Medical Report
Kenia, Nairobi 2012

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Introduction

From March 11th up to March 18th, a team of Medical Checks for Children (MCC) visited Nairobi and Nyeri in Kenia and checked and treated, free of cost, 1032 children aged newborn untill 12 years of age. In the last years MCC conducted an explorative mission in August 2008 to Njeri and three MCC misions to Nairobi in March 2009, 2010 and 2011.

The MCC mission KeNa12 team consisted Karlien Bongers, medical-end-responsible and mission leader, general surgeon; Nadine van Dijk, organization-end-responsible, emergency doctor; Petra de Jong, medical doctor preventive Health care; Rosalie Bartels, pediatrician in training; Marije de Waard, family doctor; Oscar van der Kroon, journalist; Saskia van der Kroon and Hanneke Miedema, both account manager; Eugenie Aarts, preventive oral health worker and Anique vd Velden, photographer.

Our host patron durning the Kenia stay was Archbishop Makarios, Head of the Orthodox Seminary in Riruta, Nairobi.
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.

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

- Transfer of data on demographics.
- Selection of primary schools and orphanages.
- Providing facilitating board and lodging of all MCC team members.
- Transportation of the MCC team from the airport and transportation to the check locations.
- Prior announcement of the medical camp in the locations.
- Ordering and delivery of medications.
- Giving all kinds of support to the MCC team during the medical camp.
- Managing facilitating and (pre)-payment of hospital in/out patient referrals to the Riruta Clinic and the 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 to, Nopi Nicolaou Telemachou, Panajota Panajotis. Their pro-active, direct support and enthusiasm gave MCC the opportunity to work in Kenia and they facilitated all aspects of the medical camp. We thank Marina Shakola and Matheos Demetriades for their preparational work. Without their hard work the mission would not have been possible.

Special thanks go to the translators, teachers and all local helpers. We enjoyed working together and hope they will continue to inspire their communities in the same way they inspired us as they play a vital role in spreading awareness and knowledge about child health and hygiene.
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:

The medical checks of the children were performed on seven days at different locations (see table 1).

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

	11-3-2012	12-3-2012	13-3-2012	14-3-2012	15-3-2012	16-3-2012	17-3-2012	Total
Imani	0	0	143	0	0	0	0	**143**
Joy Springs	0	0	0	138	0	0	86	**224**
Makarios home	0	0	0	0	0	64	0	**64**
Naiwasha	0	0	0	0	95	0	0	**95**
Nyeri	0	0	0	0	0	89	0	**89**
St Clemens	142	0	0	0	0	0	0	**142**
St George	0	94	0	31	0	0	0	**125**
St Paul	0	150	0	0	0	0	0	**150**
Total	**142**	**244**	**143**	**169**	**95**	**153**	**86**	**1032**

St. Clemens school, St.Pauls school and St.George school in Kibera are supported by the Archbishop Makarios of the Greek Orthodox Church in Africa.
At the St.George school, the Sophia Foundation for Children (SFFC) started a feeding program in 2009. The Joy Spring school in Kibera is not structual supported by any organisation, though they were recently involved in an deworming program of the World Health Organisation (WHO).
In Navaisha we saw the vulnerable children of whom the local organisation called Monica Memorial Development Centre for Needed Children (Mmemo) takes care for and depends on financial gifts of the local church and is supprted by SFFC as well.
In Nyeri the MCC team checked the children from the Makarios Children Home supported by the Sophia Foundation for Children and children attending the local school.
Imani childrens home, located in Kayole, a suburb of Nairobi, started in 1992, is a charitable children institution (CCI) registered with the Ministry of Gender, children and social development. Itstarted in 1992 and was visited by a MCC team for the first time. Imani as a CCI also has three welfare programs for abandoned and/or abused children and children with imprisoned parents. The Imani Childrens home is (partly) sponsored by the Dutch organisation FEMI (www.femi.org).

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.

Due to the high risk of mortality and morbidity under five years of age, the focus of MCC is checking young children.
Off all checked children, 27% of the children had the age under five, 7% were babies and 61% had the age between five and ten years. The age of the checked children was different at the different locations due to the setting (Kindergarten, school age, supporting vulnerable children). In total the amount of checked boys was slightly higher than the amount of checked girls. The percentage's of checked boy's and girls were different at the different locations (see table 2).
It should be noticed that at the different locations MCC checked besides the schoolchildren some young non-schoolgoing children from the villages.

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

2012	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
Age (in years)	**N**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
<=1	**73**	**7%**	53	37%	4	2%	0	0%	8	8%	4	4%	4	3%	0	0%	0	0%
>1 and <5	**275**	**27%**	54	38%	65	29%	3	5%	24	25%	11	12%	19	13%	52	42%	47	31%
<5	**348**	**34%**	107	75%	69	31%	3	5%	32	34%	15	17%	23	16%	52	42%	47	31%
>=5 and <=10	**627**	**61%**	36	25%	154	69%	23	36%	56	59%	63	71%	119	84%	73	58%	103	69%
>10	**57**	**6%**	0	0%	1	0%	38	59%	7	7%	11	12%	0	0%	0	0%	0	0%
Gender																		
Boy	**553**	**54%**	80	56%	122	54%	33	52%	56	59%	44	49%	85	60%	61	49%	72	48%
Girl	**479**	**46%**	63	44%	102	46%	31	48%	39	41%	45	51%	57	40%	64	51%	78	52%

Table 3: Number, age and gender distribution of the 1064 checked children at the different locations in 2011

