available although a good dental situation is essential for a healthy life.

The MCC carousel includes a cardiac examination. We suspected 14 children of having a new pathological heart murmur. All the new and old cardiac kids together with their caretakers received extra information about their conditions. The children and their care takers were stressed on teeth brushing procedures. Besides this, they were told to give their child antibiotics when going to a dentist for a teeth extraction. These children were transferred to the Coptic Hospital in Nairobi with a clinical suspicion of severe congenital defect. If necessary we will provide costs for treatment with the Nieuwendijk Foundation. We did a follow up for all the cardiac children from previous years and provided medication and treatment as needed. For the kids that were referred to the hospital this year results are still coming in and we will monitor the follow up closely. One of the kids we saw was severely compromised, sent to the hospital and has been operated on successfully already. We will monitor him, make sure his caretakers understand what they need to do and see him again in 2025.

6: Skin diseases: (118/890 13%, 7%)(see table 1 of the appendix)

This year we saw 68 children with dermatomycoses including tinea capitis. And still this could be underscored as we only treat tinea capitis with systemic treatment in case of severe disease (> 50% of head affected, or severe superinfections or growth disorders). We saw only a few children with active scabies and lice.

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We accept a certain degree of underscoring. As tinea capitis is widespread in the schools due to transmission of the fungus by razorblade and other factors, we only reported and treated the serious cases. We t

Antifungal cream (eventually in combination with hydrocortison) was given for fungal infections (dermatomycosis) and hydrocortison crème was given for different forms of skin disorders. We did treat the children with severe or infected forms of tinea capitis with griseofulvin.

The reported incidence of skin related problems is on the rise. Ofcourse skindisorders are multifactorial and it's difficult to give a general conclusion. Ofcourse fungal disease due to local practises in shaving is common; we tried to talk to the teachers to see if they can help in getting parents to understand they need to buy blades themselves. We wil monitor in 2025.



7: Dental: (caries not otherwise specified: 227 /890, 26%; painful caries: 21/890, 2%)

In general a moderate caries prevalence was found. As we did not have a dentist this year we only reported cases as caries with pain who were in need for a dental referral. We do think that the absence of a dentist resulted in a cognitive mindset of underreporting due to knowing there are no consequences.

At the last station of the medical carroussel local volunteers gave out toothbrushes and educated the children and their caretakers in teethbrushing.

We as MCC provided education, instruction folders, brush posters and tooth brushes for the schools. The folders and posters were based on the program developed by NOSH.



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Further recommendations

Deworming

This year most children of the SSFC schools did receive the antiworm tablet and in september the tablets will be distributed again! Unfortunately, the outreach from the governmental programm still appears to differ greatly between locations and in time. This resulted in a 67% rate of coverage in the checked children; we will still aim to reach the maximum in all the locations we visit!

We are grateful for the Sophia Foundation for taking the lead.

In the locations that are not included, we left tablet for after 6 months and will provide more in 2024.

We will monitor the effect and try to establish a cost effective buying program and hope to include the governmental programm if possible.

Nutrition

The incidence of growth disorders seems to be on the rise due to factors discussed earlier when we compare the results to the results of the last years. Like discussed during the medical camp the young newcomers in the nursery and baby classes seem to have a poor nutritional state when entering the school. During the years they will benefit the most from the feeding program.

We would encourage SSFC to proceed with the food programmes at the schools and nurseries. The new locations we visited have the highest incidence of malnutrition. As the caretakers there also told us during our visit there is a constant need for funds and foods. Ofcourse we do understand the Sophia Foundation can not start foodprogrammes easily but if these locations are a stable partner also next year and we do want to help them to make a change for their vulnerable children their needs are bigger than a medical camp.

There is a need for further education about nutrition and healthy living for teachers and health workers. At the moment the Sophia Foundation has children who finished highschool and are training for nurses, healthcare workers, midwife and even medicine. We urged them to use the specific knowledge if these former home residents to in educating the locations that we visit. And if possible see if there could be a way they can make a living in also giving something back. The children in the medical camps do respect the local staff of the Sophia and we are sure they can be a big asset in further health education and empowerment.

Cardiac problems

Every year we see children with suspected pathological heart problems. In Kenya there is not any governmental program for these needy children and the cost of medication and operations fall to their parents.

This year we did see an uprise in expected pathological murmurs. In the Nairobi mission 2024 we used pocus ultrasound which reduced the number of necessary referrals. We will monitor in 2025.

For all the children with possible chronic problems we should explore if insurance will pay for the need medication, hospital visits etc.

