Medical Checks for Children

Medical Rapport Kenya West 2015

Nadine van Dijk
Frank van Tunen

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MCC Kenya West 2015

Introduction

From March the 5th untill March the 11th 2015, 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 1209 children aged newborn untill 13 years of age.
The team consisted of Nadine van Dijk, mission leader and medical-end-responsible, emergency physician; Frank van Tunen, organisation-end-responsible, accountant and chariman MCC; Paul de Vries, physiotherapist; Esther Anne Broekhuizen, family doctor; Miranda Wezendonk, ER nurse; Peter van Geene, ER/ICU-nurse; Anne Claire Schreuder, ER nurse; Janneke Broers, pediatric nurse; Judith Renes, paediatrician in training and Carolien Sierms, paediatrician and fellow IC.

FOTO TEAM INVOEGEN

Our host patron durning the Kenia stay was Archbishop Makarios, Head of the Orthodox Seminary in Riruta, Nairobi.
After a explorative mission in 2010, MCC visited Kenia West for the fith time.
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.

The cooperation of the Sophia Foundation for Children and the Archbishop Makarios existed out of the following (amongst others):

- Transfer of knowledge about expected diseases, through their earlier work in Kenia.
- Transfer of data on demographics.
- Selection of primary schools and orphanages.
- Arranging accomodation in Kisumu and Eldoret.
- Transportation of the MCC team from the airport, to Kenia Westan and to the check locations.
- Prior announcement of the medical camp in the locations.
- Ordering and delivery of medications.
- Giving support to the MCC team during the medical camp.
- Managing facilitating and (pre)-payment of hospital in/out patient referrals (Riruta Clinic and Coptic Hospital in Nairobi.

The MCC team was delighted by the cooperation with Archbishop Makarios and the strong input of the Sophia Foundation for Children. Our special thanks go Marina Shacola and Nopi Nicolaou Telemachou for their preparational work and to Marina and Matheos Demetriades and for their direct support during our medical camp. Special thanks go to the translators and teachers.
We are grateful to all the care takers and community people for bringing the children and helping to conduct the program. We are happy we got the opportunity to work with and to learn from all volunteers, translators and other supporting members who have helped directly or indirectly, despite their own obligations.
And last but not least, we would like to thank the children and their care-takers who came to the checks for their inspiring presence.

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)

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 Kisumi at Lake Victoria and near Eldoret. The team visited Kesengei Nusery & Primeray at Kesengei; St. Pantelaimon Nursery & Primary Kalamai Bay Nursery, Kimerek Nursery and Kimbonze Nursery at Kimarek; St Peter's Kapkechui at Chipita , Nakuru childrens and reprimand home and Nakuru Womans prison.
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)

For the schools at Kimarek, Kesengei and St. Peters we did a sepate analysis for the baby classes. This means that all the children aged 0 and 1 are pooled in the baby classes; in the analysis of the school overall there are no children with age 0 or 1. The rest of the school children were pooled together. As our focuss lies on the schools we did not perform a separate analysis for the children from the villages who did not belong to one of the schools that we visited.

Table 1: Total children per location

Rijlabels	05-03-15	06-03-15	07-03-15	08-03-15	09-03-15	10-03-15	Total
Kamalai	0	207	0	0	0	0	207
Kapkures	50	0	0	0	0	0	50
Kesengei	0	0	0	233	0	0	233
Kesengei baby	0	0	116	40	0	0	156
Kimarek	95	0	0	0	0	0	95
Kimarek baby	80	0	0	0	5	23	108
Nakuru	0	0	0	0	0	33	33
Nature Woman	0	0	0	0	0	26	26
St Peters	0	0	0	0	132	98	230
St Peters baby	0	0	0	0	70	1	71
Total	**225**	**207**	**116**	**273**	**207**	**181**	**1209**

Table 2: Number. age and gender distribution of the 1209 checked children at the different locations