2011	Total				Joy Springs		Makarios home		Naiwasha		Nyeri *				St George		St Paul	
	1064				Total	=383	Total	=81	Total	=123	Total	=89			Total	=122	Total	=72
Age (in years)	**N**	**%**			**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**			**n**	%	**n**	**%**
>=0 and <1	**16**	**2%**			3	1%	0	0%	2	2%	5	4%			1	1%	0	0%
>=1 and <5	**235**	**22%**			63	16%	6	7%	17	14%	20	17%			59	48%	15	21%
>=5 and <12	**618**	**58%**			273	71%	30	37%	82	67%	63	53%			62	51%	55	76%
>=12 and <18	**180**	**17%**			44	11%	45	56%	22	18%		25%			0	0%	2	3%
Gender											30							
Boy	**544**	**51%**			184	48%	41	51%	79	64%	52	44%			58	48%	35	49%
Girl	**519**	**49%**			199	52%	40	49%	44	36%	66	56%			64	52%	37	51%

*The data of Nyeri School/village include 101 children of the Nyeri School and 17 children of Nyeri village.

On each location the children stood in line for the check up in the medical carrousel. They were given a numbered form and were admitted to the first station where their name, age and MCC number were written on the form by a local helper. This paper was than given to the child who kept it until his or her treatment had been completed. If checked by MCC in former years, efforts were taken to collect the form(s) of earlier checks.
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.
Afterwards the child was sent to the station where the clinical forms were kept after medication was dispensed and information was given with the help of a local worker.
When indicated by the doctors, the child was referred to a local dentist or hospital.
We made efforts to include local volunteers (medical workers, teachers, students etc.) in the care of the children as much as possible.

At the end of the medical carrousel, every child got a toothbrush, tooth paste and soap together with instructions for the child and the care taker about how to brush their teeth, proper hand washing and healthy food.

The data of all children were put into the database computer program. We analysed the data to make a comparison as a group but we did not make a computer analysis on individual basis.

Most of the medical cases which received the attention of the MCC team were growth abnormalities, anaemia, skin problems and worm infections.

Diagnosis and categories of ailments:
During the week, the MCC team checked 1032 children.
Most of the ailments, except the dental problems, could be treated on the spot.

For more detailed information on all diagnoses see table 4. For treatment given during the medical camp see table 5 and 6 and for information about referrals see table 7.

able 4: Disease prevalence among all children per geographical location

	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Underweight	100	10%	56	39%	5	2%	3	5%	13	14%	6	7%	5	4%	5	4%	7	5%
Stunting	166	16%	83	58%	5	2%	14	22%	22	23%	5	6%	11	8%	12	10%	14	9%
Wasting	43	4%	15	10%	4	2%	1	2%	6	6%	3	3%	6	4%	2	2%	6	4%
Anaemia	251	24%	47	33%	53	24%	15	23%	16	17%	25	28%	45	32%	19	15%	31	21%
HIV pos.	19	2%	6	4%	0	0%	12	19%	0	0%	0	0%	1	1%	0	0%	0	0%
Malaria (suspected)	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
confirmed abuse by teachers	3	0%	0	0%	0	0%	0	0%	2	2%	1	1%	0	0%	0	0%	0	0%
syndrome n.o.s.	7	1%	1	1%	0	0%	0	0%	5	5%	0	0%	1	1%	0	0%	0	0%
pneumonia (clinical)	32	3%	7	5%	6	3%	2	3%	5	5%	0	0%	7	5%	4	3%	1	1%
pneumonia (X-ray confirmed)	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	0	0%	0	0%
tuberculosis (clinical)	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
bronchitis	2	0%	0	0%	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%
BHR/asthma	4	0%	1	1%	1	0%	0	0%	0	0%	0	0%	1	1%	1	1%	0	0%
dysenteria	4	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	2%	1	1%
dehydration : acute diarrhoea	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
diarrhoea without dehydration	28	3%	0	0%	8	4%	0	0%	3	3%	0	0%	4	3%	6	5%	7	5%
active worm infection	3	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	2%	0	0%
otitis media acuta	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	0	0%	0	0%
otitis media with effusion	5	0%	1	1%	2	1%	0	0%	0	0%	0	0%	2	1%	0	0%	0	0%
otitis externa	2	0%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	0	0%
(adeno)tonsillitis	2	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	1	1%	0	0%
candida stomatitis	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%
hearing impairment	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
other	5	0%	2	1%	2	1%	0	0%	1	1%	0	0%	0	0%	0	0%	0	0%
cariës n.o.s.	197	19%	14	10%	45	20%	13	20%	36	38%	13	15%	32	23%	20	16%	24	16%
fluorosis	41	4%	2	1%	3	1%	2	3%	25	26%	3	3%	4	3%	1	1%	1	1%
caries with pain	24	2%	0	0%	11	5%	2	3%	1	1%	1	1%	4	3%	4	3%	1	1%
wounds n.o.s.	5	0%	0	0%	3	1%	1	2%	0	0%	0	0%	0	0%	1	1%	0	0%
eczema n.o.s.	3	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	1%	0	0%	0	0%
dermatomycosis	44	4%	19	13%	4	2%	0	0%	1	1%	3	3%	9	6%	5	4%	3	2%
Impetigo/furunculosis	13	1%	5	3%	3	1%	0	0%	0	0%	0	0%	2	1%	3	2%	0	0%
scabies	1	0%	0	0%	0	0%	1	2%	0	0%	0	0%	0	0%	0	0%	0	0%
erysipelas / cellulites	1	0%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
wounds infected	12	1%	2	1%	0	0%	0	0%	0	0%	1	1%	4	3%	1	1%	4	3%
other (psoriasis etc)	3	0%	0	0%	0	0%	0	0%	0	0%	0	0%	3	2%	0	0%	0	0%
psychomotoric retardation	63	6%	7	5%	9	4%	2	3%	10	11%	7	8%	12	8%	11	9%	5	3%
hypertonia	2	0%	0	0%	0	0%	1	2%	0	0%	0	0%	0	0%	1	1%	0	0%
hypotonia	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
epilepsy	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
physiological murmer	3	0%	0	0%	1	0%	0	0%	0	0%	2	2%	0	0%	0	0%	0	0%
pathological murmur (suspected)	10	1%	0	0%	0	0%	0	0%	9	9%	0	0%	0	0%	0	0%	1	1%
inguinal hernia	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
urinary infection	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
new fracture	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%	0	0%	0	0%	0	0%
umbilical hernia with pain	2	0%	0	0%	2	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Table 5: Treatment among all children per geographical location