Skin disorders

Fungal infections of the head are still common. In general we see a lot of children with dirty skin due to poor hygienic conditions. This poses a risk for getting skin infections. We do know that water is a problem but should stress that children should clean dirty wounds with water to prevent more serious infections.

Teeth

During the years we've seen a lot of children with dental problems. The last dental camp in Western Kenya has been some years ago. This year we did not have a dentist with us and might have underscored dental problems as a result. Of all the children we checked we only scored caries in 1/4th of them. Caries with pain was almost not scored at all. We did spend in dental education also using our new promotion material from Aisha & friends which was very well received!

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Health and Hygiene

In general we notice that knowledge about what is good health and hygiene among children, caretakes and sometimes even teachers is little.

We are grateful for all the new education material that we can use that resonates with the children.

Last words:

Thanks to the amazing support from the Sophia Foundation we were able to give a lot of children their share of medical care and personal attention. We all felt to be part of one big team and all teammembers expressed the wish to come back again next year.



Appendix A Disease prevalence among all children per geographical location

	Total		Kamalabei		Kimerek		Kisengei	
	890		Total= 120		Total= 206		Total= 160	
	N	%	n	%	n	%	n	%
Underweight	120	13%	19	16%	40	19%	20	13%
Stunting	97	11%	11	9%	20	10%	22	14%
Wasting	80	9%	17	14%	24	12%	13	8%
Anaemia	274	31%	28	23%	70	34%	44	28%
vitamin deficit (clinical signs)	5	1%	5	4%	0	0%	0	0%
Malaria (confirmed)	5	1%	2	2%	2	1%	1	1%
pneumonia (clinical)	45	5%	12	10%	12	6%	7	4%
tuberculosis (X-ray confirmed)	1	0%	0	0%	0	0%	0	0%
bronchitis	3	0%	2	2%	1	0%	0	0%
BHR/asthma	5	1%	2	2%	1	0%	1	1%
diarrhoea without dehydration	1	0%	0	0%	0	0%	0	0%
constipation	1	0%	0	0%	1	0%	0	0%
active worm infection	18	2%	2	2%	3	1%	1	1%
otitis media acuta	1	0%	0	0%	0	0%	1	1%
otitis externa	1	0%	0	0%	1	0%	0	0%
(adeno)tonsillitis	3	0%	1	1%	0	0%	2	1%
other	3	0%	0	0%	0	0%	0	0%
cariës n.o.s.	227	26%	6	5%	56	27%	57	36%
pain n.o.s	3	0%	0	0%	1	0%	0	0%
fluorosis	80	9%	2	2%	6	3%	9	6%
caries with pain	21	2%	4	3%	8	4%	1	1%
wounds n.o.s.	6	1%	1	1%	4	2%	1	1%
eczema n.o.s.	10	1%	3	3%	1	0%	2	1%
dermatomycosis	12	1%	7	6%	1	0%	1	1%
Impetigo/furunculosis	7	1%	3	3%	1	0%	2	1%
lice	2	0%	1	1%	0	0%	0	0%
scabies	5	1%	3	3%	0	0%	2	1%
Tinea Capitis	56	6%	15	13%	6	3%	13	8%
wounds infected,	5	1%	2	2%	1	0%	1	1%
Burn wound fresh	1	0%	0	0%	0	0%	1	1%
Skin other (psoriasis etc)	14	2%	3	3%	1	0%	4	3%
psychomotoric retardation	10	1%	1	1%	5	2%	3	2%
epilepsy / convulsions	1	0%	0	0%	0	0%	0	0%
Neuromusc other	4	0%	1	1%	3	1%	0	0%
physiological murmur	5	1%	0	0%	1	0%	1	1%
pathological murmur (suspected)	14	2%	1	1%	5	2%	2	1%
refractory problem	2	0%	0	0%	1	0%	0	0%
keratoconjunctivitis	6	1%	1	1%	0	0%	3	2%
eye other	4	0%	1	1%	0	0%	2	1%
inguinal hernia	1	0%	0	0%	1	0%	0	0%
urinary infection	2	0%	0	0%	2	1%	0	0%
old fracture	1	0%	0	0%	0	0%	0	0%
skeletal other	2	0%	1	1%	1	0%	0	0%
hernia(umbilical etc)	7	1%	0	0%	0	0%	1	1%
abdomen other	3	0%	0	0%	0	0%	1	1%