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 233		Total= 156		Total= 95	
Age	**N**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
<=1 year	58	5%	9	4%	0	0%	0	0%	17	11%	0	0%
>1 en <5 years	213	18%	45	22%	13	26%	0	0%	70	45%	0	0%
<5 years	271	22%	54	26%	13	26%	0	0%	87	56%	0	0%
>=5 en <=10 years	811	67%	144	70%	37	74%	177	76%	67	43%	95	100%
>10 years	127	11%	9	4%	0	0%	56	24%	2	1%	0	0%
Gender												
Boy	610	50%	110	53%	28	56%	110	47%	79	51%	51	54%
Girl	599	50%	97	47%	22	44%	123	53%	77	49%	44	46%

Kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 108		Total= 33		Total= 26		Total= 230		Total= 71	
n	%	n	%	n	%	n	%	n	%
15	14%	0	0%	16	62%	0	0%	1	1%
47	44%	0	0%	10	38%	0	0%	28	39%
62	57%	0	0%	26	100%	0	0%	29	41%
45	42%	1	3%	0	0%	203	88%	42	59%
1	1%	32	97%	0	0%	27	12%	0	0%
53	49%	22	67%	15	58%	105	46%	37	52%
55	51%	11	33%	11	42%	125	54%	34	48%

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Table 3 Percentage of children also checked last year

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 279		Total= 110		Total= 131	
	N	%	n	%	n	%	n	%	n	%	n	%
No	439	36%	59	29%	50	100%	46	16%	17	15%	37	28%
Yes	770	64%	148	71%	0	0%	233	84%	93	85%	94	72%

kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 72		Total= 33		Total= 26		Total= 233		Total= 68	
n	%	n	%	n	%	n	%	n	%
63	88%	33	100%	26	100%	41	18%	67	99%
9	13%	0	0%	0	0%	192	82%	1	1%

Because we visit the schools of the SFFC each year we are able to see a lot of children in follow-up each year. This year overall 64% of the children we did also check during last years medical camp. We don't expect this number to rise as there are lots on newcomers in baby class each year and we do not see the older classes in our medical camp.

1: Growth abnormality and malnutrition:
(underweight: 17% (204/1003), stunting: 20 % (244/963), wasting: 6% (50/727)
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).

We did a subgroup analysis of the baby classes in Kimarek, Kesengei and St.Peters. In kenya children as old as 5 years can still be in babyclass! But for this analysis only babies aged 0 and 1 were pooled in the baby class. As expected incidence of growth abnormatlities are higher in the nursery with the younger kids. The difference is most clearly seen in St.Peters where in baby classes the incidence of underweight is 25% in baby compared to 10% in the other schoolchildren from St.Peters. The SFFC runs a feeding program at this school and we expected that in the higher classes incidences would drop because the children received the benefits of the feeding program for a longer time than the young children in the nursery classes. ***As wasting is a long term sign of malnutrition the severe decline in incidence in St.Peters from baby classes compared to the other schoolchildren who have had the benefits of the feeding programm for at least 2 years, is a indirect marker of the positive effect of the feeding programm on this school.***

In 2014 the incidence of underweight/ stunting/ and wasting in Kimarek Nursery was 24%/19% and 0% compared to 13% /35% and 1% this year. Last year the numbers for St Peters overall were 6%/8% and 2% compared to 9%/6% and 1%. For Kesengei overall the numbers in 2014 were 17%/ 6% and16%. We do need to mention that in the years before also older children were pooled in the nursery classes.

We do need to mention that the groups ar to small to give statistical support to this observation.

5 of the 21 babies seen in the Nakuru woman's prison had severe mulnutrition (19% stunting). The reality of growing up in these conditions is harse and we do realize that interventions are problematic due to strict regulations and control. We hope the innitiative to provide the mothers and the babies with fruids and vegetables will be a sustainable one.

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 nutrious 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.

The reported incidence for underweight (Kenya Statistical Factsheet WHO) is 16,5 % and for stunting 36%. These data are still the most recent WHO/Unicef country data from 2013.

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).