	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Iron child	174	17%	6	4%	47	21%	10	16%	10	11%	20	22%	40	28%	16	13%	25	17%
mother iron	4	0%	0	0%	2	1%	0	0%	1	1%	0	0%	1	1%	0	0%	0	0%
multivitamins	189	18%	88	62%	6	3%	13	20%	28	29%	10	11%	16	11%	13	10%	15	10%
anti-worm	429	42%	1	1%	0	0%	0	0%	23	24%	1	1%	132	93%	124	99%	148	99%
acute worm	3	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	2%	0	0%
amoxicillin	24	2%	5	3%	6	3%	2	3%	5	5%	0	0%	3	2%	3	2%	0	0%
augmentin	8	1%	4	3%	2	1%	0	0%	0	0%	0	0%	1	1%	0	0%	1	1%
second line antibiotics	7	1%	0	0%	1	0%	0	0%	0	0%	0	0%	5	4%	1	1%	0	0%
metranidazol	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
co-trimoxazol	4	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	2%	1	1%
ORS	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	0	0%	0	0%
eardrops	2	0%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	0	0%
nystatine	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%
hydrocortisone cream	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	0	0%	0	0%
dactarin cream	42	4%	18	13%	5	2%	0	0%	1	1%	2	2%	9	6%	4	3%	3	2%
dactacort cream	2	0%	0	0%	1	0%	0	0%	0	0%	1	1%	0	0%	0	0%	0	0%
fusidin cream	23	2%	6	4%	2	1%	0	0%	0	0%	1	1%	6	4%	4	3%	4	3%
iodine	3	0%	2	1%	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
griseofulvin	26	3%	3	2%	4	2%	0	0%	5	5%	3	3%	6	4%	1	1%	4	3%
eyedrops	7	1%	2	1%	0	0%	2	3%	1	1%	1	1%	0	0%	0	0%	1	1%

Table 6: Selected treatment per geographical location 2011 and 2012

2012	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
iron child	174	17%	6	4%	47	21%	10	16%	10	11%	20	22%	40	28%	16	13%	25	17%
mother iron	4	0%	0	0%	2	1%	0	0%	1	1%	0	0%	1	1%	0	0%	0	0%
multivitamins	189	18%	88	62%	6	3%	13	20%	28	29%	10	11%	16	11%	13	10%	15	10%
anti-worm	429	42%	1	1%	0	0%	0	0%	23	24%	1	1%	132	93%	124	99%	148	99%
acute worm	3	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	2%	0	0%
2011	Total				Joy Springs		Makarios home		Naiwasha		School Nyeri				St George		St Paul	
	1064				Total	=383	Total	=81	Total	123	Total	118			Total	122	Total	=72
iron child	239	22%			96	25%	18	22%	9	7%	22	19%			51	42%	15	21%
mother iron	6	1%			2	1%	0	0%	1	1%	1	1%			0	0%	0	0%
multivitamins	181	17%			35	9%	16	20%	36	29%	16	14%			24	20%	4	6%
anti-worm	544	51%			13	3%	11	14%	114	93%	98	83%			108	89%	70	97%
acute worm	16	2%			0	0%	0	0%	5	4%	0	0%			10	8%	1	1%

Table 7: Follow-up of all children per geographical location

	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Dentist	11	1%	0	0%	7	3%	1	2%	0	0%	1	1%	0	0%	0	0%	2	1%
Specialist in hospital	13	1%	2	1%	3	1%	0	0%	3	3%	0	0%	3	2%	2	2%	0	0%

1: Growth abnormality and malnutrition:

Malnutrition has been related to poor cognitive and school performance. There is strong evidence to suggest that malnutrition places children under the age of five 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 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.

It has to be noted that reference data are only available for certain heights, weights and ages (as specified above), leading to the general prevalence's of growth abnormalities of being underweight 10%, stunting 16 % and wasting 6 %

Analysis of the nutritional status shows significant differences among the locations visited.
Within the children assessed, it is unknown how many children exactly have HIV related weight loss (wasting syndrome) since in only 19 children (2%) HIV positivity was reported which seems an underestimation.

In Imani Children's Home we found a high prevalence of growth abnormalities (underweight 39%, stunting 58%, wasting 12%). This finding is (partly) due to the poor composition of the food with a lack of sources of vitamins and a lack of fat.
The lack of staff who takes care for feeding the small children can be an additional reason for these findings.
The higher percentage of growth abnormalities in Naiwasha (underweight 15%, stunting 23%, wasting 9%) is a reflection of the selection of the vulnerable children which are supported by the local organisation Monica Memorial Development Centre for Needed Children (Mmemo).
At Makarios Home we only found stunting in the children older than ten years of age. This seems a refelection of the selection of children living in Nyeri orphage (orphans, streetchildren, children from prison, children with AIDS etcetera) which were not well taken care for at a younger age.
Striking is the fact that although the background of the younger children is the same as the older children, the children younger than 10 years of aghe did not have any growth disturbance which reflect the enourmous importance of a well designed supporting plan for children at a young age including a good and balanced diet.