	St. Peters		Holy Family		Nakuru Women Prison		New Life	
	Total = 195		Total= 86		Total= 9		Total= 114	
	N	%	n	%	n	%	n	%
Underweight	6	3%	18	21%	2	22%	15	13%
Stunting	6	3%	25	29%	1	11%	12	11%
Wasting	5	3%	11	13%	0	0%	10	9%
Anaemia	62	32%	31	36%	6	67%	33	29%
vitamin deficit (clinical signs)	0	0%	0	0%	0	0%	0	0%
Malaria (confirmed)	0	0%	0	0%	0	0%	0	0%
pneumonia (clinical)	6	3%	4	5%	0	0%	4	4%
tuberculosis (X-ray confirmed)	1	1%	0	0%	0	0%	0	0%
bronchitis	0	0%	0	0%	0	0%	0	0%
BHR/asthma	1	1%	0	0%	0	0%	0	0%
diarrhoea without dehydration	1	1%	0	0%	0	0%	0	0%
constipation	0	0%	0	0%	0	0%	0	0%
active worm infection	2	1%	0	0%	0	0%	10	9%
otitis media acuta	0	0%	0	0%	0	0%	0	0%
otitis externa	0	0%	0	0%	0	0%	0	0%
(adeno)tonsillitis	0	0%	0	0%	0	0%	0	0%
other	1	1%	0	0%	0	0%	2	2%
cariës n.o.s.	48	25%	21	24%	0	0%	39	34%
pain n.o.s	1	1%	0	0%	0	0%	1	1%
fluorosis	18	9%	23	27%	0	0%	22	19%
caries with pain	5	3%	1	1%	0	0%	2	2%
wounds n.o.s.	0	0%	0	0%	0	0%	0	0%
eczema n.o.s.	4	2%	0	0%	0	0%	0	0%
dermatomycosis	3	2%	0	0%	0	0%	0	0%
Impetigo/furunculosis	1	1%	0	0%	0	0%	0	0%
lice	1	1%	0	0%	0	0%	0	0%
scabies	0	0%	0	0%	0	0%	0	0%
Tinea Capitis	10	5%	1	1%	0	0%	11	10%
wounds infected,	1	1%	0	0%	0	0%	0	0%
Burn wound fresh	0	0%	0	0%	0	0%	0	0%
Skin other (psoriasis etc)	3	2%	1	1%	0	0%	2	2%
psychomotoric retardation	0	0%	1	1%	0	0%	0	0%
epilepsy / convulsions	0	0%	0	0%	1	11%	0	0%
Neuromusc other	0	0%	0	0%	0	0%	0	0%
physiological murmur	1	1%	1	1%	1	11%	0	0%
pathological murmur (suspected)	6	3%	0	0%	0	0%	0	0%
refractory problem	1	1%	0	0%	0	0%	0	0%
keratoconjunctivitis	2	1%	0	0%	0	0%	0	0%
eye other	1	1%	0	0%	0	0%	0	0%
inguinal hernia	0	0%	0	0%	0	0%	0	0%
urinary infection	0	0%	0	0%	0	0%	0	0%
old fracture	0	0%	0	0%	0	0%	1	1%
skeletal other	0	0%	0	0%	0	0%	0	0%
hernia(umbilical etc)	5	3%	0	0%	0	0%	1	1%
abdomen other	2	1%	0	0%	0	0%	0	0%

Appendix C: Treatment among all children per geographical location

	Total		Kamalabei		Kimerek		Kisengei	
	890		Total= 120		Total= 206		Total= 160	
	N	%	n	%	n	%	n	%
ferro	184	21%	23	19%	42	20%	34	21%
mother iron	20	2%	0	0%	5	2%	6	4%
multivitamins	253	28%	34	28%	68	33%	45	28%
anti-worm	202	23%	0	0%	9	4%	5	3%
acute worm	59	7%	4	3%	10	5%	7	4%
anti-lice	1	0%	1	1%	0	0%	0	0%
anti-scabies	1	0%	0	0%	0	0%	1	1%
scabies soap	2	0%	0	0%	0	0%	1	1%
amoxicillin	40	4%	12	10%	11	5%	7	4%
augmentin	4	0%	0	0%	1	0%	3	2%
2e lijns antibiotica	9	1%	2	2%	2	1%	1	1%
malaria treatment	1	0%	0	0%	0	0%	0	0%
paracetamol	2	0%	0	0%	1	0%	0	0%
inhaler	2	0%	0	0%	1	0%	0	0%
metranidazol	1	0%	0	0%	1	0%	0	0%
AB urine infection	1	0%	0	0%	1	0%	0	0%
ORS	1	0%	0	0%	0	0%	0	0%
eardrops	1	0%	0	0%	0	0%	0	0%
nystatine	1	0%	0	0%	1	0%	0	0%
mupirocine=Bactroban	2	0%	1	1%	1	0%	0	0%
hydrocortisone cream	7	1%	2	2%	2	1%	1	1%
dactarin cream	34	4%	12	10%	3	1%	5	3%
dactacort cream	7	1%	4	3%	0	0%	2	1%
fusidin cream	20	2%	5	4%	3	1%	7	4%
sudo cream	1	0%	0	0%	0	0%	1	1%
neutral cream	9	1%	2	2%	0	0%	0	0%
griseofulvine	15	2%	3	3%	0	0%	3	2%
eyedrops	13	1%	2	2%	0	0%	6	4%
AB urine infection	1	0%	0	0%	1	0%	0	0%