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

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 233		Total= 156		Total= 95	
	N	%	n	%	n	%	n	%	n	%	n	%
Underweight	204	17%	55	27%	18	36%	36	15%	23	15%	19	20%
No underweight	1003	83%	152	73%	32	64%	197	85%	133	85%	76	80%
Unknown	2	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Underweight children per age												
<=1 year	9	16%	4	44%	0	0%	0	0%	4	24%	0	0%
>1 en <5 years	47	22%	14	31%	6	46%	0	0%	11	16%	0	0%
<5 years	56	21%	18	33%	6	46%	0	0%	15	17%	0	0%
>=5 en <=10 years	140	17%	36	25%	12	32%	29	16%	8	12%	19	20%
>10 years	8	6%	1	11%	0	0%	7	13%	0	0%	0	0%
Underweight children per gender												
Boy	116	19%	34	31%	7	25%	20	18%	12	15%	16	31%
Girl	88	15%	21	22%	11	50%	16	13%	11	14%	3	7%

Kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 108		Total= 33		Total= 26		Total= 230		Total= 71	
n	%	n	%	n	%	n	%	n	%
12	11%	0	0%	1	4%	22	10%	18	25%
95	89%	33	100%	25	96%	207	90%	53	75%
1	1%	0	0%	0	0%	1	0%	0	0%
1	7%	0	0%	0	0%	0	0%	0	0%
10	21%	0	0%	1	10%	0	0%	5	18%
11	18%	0	0%	1	4%	0	0%	5	17%
1	2%	0	0%	0	0%	22	11%	13	31%
0	0%	0	0%	0	#DIV/0!	0	0%	0	0%
3	6%	0	0%	1	7%	11	10%	12	32%
9	17%	0	0%	0	0%	11	9%	6	18%

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

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 233		Total= 156		Total= 95	
	N	%	n	%	n	%	n	%	n	%	n	%
Stunting	244	20%	52	25%	11	22%	48	21%	39	25%	24	25%
No stunting	963	80%	155	75%	39	78%	185	79%	117	75%	71	75%
Unknown	2	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Stunting children per age												
<=1 year	19	33%	6	67%	0	0%	0	0%	5	29%	0	0%
>1 en <5 years	65	31%	13	29%	3	23%	0	0%	22	31%	0	0%
<5 years	84	31%	19	35%	3	23%	0	0%	27	31%	0	0%
>=5 en <=10 years	131	16%	32	22%	8	22%	29	16%	12	18%	24	25%
>10 years	29	23%	1	11%	0	0%	19	34%	0	0%	0	0%
Stunting children per gender												
Boy	133	22%	35	32%	5	18%	27	25%	20	25%	15	29%
Girl	111	19%	17	18%	6	27%	21	17%	19	25%	9	20%

Kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 108		Total= 33		Total= 26		Total= 230		Total= 71	
n	%	n	%	n	%	n	%	n	%
32	30%	6	18%	5	19%	13	6%	14	20%
75	70%	27	82%	21	81%	216	94%	57	80%
1	1%	0	0%	0	0%	1	0%	0	0%
4	29%	0	0%	3	19%	0	0%	1	100%
20	43%	0	0%	2	20%	0	0%	5	18%
24	39%	0	0%	5	19%	0	0%	6	21%
8	18%	0	0%	0	0%	10	5%	8	19%
0	0%	6	19%	0	0%	3	11%	0	0%
10	19%	5	23%	3	20%	5	5%	8	22%
22	41%	1	9%	2	18%	8	6%	6	18%

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

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 233		Total= 156		Total= 95	
	N	%	n	%	n	%	n	%	n	%	n	%
Wasting	50	6%	17	12%	9	18%	2	3%	5	3%	0	0%
No wasting	727	94%	125	88%	40	82%	64	97%	148	97%	73	100%
Unknown	432	36%	65	31%	1	2%	167	72%	3	2%	22	23%
Wasting children per age												
<=1 year	3	5%	1	11%	0	0%	0	0%	1	6%	0	0%
>1 en <5 years	17	8%	7	16%	2	15%	0	0%	2	3%	0	0%
<5 years	20	7%	8	15%	2	15%	0	0%	3	3%	0	0%
>=5 en <=10 years	30	6%	9	10%	7	19%	2	3%	2	3%	0	0%
>10 years	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Wasting children per gender												
Boy	23	6%	7	9%	1	4%	1	4%	3	4%	0	0%
Girl	27	7%	10	16%	8	36%	1	3%	2	3%	0	0%

Kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 108		Total= 33		Total= 26		Total= 230		Total= 71	
n	%	n	%	n	%	n	%	n	%
3	3%	0	0%	0	0%	1	1%	13	18%
98	97%	1	100%	26	100%	94	99%	58	82%
7	6%	32	97%	0	0%	135	59%	0	0%
1	7%	0	0%	0	0%	0	0%	0	0%
2	4%	0	0%	0	0%	0	0%	4	14%
3	5%	0	0%	0	0%	0	0%	4	14%
0	0%	0	0%	0	0%	1	1%	9	21%
0	0%	0	0%	0	0%	0	0%	0	0%
1	2%	0	0%	0	0%	0	0%	10	27%
2	4%	0	0%	0	0%	1	2%	3	9%

In comparison with 2013 and 2014 the reported incidence of malnutrition and growth retardation is stable and the incidence of stunting is again wel below the reported WHO incidence in Kenya. Selection bias due to the large population of school going kids may be a factor in underreporting severe malnutrition.

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

We are aware of the financial problems and, because of draught, scarcity of healthy food for many families.

On the schools that are in the feeding programm of the SFFC, each month dry foods are given. Fruit and vegetables are locally purchased and depend on the availablity and the season. Also we know that if the schools accept more children as was the case in St.Peters 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.

2: Anaemia: (37%, 446/1209; 1% Hb<5; 2014:39%, 469/1196)
Anaemia is the most prevalent micronutrient disorder in the world.
In Kenia 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.

In 446 (37%) children anemia was diagnosed (see table 7). In eightchildren (1 %, 8/1209) the haemoglobin level was less than 5.0 mmol/l; these children were treated and there Hb was checked in 3 months. One of the children with a Hb <5 was diagnoseds with Sicckle cell disease before; regular follow up in the clinic remains a problem.

The percentage of anemia is much lower in Kesengei in baby and overall compared to the other schools. Kesengei has a high percentage of children who received a antiworm pil in the last 6 months (almost 100%) with a bit lower percentage of combined skininfections or other infections (see Appendix A). We know that anemia is strongly associated with chronic worm infections. We are happy to see the positve effect this profylactic antiworm treatment has on the incidence of anemia.
The feeding programm at Kesengei consist of the samy dry food as in other schools; local varriation in supply of fresh food or vegetables could play a role. This needs some further research with the SFFC. Questions that come to mind concern the specific food and what the local diet is. Do they really get only carbohydrates or is there more greens available on the lands that we know of?

List of referrals and results can be found in appendix E.

This year the prevalence was in concordence with previous years.

Table 7:

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Prevalence of anaemia per geographical location by age and gender

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 233		Total= 156		Total= 95	
	N	%	n	%	n	%	n	%	n	%	n	%
Anaemia	446	37%	93	45%	22	44%	34	15%	40	26%	53	56%
No anaemia	763	63%	114	55%	28	56%	199	85%	116	74%	42	44%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Hb <5,0 mmol	8	1%	1	0%	2	4%	0	0%	0	0%	2	2%
Anaemia per age												
<=1 year	28	48%	2	22%	0	0%	0	0%	8	47%	0	0%
>1 en <5 years	80	38%	18	40%	6	46%	0	0%	17	24%	0	0%
<5 years	108	40%	20	37%	6	46%	0	0%	25	29%	0	0%
>=5 en <=10 years	297	37%	68	47%	16	43%	25	14%	14	21%	53	56%
>10 years	41	32%	5	56%	0	0%	9	16%	1	50%	0	0%
Anaemia per gender												
Boy	244	40%	45	41%	11	39%	24	22%	23	29%	32	63%
Girl	202	34%	48	49%	11	50%	10	8%	17	22%	21	48%

Kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 108		Total= 33		Total= 26		Total= 230		Total= 71	
n	%	n	%	n	%	n	%	n	%
49	45%	18	55%	13	50%	96	42%	28	39%
59	55%	15	45%	13	50%	134	58%	43	61%
0	0%	0	0%	0	0%	0	0%	0	0%
0	0%	0	0%	2	8%	1	0%	0	0%
9	60%	0	0%	9	56%	0	0%	0	0%
24	51%	0	0%	4	40%	0	0%	11	39%
33	53%	0	0%	13	50%	0	0%	11	38%
15	33%	0	0%	0	0%	89	44%	17	40%
1	100%	18	56%	0	0%	7	26%	0	0%
25	47%	15	68%	9	60%	46	44%	14	38%
24	44%	3	27%	4	36%	50	40%	14	41%

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

3: Worm treatment: (no antiworm 19%, 230/1209, prophylactic given 9%, 113/1209; active worminfection 2% 15/1209 (3% in 2014) ; suspected gardia <1% 6/1209, 3% in 2014)
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 Kenia 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 supsicion of a active worminfection or anemnestic clues of a gardia infection, children where treated either with albendazol for a active worminfection or with a course of metronidazol for a suspected gardia infection. We did not treat children below 2 years with profylactic antiwormtreatment following the international guidelines on the subject.

Dysenteria was suspected in 5 children (<1%) who where treated with a course of cotrimoxazol.

Unfortunately in Kimarek only 65% of the children were reported to have received profylactic antiworm treatment. As this is one of the SFFC schools we should be able to achieve a almost 100% coverage here.

We see a trend towards a higher reported incidence of active worm infection and suspected guardia. This could be due to more awareness in the treating doctors due to medical information

provided to the medical team during the prepartion fase and the new treatment protocol in our medical handbook.

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

	Total		Kamalai		Kapkures		Kesengei		Kesengei baby		Kimarek	
	1209		Total= 207		Total= 50		Total= 233		Total= 156		Total= 95	
	N	%	n	%	n	%	n	%	n	%	n	%
Anti-worm	976	81%	165	80%	0	0%	232	100%	113	72%	62	65%
No anti-worm	230	19%	40	19%	50	100%	1	0%	43	28%	33	35%
Anti-worm per age												
<=1 year	4	0%	0	0%	0	0%	0	0%	2	1%	0	0%
>1 en <5 years	127	11%	19	9%	0	0%	0	0%	46	29%	0	0%
<5 years	131	11%	19	9%	0	0%	0	0%	48	31%	0	0%
>=5 en <=10 years	721	60%	138	67%	0	0%	176	76%	63	40%	62	65%
>10 years	124	10%	8	4%	0	0%	56	24%	2	1%	0	0%

Kimarek baby		Nakuru		Nature Woman		St Peters		St Peters baby	
Total= 108		Total= 33		Total= 26		Total= 230		Total= 71	
n	%	n	%	n	%	n	%	n	%
76	70%	33	100%	0	0%	227	99%	68	96%
32	30%	0	0%	26	100%	2	1%	3	4%
2	2%	0	0%	0	0%	0	0%	0	0%
36	33%	0	0%	0	0%	0	0%	26	37%
38	35%	0	0%	0	0%	0	0%	26	37%
37	34%	1	3%	0	0%	202	88%	42	59%
1	1%	32	97%	0	0%	25	11%	0	0%

Preventive antiworm treatment was given to 19 % of all checked children. Last year we had to give all the children (100%) a profylactic antiworm tablet. We hope to see next year that this represents a structural improvement in the health care system.

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 al 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: (8/1209, 1%) (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 8 children with a severe acute respiratory infection (ARI) were treated with appropriate antimicrobials and home treatment advice. We saw 6 children with astma/bronchitis. One child with astma was treated with ventolin on the spot with good results. We did a home visit to monitor the correct use of the inhaler.