Table 8: Prevalence of weight/age at or under P3 (underweight) per geographical location by age and gender *(measurable up to10 years of age)*

	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Underweight	100	**10%**	56	39%	5	2%	3	12%	13	15%	6	8%	5	4%	5	4%	7	5%
No underweight	874	90%	87	61%	218	98%	23	88%	75	85%	72	92%	137	96%	119	96%	143	95%
Unknown	58	6%	0	0%	1	0%	38	59%	7	7%	11	12%	0	0%	1	1%	0	0%
per age																		
<=1	24	33%	22	42%	0	0%	0	0%	2	25%	0	0%	0	0%	0	0%	0	0%
>1 en <5	41	15%	30	56%	2	3%	1	33%	3	13%	0	0%	1	5%	2	4%	2	4%
<5	65	19%	52	49%	2	3%	1	33%	5	16%	0	0%	1	4%	2	4%	2	4%
>=5 en <=10	35	6%	4	11%	3	2%	2	9%	8	14%	6	10%	4	3%	3	4%	5	5%
per gender																		
Boy	70	13%	43	54%	3	2%	2	11%	9	17%	3	8%	3	4%	3	5%	4	6%
Girl	30	7%	13	21%	2	2%	1	13%	4	12%	3	7%	2	4%	2	3%	3	4%

Table 9: Prevalence of length/age at or under P3 (stunting) per geographical location by age and gender
(measurable up to19 years of age)

	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Stunting	166	**16%**	83	58%	5	2%	14	26%	22	23%	5	6%	11	8%	12	10%	14	9%
No stunting	849	84%	60	42%	219	98%	39	74%	73	77%	80	94%	131	92%	112	90%	135	91%
Unknown	17	2%	0	0%	0	0%	11	17%	0	0%	4	4%	0	0%	1	1%	1	1%
per age																		
<=1	44	60%	37	70%	1	25%	0	0%	5	63%	0	0%	1	25%	0	0%	0	0%
>1 en <5	55	20%	38	70%	1	2%	0	0%	5	21%	0	0%	2	11%	6	12%	3	6%
<5	99	28%	75	70%	2	3%	0	0%	10	31%	0	0%	3	13%	6	12%	3	6%
>=5 en <=10	50	8%	8	22%	3	2%	3	13%	8	14%	3	5%	8	7%	6	8%	11	11%
>10	17	40%	0	0%	0	0%	11	41%	4	57%	2	29%	0	0%	0	0%	0	0%
per gender																		
Boy	102	19%	56	70%	2	2%	6	20%	12	21%	3	7%	9	11%	9	15%	5	7%
Girl	64	14%	27	43%	3	3%	8	35%	10	26%	2	5%	2	4%	3	5%	9	12%

Table 10: Prevalence of weight/length at or under P3 (wasting) per geographical location by age and gender
(measurable up to 1.20m)

	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Wasting	43	**6%**	15	12%	4	3%	1	7%	6	9%	3	7%	6	7%	2	2%	6	5%
No wasting	684	94%	114	88%	141	97%	14	93%	59	91%	42	93%	81	93%	122	98%	111	95%
Unknown	305	30%	14	10%	79	35%	49	77%	30	32%	44	49%	55	39%	1	1%	33	22%
per age																		
<=1	11	15%	10	19%	0	0%	0	0%	1	13%	0	0%	0	0%	0	0%	0	0%
>1 en <5	13	5%	5	9%	0	0%	1	33%	3	13%	0	0%	1	5%	1	2%	2	4%
<5	24	7%	15	14%	0	0%	1	33%	4	13%	0	0%	1	4%	1	2%	2	4%
>=5 en <=10	19	5%	0	0%	4	5%	0	0%	2	6%	3	10%	5	8%	1	1%	4	6%
>10	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
per gender																		
Boy	25	6%	11	15%	2	2%	1	11%	5	14%	1	4%	1	2%	1	2%	3	5%
Girl	18	5%	4	7%	2	3%	0	0%	1	4%	2	10%	5	16%	1	2%	3	5%

During the medical check-ups, we paid again attention to issues of hygiene and nutritional advise. We emphasised on hand-washing, vitamin C, fruit and vegetable intake, so the children may grow healthy and strong. We noticed the policy of mothers to feed their babies up to the age of one year or even more, sourly only with breast milk. 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. This is one the strongest arguments of MCC to link up and cooperate with other organisations, like SFFC, facilitating/paying for school lunches.

2: <u>Anaemia:</u>
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 which, through integrative interventions, addresses the various factors that play a significant role in producing anaemia in a given community. 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.

Anemia was diagnosed in 24% of all checked children. We treated these children with anaemia (and their mothers if they were breast fed) with supplements for three months. If we suspected a vitamin deficiet and/or an infection we gave multivitamins instead of iron supplements.