	St. Peters		Holy Family		Nakuru Women Prison		New Life	
	Total = 195		Total= 86		Total= 9		Total= 114	
	N	%	n	%	n	%	n	%
ferro	48	25%	15	17%	1	11%	21	18%
mother iron	4	2%	0	0%	5	56%	0	0%
multivitamins	27	14%	40	47%	4	44%	35	31%
anti-worm	17	9%	76	88%	4	44%	91	80%
acute worm	14	7%	2	2%	0	0%	22	19%
anti-lice	0	0%	0	0%	0	0%	0	0%
anti-scabies	0	0%	0	0%	0	0%	0	0%
scabies soap	1	1%	0	0%	0	0%	0	0%
amoxicillin	5	3%	2	2%	0	0%	3	3%
augmentin	0	0%	0	0%	0	0%	0	0%
2e lijns antibiotica	1	1%	2	2%	0	0%	1	1%
malaria treatment	1	1%	0	0%	0	0%	0	0%
paracetamol	1	1%	0	0%	0	0%	0	0%
inhaler	1	1%	0	0%	0	0%	0	0%
metranidazol	0	0%	0	0%	0	0%	0	0%
AB urine infection	0	0%	0	0%	0	0%	0	0%
ORS	1	1%	0	0%	0	0%	0	0%

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eardrops	0	0%	0	0%	0	0%	1	1%
nystatine	0	0%	0	0%	0	0%	0	0%
mupirocine=Bactroban	0	0%	0	0%	0	0%	0	0%
hydrocortisone cream	2	1%	0	0%	0	0%	0	0%
dactarin cream	11	6%	1	1%	0	0%	2	2%
dactacort cream	1	1%	0	0%	0	0%	0	0%
fusidin cream	3	2%	2	2%	0	0%	0	0%
sudo cream	0	0%	0	0%	0	0%	0	0%
neutral cream	5	3%	2	2%	0	0%	0	0%
griseofulvine	1	1%	1	1%	0	0%	7	6%
eyedrops	4	2%	1	1%	0	0%	0	0%
AB urine infection	0	0%	0	0%	0	0%	0	0%

Appendix D Follow up

	Total		St Peters		Kimerek		Kalambei	
	910		Total= 191		Total= 188		Total= 188	
	N	%	n	%	n	%	n	%
Dentist	35	4%	5	3%	7	4%	13	7%
Specialist in hospital	10	1%	2	1%	2	1%	3	2%
Revisit	20	2%	13	7%	1	1%	1	1%
Social program	16	2%	8	4%	0	0%	3	2%
Diagnostics	14	2%	6	3%	3	2%	1	1%
Bloodtest after 3 months	9	1%	8	4%	0	0%	0	0%
International organisation	2	0%	0	0%	1	1%	0	0%
Other...	3	0%	1	1%	2	1%	0	0%

	Kesengei		New Life		Nakuru Remand		Holy Mary	
	Total= 148		Total= 108		Total= 44		Total= 43	
	n	%	n	%	n	%	n	%
Dentist	1	1%	4	4%	5	11%	0	0%
Specialist in hospital	1	1%	1	1%	0	0%	1	2%
Revisit	4	3%	0	0%	1	2%	0	0%
Social program	1	1%	4	4%	0	0%	0	0%
Diagnostics	3	2%	1	1%	0	0%	0	0%
Bloodtest after 3 months	1	1%	0	0%	0	0%	0	0%
International organisation	0	0%	0	0%	1	2%	0	0%
Other...	0	0%	0	0%	0	0%	0	0%