5: Cardial problems: (3/1209, 1 %) (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 live.
The MCC carrousel includes a cardial examination. *We suspected 3 children of having a new pathological heart murmur.* The children and their care takers with this condition 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. *In follow up we saw the cardiac kids who were referred in the previous years with good results. One 17 year old boy who we referred in the past, finally got his cardiac surgery and is doing good. We provided funds for the grandmother to take him for follow-up to the hospital.*

See appendix E for futher details.

6: Skin diseases: (235/1196, 20%)(see table 1of the appendix)
In respect to skin diseases we saw 124 (124/1209 11%)children with dermatomycoses including tinea capitits. We hope this positive trend will continue in the future and is due to education and the use of clean razorblades. We've treated 6 children with ivermectin for scabies (<1%). We encountered a broad range of different kind of wounds and skindisorders (39/1209, 3%).

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

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.

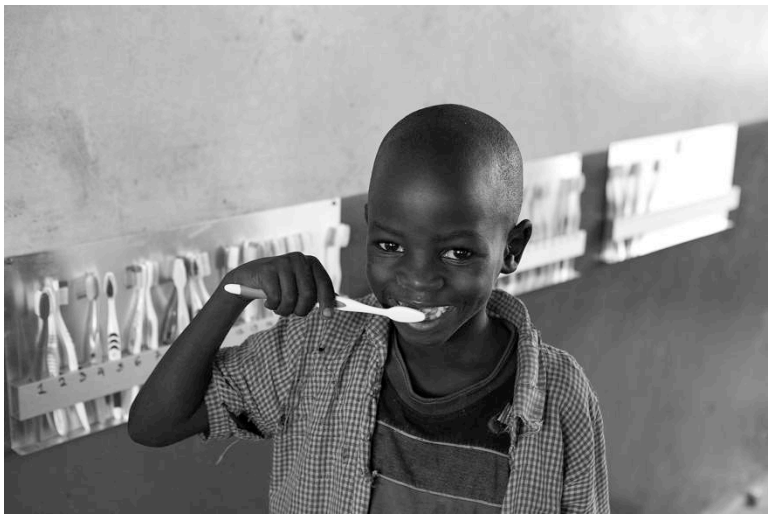
The reported incidence of skin related problems is stable; overall 20% in 2014 with 11% of the children with tinea capitis. We interpretet this as a good sign as we do see a lot on newcomers in our medical camp each year. The awereness at the schools, especially the SFFC schools, for hygiene, sanitation and healthy food could also have a impact here.

7: Dental: (caries not otherwise specified: 124/1209, 10%; painful caries: 34/1209, 3%; flurosis: 54/1209 4%)
In general a high caries prevalence was found. Our reported incidence of 3% for painfull caries is low. This is due to underscoring. We still see a need for a dental camp en will try to bring our dentis with us next year.

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

This year we started with a brush at school programm in Kimarek and St.Peters. The aim of this project is that all children have their own toothbrush at school. And the whole school brushes their that at school together with the teachers. Washing hands and hygiene is also part of the programm.

MCC Kenya West 2015



We as MCC provided education, instructionfolders, brushposters and toohtbrushes for the schools. The SFFC provided the toothbrush holders for each classroom. In these schools we organized a meeting with all the teachers and selected students who were then in charge of training their classes. At a follow-up visit the next day we did a brush session with the classes and with all the MCC team members.

8: Other

One unemployed single mother with nine children to raise on her own was supported last year with food and will hopefully be incorparated in the foodprogramme in some way to try to give this family some basic necessities of life. This year we did a housevisit and we were really happy to see how this mam was doing with her acres and her farm. We will sponsor some more seeds for this year.

At St.Peter we did again see a boy with SSD who's grandparent did not take him to the hospital for treatment and follow-up. We sam him with a very low Hb and bone pains suspeted of sicle cell anemia. We talked to the grandmother and referred him to the hospital. Grandmother will be responible for follow-up and medicine from now on.