Table 11: Prevalence of anaemia per geographical location by age and gender in 2012

2012	Total		Imani		Joy Springs		Makarios home		Naiwasha		School Nyeri		St Clemens		St George		St Paul	
	1032		Total	=143	Total	=224	Total	=64	Total	=95	Total	=89	Total	=142	Total	=125	Total	=150
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Anaemia	251	**24%**	47	33%	53	24%	15	23%	16	17%	25	28%	45	32%	19	15%	31	21%
No anaemia	776	75%	96	67%	170	76%	49	77%	79	83%	63	71%	96	68%	104	83%	119	79%
Unknown	5	0%	0	0%	1	0%	0	0%	0	0%	1	1%	1	1%	2	2%	0	0%
Hb <5,0 mmol	**5**	0%	0	0%	0	0%	0	0%	1	1%	0	0%	1	1%	3	2%	0	0%
per age																		
<=1	34	47%	25	47%	3	75%	0	0%	3	38%	1	25%	2	50%	0	0%	0	0%
>1 en <5	69	25%	18	33%	15	23%	0	0%	5	21%	3	27%	7	37%	9	17%	12	26%
<5	103	30%	43	40%	18	26%	0	0%	8	25%	4	27%	9	39%	9	17%	12	26%
>=5 en <=10	138	22%	4	11%	35	23%	9	39%	7	13%	18	29%	36	30%	10	14%	19	18%
>10	10	18%	0	0%	0	0%	6	16%	1	14%	3	27%	0	0%	0	0%	0	0%
per gender																		
Boy	137	25%	26	33%	29	24%	9	27%	10	18%	10	23%	28	33%	10	16%	15	21%
Girl	114	24%	21	33%	24	24%	6	19%	6	15%	15	33%	17	30%	9	14%	16	21%

Table 12: Prevalence of anaemia per geographical location by age in 2011

2011	Total				Joy Springs		Makarios home		Naiwasha		School Nyeri				St George		St Paul	
	1064				Total	=383	Total	=81	Total	=123	Total	=118			Total	=122	Total	=72
	N	%			n	%	n	%	n	%	n	%			n	%	n	%
Anaemia	322	31%			112	30%	22	28%	19	15%	32	27%			68	**56%**	16	22%
Hb <5,0 mmol	10	0,9%			4	1%	2	2,5%	0	0%	1	0,8%			0	0%	0	0%
per age																		
>=0 and <1	5	31%			0	0%	0	n.a.	1	50%	1	20%			1	100%	0	0%
>=1 and <5	95	41%			19	31%	3	50%	4	24%	11	55%			33	56%	3	20%
>=5 and <12	180	29%			82	30%	11	37%	11	13%	13	21%			34	55%	13	24%
>=12 and <18	39	22%			11	25%	8	19%	3	14%	7	23%			0	n.a.	0	0%

In five children the Haemoglobin level was less than 5.0 mmol/l. Three of these children were referred to a Hosptal because all three suffered from a Sickle cell crisis. The Sophia Foundation paied for their clinical treatment. The parents of these children were informed about the medical condition and what they should do to prevent such a crisis in the future.

When it comes to the prevention of anaemia, the vitamin C intake is important because vitamin C facilitates the uptake of iron in the gut (as milk counterparts it). Cheap and available sources for vitamin C in Kenia are lemon and passion fruit.
For babies, we advised exclusive breastfeeding up to six months, then start with the introduction of additional foods. Four mothers of breastfed, anaemic babies were treated with iron supplementation for three months.

In 2011 St George school the food program was very effective treating protein-energy malnutrition, but less successful to iron deficient anaemia (anaemia in 2011 in St George was 56%). We discussed our findings with SFFC, the sponsor of the foodprogram and in 2012 and the program was changed. In 2012 only 15% of the children was anaemic (far less than at other locations). The prevalence of 33% anamia at Imani Children's Home should be addressed through close evaluation of the food-based strategy, especially dietary diversification with close attention to and vitamin C containing food and not giving milk togetjher with the food.

3: Worm treatment: (prophylactic 42%, 544/1064; therapeutic 3 children, 0%)
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 in Kenia is around 19% and hookworm 8%. The incidence/prevalence of Taenia Saginata (tape worm) is not known.

Table 13: Frequency of handing out preventive anti-worm treatment and treatment for a suspected acute worm infection

2012	**Total**		**Imani**		**Joy Springs**		**Makarios home**		**Naiwasha**		**School Nyeri**		**St Clemens**		**St George**		**St Paul**	
	1032		**Total**	**=143**	**Total**	**=224**	**Total**	**=64**	**Total**	**=95**	**Total**	**=89**	**Total**	**=142**	**Total**	**=125**	**Total**	**=150**
preventive anti-worm	429	42%	1	1%	0	0%	0	0%	23	24%	1	1%	132	93%	124	99%	148	99%
acute worm treatment	3	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	2	2%	0	0%
2011	**Total**				**Joy Springs**		**Makarios home**		**Naiwasha**		**School Nyeri**				**St George**		**St Paul**	
	1064				**Total**	**=383**	**Total**	**=81**	**Total**	**123**	**Total**	**118**			**Total**	**122**	**Total**	**=72**
preventive anti-worm	544	51%			13	3%	11	14%	114	93%	98	83%			108	89%	70	97%
acute worm treatment	16	2%			0	0%	0	0%	5	4%	0	0%			10	8%	1	1%

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%. Table 13 shows the frequency of worm treattment of the children checked in this years mission in the last six months. St Paul and St George waited untill the medical check of MCC to give the half yearly medication. In St Clemens school it is not yet clear if a good working de-worming program exists.

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. Pre- and non- school children got a anti-worm tablet and explanations why and when this treatment should be taken.
Simple ways of improving personal hygiene and sanitation through hand washing, nail trimming, wearing of shoes and use of a latrine and clear water supplies were encouraged.
Although all members of a population can be infected by worms, those who are at most risk and would benefit most from preventive interventions are the pre-school and school age children.

4: Pneumonia: (32; 3%) (see table 4)
The 32 children with a severe acute respiratory infection (ARI) were treated with appropriate antimicrobials and home treatment advice.
"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).
For doctors working in Europe it is amazing how few children have asthma in Kenia. We only saw six children with symptoms of astma/bronchits/BHR. We referred one child to the Riruta clinic for additinal anti-asthma drugs because of the severity of the complains.

The principles of the Integrated Management of Childhood Illness (IMCI, see www.who.int/child-adolescent-health/integr.htm) (respiratory rate of 50 breaths per minute or more in a baby of two months up to 12 months, and 40 breaths per minute or more in a child of 12 months up to five years, lower chest wall indrawing and stridor which is a harsh noise made when the child inhales) for recognition and treatment of pneumonia were transferred to the teachers and caretakers.

5: Cardial problems: (10; 1 %) (see table 4)
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 ten children of having a pathological heart murmur. The children and their care takers with the suspected pathological heart murmurs 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.
One child in Naiwasha with a known cardial problem needed a referral to his specialist in the Coptic Hospital in Nairobi which was arranged by SFFC.

6: Skin diseases: (see table 4)
In respect to skin diseases we saw children with dermatomycoses (tinea capitis), eczema, wounds (burns and infectend wounds) but hardly any scabies and lice.
Antifungal cream (eventually in combination with hydrocortison) was given for fungal infections (dermatomycosis) and hydrocortison crème was given for different forms of dermatitis. We did treat the children with severe or infected forms of tinea capitis with griseofulvin. In comparisson with 2010 the incidence of tinea capitiis in this selected population seemed to have dropped (10% in 2010to 3% in 2012).

7: Eye problems:
This year we hardly diagnosed any eye problem. Only nine children were diagnosed with a keratoconjunctivitis.
Especially in the group of children above five years of age a rather common complaint was dry and/or painful eyes. Xerophtalmia can be attributed to Vitamin A deficiency. Vitamin A deficiency effect growth, the differentiation of epithelial tissues and immune competence. The most dramatic impact, however is on the eye and includes night blindness, xerosis of the conjunctiva and cornea and ultimately corneal ulceration and necrosis of the cornea. Vitamin A deficiency occurs when body stores are exhausted and supply fails to meet the body's requirements, either because there is a dietary insufficiency, requirements are increased, or intestinal absorption, transport and metabolism are impaired as a result of conditions such as diarrhoea. The most important step in preventing Vitamin A deficiency is insuring that children's diets include adequate amounts of carotene containing cereals, tubers, vegetables and fruits. We treated children with painful eye's with extra vitamin suppletion and eyedrops.

8: Dental: (caries not otherwise specified: 19%; painful caries: 2%; flurosis:4%; see table 14))
In general, a high caries prevalence was found.
Unfortunately this year a dentist was not part of the MCC carroussel. Only the 11 worst case children were send to a local dentist which was paided by either SFFC or by individual MCC team members. The other children with cariës were told to go to the dentist themselves. After the medical check local volunteers gave out toothbrushes and educated the people in teethbrushing.

In Naiwasha, as in former years, a striking high prevalence of flurosis was found (26%) suggesting a contamination of water sources with fluor.

Table 14: Prevalence of dental problems

2012	**Total**		**Imani**		**Joy Springs**		**Makarios home**		**Naiwasha**		**School Nyeri**		**St Clemens**		**St George**		**St Paul**	
	1032		**Total**	**=143**	**Total**	**=224**	**Total**	**=64**	**Total**	**=95**	**Total**	**=89**	**Total**	**=142**	**Total**	**=125**	**Total**	**=150**
cariës n.o.s.	197	19%	14	10%	45	20%	13	20%	36	38%	13	15%	32	23%	20	16%	24	16%
fluorosis	41	4%	2	1%	3	1%	2	3%	25	26%	3	3%	4	3%	1	1%	1	1%
caries with pain	24	2%	0	0%	11	5%	2	3%	1	1%	1	1%	4	3%	4	3%	1	1%
2011	**Total**				**Joy Springs**		**Makarios home**		**Naiwasha**		**School Nyeri**				**St George**		**St Paul**	
	1064				**Total**	**=383**	**Total**	**=81**	**Total**	**=123**	**Total**	**=118**			**Total**	**=122**	**Total**	**=72**
cariës n.o.s.	216	20%			68	18%	24	**30%**	39	32%	18	15%			19	16%	11	15%
fluorosis	52	5%			10	3%	4	5%	31	25%	2	2%			3	2%	1	1%
caries with pain	66	6%			31	8%	1	1%	9	7%	3	3%			7	6%	8	11%

9: Stomach ache and other gastrointestinal complaints

During our health checks we encounter a huge amount of (older) schoolchildren with complaints of stomach pain (no exact data available). In the absence of weight loss, bloating or fever these pains could be stress induced. Pressure on adolescents to succeed academically is well known in Nepal, along with problems at home.

Data on milk products sensitivity, gastritis or peptic ulcers are currently lacking as well as the prevalence of Helicobacter pylori bacteria which has an overall higher incidence in an urban population compared with a rural population.

We also noticed a lot of children who have complains about constipation, leg cramps and headaches (no exact data available). These complaints can be due of the habit of drinking too little. We noticed the normal drinking habit of schoolchildren consists of drinking only one or two cups a day while they need at least a litre a day. We explained the children and their caretakers how and why they should change their drinking habits.

Two children with intermittend belly pain due to a (partial) bowel obstruction in a hernia umbilicalis were, after consulting their parents if they were willing to let their children underwent an operation, to the surgeon at the Coptic Hospital. The costs wil be covered by either SFFC or Archbishop Makarios.

10: Ear-Nose-Throat (ENT) (see table 4)

The prevalence of acute ear infections was comparable with the prevalence in the Netherlands.

Although in the Netherlands treatment of middle ear infections with antibiotics is discouraged, in Africa it still has a big impact in preventing deafness.

Effective initiatives for better hygiene and nutrition will play a part in diminishing chronic ear infections and their complications.

Two children with a adenotonsillitis which was already seen in 2011 were rerred to the Coptic Hospital for an operation. Costs willl be covered by Archbishop Makarios.

Education health workers, caretakers and other local helpers:

One of the important tasks of MCC is to encourage the continuation of health education of the caretakers and older children. During our week we talked about common diagnoses of frequent illnesses and medication. We especially focused on anaemia and malnutrition, balanced diet, infection, parasites and failure to thrive. We focused on nutritious food and vitamins , as well as hygienic and health promotion issues.

Future medical needs:

- The children in the locations visited need more clean water for drinking and hygiene purposes. Especially providing a source of clean drinking water at the schools is important for lessons in hygiene and for giving the children a source of save drinking water when they are at school.
- It is important to stress the importance of regular (six monthly) de-worming of all children up to fourteen year of age.
- In all locations visited, there is a strong need for comprehensive and systematic health promotion and preventive measures. Special emphasis needs to be put on personal hygiene (starting with the importance of hand washing with soap), dental care, good eating habits and nutritious food.
- There is a need to transfer information about health promotion and preventive measures to the mothers/caretakers of the children as well as knowledge of the alarming medical symptoms in children so they can find medical help in time.
- There is a need to find a method for keeping relevant medical information with the child (like the need of antibiotics before dental extraction in children with a cardial septal defect).

The Sophia Foundation for Children is making a good start with trying to establish a pattern for follow-up.

-More information about the water supplies in Naivasha and investigations into the possible correlation between the quality of this water and the incidence of heartproblems and dental fluorosis in this area are needed.

-To fight the growth abnormalities in the children in Imani Children's Home a good and balanced diet should be given with enough fat and vitamins. The Sofia Foundation for Children is willing to support the staff of Imani Children's Home with knowledge about a balanced diet and a program to improve the food intake in todlers without enough adult care takers.

-Children at school should be save. Therefore it is important to find ways to prevent any hitting or whats so ever at schools.

Last words:

Once Africa gets into your heart she will never let you go. Both teamleaders, Nadine after joining Medical Checks for Children in 2010 for the first time as a team member and in 2011 leading the missions to Nairobi and Kenia West and Karlien after the explorative mission in 2008 and leading the MCC team in Nairobi in 2010 and 2011 and the mission team in Kenia West, feel very fortunate to be able to come back to Nairobi for another MCC mission.

It has been a memorable mission in the lives of all the team members.
We will not forget Cliff, happily running around on his special shoes, nor Denis, sick and half sided paratic because of a Scickle cell crisis when he was three years of age. Nor will we forget Susan from Nawaisha after het heart operation in 2009 sponsored by the Emile Nieuwendijk Foundation she is a vived beautiful girl who clings at our side from the minute we arive. We were deeply toughed by the other Susan from Naiwasha, 12 years old with the dead in het eyes because an end stage hepatic failure after multiple Sickle cell crises with multiple blood transfusions. We were impressed by the work the Sofia Foundation did at Makarios Home and inspired how people from different backgrounds and with different goals in life can form a close unit when the common goal is to help children.

Special thanks go to all the members of the Sophia Foundation: to Marina Shakola and Dr Matheos Demetriades who prepared the medical checks and whose company we missed during our week in Kenia and to Nopi Nicolaou Telemachou and Panajota Panajotis who took care of us as if we where their own babies and last but certainly not least thanks to Archbishop Makarios who's support was essential in many ways to make this mission a success.

Nadine van Dijk, organization-end-responsible MCC mission Nairobi, Kenia 2012
Karlien Bongers, medical-end-responsible MCC mission Nairobi, Kenia 2012

Amsterdam, September 2012

Appendix A: Medication	units	Stock 2011	exp.date	ordered	exp. date	Total stock mission 2012	End missie	used	Left for KeWe12	Composition
1=Iron syrop	5 liters			5liter	Oct-13	5	5 liter	0	5 liter	each 5 ml Ferrous Sulphate 100 mg, vitB1 1.5mg, vitB2 1 mg, vit B6 2 mg, Niacinamide 5 mg,
1=Iron tablets		40000	July-14	55000	Nov-14	95.000	56.000	39.000	56.000	Ferrous Sulphate 200 mg=40 mg iron
2=Multivitamine syryp	100 ml	5100			Aug-12	933	606	327	606	5 ml : vitB1 1mg, vitB2 1 mg, vit B6 0.5 mg, vitA 1600IU, vitD3 100 IU, Niacinamide 15 mg,
2=Multivitamine tablets		35000	Mar-13	16000		51000	43.000	8000	43.000	vitA 2500IU, vitD 300IU, Thiamine 1 mg, Riboflavin 0.5 mg, Nicotinamide 7.5mg, Ascorbic Acid 15 mg
3/6=Albendazole 200 mg		4100	Oct-14		Oct-14	4100	3000	1100	3000	
3/6=Albendazole 400 mg				200		0	0	0	0	
3/6=Mebendazol 100 mg				2000	May-14	2000	2000	0	2000	
7=Praziquantel 600 mg		100	Oct-12	0	Dec-12	100	100	0	100	
10=Amoxycilline 125 mg	100 ml	40		25	Aug-13	65	38	27	38	
10=Amoxycilline 250 mg	tabl	1200			Dec-13	2600	2000	600	2000	amoxy 250 tabl
10=Amoxycilline 500 mg	tabl					0	0	0	0	
11=Amoxycilline/clavulan acid syrup	70 ml	49	Oct- 2012		Oct-12	49	39	10	39	228 mg/5 ml 200mg Amoxy & 28.5 mg clavulan
11=Amoxycilline/clavulan acid 250/125	tabl					0	0	0	0	
11=Amoxycilline/clavulan acid 500/125	tabl			140	Sep-2014	140	240	100	240	
12=Erythromycine susp 125 mg/5 ml	100 ml	20		geen		20	21	1	21	each 5 ml 125 mg erythromycine
12=Erythromycine tabl 500 mg	tabl	73	Oct 2013		Jul-13	73	33	40	33	
12=Azithromycin 200mg/5ml	15ml	14	Oct-13	15	Sep-15	15	19		19	
12=Clarithromycin 125/5ml	70ml		Apr-14	15	apr-14	15	12	3	12	
21=Cotrimoxazol syrup	50ml	14	Jun-13	40	jan-15	54	50	4	50	Trimethoprim 40 mg, Sulphamethoxazole 200mg =240 mg/5ml
21=Cotrimoxazol 240 mg	tabl			300	jan-15	300	300	0	300	
20=Metronidazol 200 mg	tabl			1000	aug-15	1000	1000	0	1000	
Sulphameth 800mg/Trimethoprim 160	tabl			200	jan-14	200	200	0	200	
Griseofulvin 125 mg = code 60	tabl			2000	june -14	2000	1600	400	1600	
Griseofulvin 250 mg	tabl			3000	march -14	3000	2400	600	2400	
Griseofulvin 500 mg	tabl	800	Sep-13	2000	june -14	2800	2600	200	2600	
Chlorhexidine/cetrimide creme	100 gr	9	May-13			9	7	2	7	
Hydrocortison creme	15 gr	4	Aug-13	25	july -14	29	28	1	28	
Ivermectine 6 mg (brought from NL)	tabl	27	Apr-13			27	27	0	27	
Grabacin-3= fusidin	creme	29	May 2013	50	july -14	79	56	14	56	Neomycine, poymixin, bacitracin

Clotrimazole cream= daktarin	20gr	1		90	Oct-2014	91	55	36	55	
Clotrim-B=daktacort		19	Nov-13	40	Jun- 2014	59	40	19	40	
Silver Sulphadiazine	100 gr	8	Dec-13			8	7	1	7	
Chlooramf oog creme		6	Aug-12			8	5	3	5	
Bet/neomysine eye/ ear drops		139	Jul-12			139	121	18	121	
Povidon jood creme 6%	25 gr	9	Oct-12			9	9	0	9	
Povidon jood lotion 10%	500 ml	geen		20		20	15	5	15	
bottles 120 ml				100		100	100	0	100	
bottles 500 ml				100		100	100	0	100	

Appendix B: Children with special follow up: remove data when published because these are private medical data

location	MCC number	Name	Fathers name	age	height	weight	Hb		Reason for referral
StClemens	KeNa120052	Samuel	Abisa	7	117	24	7,1	2	BHR referral Riruta clinic for asthma medication (SFFC will pay)
Joysprings	KeNa121049	George	Odhiambo	7	122	22	7,4	2	Intermittant bowel obstruction in Hernia Umbilicalis (Archbishop Makarios will pay)
StClemens	KeNa120124	Grace	Agutu	5	103	16,2	7,3	2	Referred KNO Doctor ENT: chronic adenotonsillitis (Archbishop Makarios will pay)
StGeorge	KeNa120374	Jackim	Omondi	5	111	18,4	9,2	2	Referred KNO Doctor ENT (Archbishop Makarios will pay)
StGeorge	KeNa120377	Denis	Odhiambo	6	112	16,3	3,8	2	Sikkle cell anaemia; stroke at age of 3 years, still hemiparesis Right side and hypertonia (SFFC will pay)
Imani	KeNa120393	Maxwell	Mbuni	0,7	45	3,3	5,5	2	Referral to surgeon in Italy, congenital malformation arms and legs (Imani will arrange)
Imani	KeNa120409	Baby	Risiki	0,3	42	4	5,9	2	Referral to surgeon in Italy, congenital malformations and gender malformation (Imani will arrange)
Naiwasha	KeNa120768	Samuel	Muiruri Karuki	4	96	15,6	5,9	2	Known in hospital with cardiac problem, not growing well, unilateral choana atresie, serious cor pulmonale, referred again (SFFC will pay)
Naiwasha	KeNa120771	Ann	Wanjiru Kinagui	11	126	19,3	2,5	2	Sikkle cell anaemia with hepatic failure, Souffle IV/VI, Hepatosplenomegalia, Referred to local Hospital for bloodtransfusion, by mistake went to Coptic Hospital (SFFC will pay)
Makarios home	KeNa120890	Daniel	Kiplagat	14	999	33,9	8,6	1	dentist in outspan hospital (SFFC will pay)
Joysprings	KeNa121049	George	Odhiambo	7	122	22	7,4	2	Intermittant bowel obstruction in Hernia Umbilicalis (Archbishop Makarios will pay)
Makarios home	KeNa120864	Alfred	Nboti	11	141	33,3	7,2	0	Hit at school
Joy Springs	KeNa120703	George	Odhiambo	7	122	22	7,4	2	Intermittant bowel obstruction in Hernia Umbilicalis (Archbishop Makarios will pay)
Naiwasha	KeNa120713	Susan	Kamau	8	112	18,7	5,0	2	Sikkle cell crisis, Splenomegalia (SFFC will pay)