Medical Checks for Children

Medical Report
Nepal SVSI 2023

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Introduction
From November 20th to November 25th 2023, Medical Checks for Children (MCC) performed a second medical camp in Chitwan and Chepang hills. The MCC team checked and treated free of cost 1117 children in 6 days.

The medical checks were organized in close cooperation with Sapana Village Social Impact (SVSI). SVSI is a non-governmental organization which aims to serve vulnerable communities in Chitwan and Chepang hills through several projects, with a focus on education, health, women empowerment, income generation and environment conservation.

The cooperation with SVSI existed out of the following (amongst others):
- Announcement of the medical camp in the different villages.
- All contacts with hospital and the medical college in Bharatpur.
- Selection of translators/local helpers.
- Ordering medication listed by MCC
- Arrangements for food, drinks and lodging of the MCC team
- Transportation of the MCC team from lodge to the villages.
- Give follow-up for the referred children: arranging hospital visits

The MCC team consisted of ten members from The Netherlands: Nadine van Dijk (medical-end-responsible and mission leader, emergency physician), Iris van de Gevel (organization-end-responsible, toxicologist), Hedwig Gosselink (education advisor), Janneke Boers (pediatric nurse), Saskia van Daalen (Pediatrician), Corne Dingemans (general practitioner), Femke ten Wolde (pediatric nurse), Wietske Boer (general practitioner), Femke van der Boon (youth doctor), Yvette van Bekkum (manager, toxicology) and Sasya Hamersveld (medical student).

Technical equipment, medical supplies and toothbrushes were brought from the Netherlands by MCC team members. Medication was ordered by SVSI in Chitwan. Transport arrangements were made by Prakash Bhatta.

The aim of the mission is to make an inventory of the health situation of the children in several places in Chitwan and Chepang hills, treat the children if necessary and to advise SVSI on the future steps to take.

Medical Checks for Children on location:
During the free of costs medical checks, the children were checked following the MCC carrousel:
1. Registration of the child
2. Measuring height and weight
3. Blood test (haemoglobin) and urine test and/or malaria test when indicated
4. Physical examination by a medical doctor
5. Giving medication (pharmacy)
6. Education on tooth brushing (a toothbrush was given to each child)
7. Enter children's files in data base.

Special attention was given to the transfer of knowledge on nutritious food, drinking habits and dental care.

Results Medical Camp in Chitwan and Chepang hills

During the second medical camp in Chitwan and Chepang hills MCC saw in total 1117 children from different locations. Most important findings are described below, and detailed tables of the findings are given in Annex A.

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

Locations / date	20-11-23	21-11-23	22-11-23	23-11-23	24-11-23	25-11-23	Total
Siddhi	174	186	0	0	0	0	360
Kaule	0	0	274	0	0	0	274
Hattibang	0	0	0	159	0	0	159
Thakaltar	0	0	0	0	194	0	194
Sapana/Malpur	0	0	0	0	0	130	130
Total	**174**	**186**	**274**	**159**	**194**	**130**	**1117**

Children and caretakers of multiple villages visited the medical camp, which were grouped into 6 locations.

In the announcement of the medical children of age below 12 years were invited to come with their caretakers. Of the 1117 children, 38% was below the age of 5 years, 48% of the children was between 5 and 10 years of age, and 14% was above 10 years old. Children below 5 years of age are considered to benefit most from a medical camp, so we were happy to see these young children and their parents visit the MCC medical camp (86% of the children was accompanied by a parent, 13% by a teacher). Further details on the ages of the children can be found in the annex.

The following findings can be highlighted:

- High prevalence of underweight (low weight for age): 30% for all children and 30% for children under 5, with the highest prevalence of underweight in Kaule of 45% for all children. Overall prevalence of underweight is equivalent to the overall prevalence of underweight in 2022 (30%).
- High prevalence of stunting (low height for age): 40% for all children, and 39% for children under 5, with the highest prevalence in Hattibang (58% for all children and 49% for children under 5) and Kaule (47% for all children and 46% for children under 5), compared to 32% for children under 5 in Nepal reported by Unicef[1]. Overall prevalence of stunting is worse than the overall prevalence of stunting in 2022, which was 34%.
- Prevalence of wasting (low weight for height): 6% for all children and 9% for children under 5, with a higher incidence in Kaule of 10% in all children and 13% for children under 5, compared to 12% for children under 5 in Nepal reported by (WHO, 2019[1]). Overall prevalence of wasting is equivalent to the overall prevalence of wasting in 2022 (10%).
- A prevalence of anaemia of 25% (overall 16% in 2022) for all children and 27% for children under 5, with a significant higher prevalence in Sapana (50% for all children and 44% for children under 5), which is even higher compared to the 44.6% anaemia reported for children

[1] https://www.who.int/data/gho/data/indicators/indicator-details/GHO/gho-jme-country-children-aged-5-years-wasted-br-(-weight-for-height--2-sd)

under 5 in Nepal by the WHO (2019[2]) and compared to the prevalence of anaemia in the Netherlands (15.5% for children under 5 (WHO, 2019[3]).

- Other frequent diagnoses: pneumonia (1%), otitis media acuta (2%), dermatomycosis (1%), impetigo/furunculosis (4%), infected wounds (2%), other skin diseases (2%), lice (12%) and scabies (2%), with the highest prevalence in Hattibang and Kaule.
- With regard to dental diagnoses: 20% of the children had caries and 3% cariës with pain. Highest prevalences were noted in Sapana (34% cariës and 12% cariës with pain).
- Most frequent treatment given to the children was deworming (43%), iron (11% of the children and 3% of the mothers), multivitamin (48%), antibiotics (3%), various cremes for skin diseases (10%).
- Only 47% of the children received deworming in the last 6-months. In Nepal a governmental program is available for deworming of children below 5 years of age, which is reflected in a higher percentage receiving deworming treatment of the children between 1 and 5 years of age, 79%.

Table 2 Highest prevalence of disease among all children per geographical location

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Underweight	331	30%	80	22%	123	45%	55	35%	41	21%	32	25%
Stunting	443	40%	130	36%	128	47%	92	58%	73	38%	20	15%
Wasting	70	6%	16	4%	27	10%	8	5%	8	4%	11	8%
Anaemia	283	25%	65	18%	59	22%	47	30%	47	24%	65	50%
pneumonia	12	1%	4	1%	6	2%	1	1%	1	1%	0	0%
bronchitis	7	1%	1	0%	2	1%	0	0%	3	2%	1	1%
BHR/asthma	4	0%	1	0%	2	1%	0	0%	1	1%	0	0%

[2] https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-anaemia-in-children-under-5-years-(-)

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Respir. Other	6	1%	1	0%	4	1%	1	1%	0	0%	0	0%
active worm infection	8	1%	1	0%	2	1%	0	0%	1	1%	4	3%
otitis media acuta	17	2%	6	2%	6	2%	1	1%	1	1%	3	2%
otitis media with effusion	22	2%	10	3%	4	1%	5	3%	3	2%	0	0%
otitis externa	2	0%	1	0%	1	0%	0	0%	0	0%	0	0%
cariës n.o.s.	225	20%	64	18%	32	12%	25	16%	60	31%	44	34%
caries with pain	32	3%	8	2%	3	1%	3	2%	3	2%	15	12%
eczema n.o.s.	18	2%	3	1%	3	1%	6	4%	3	2%	3	2%
dermatomycosis	11	1%	2	1%	4	1%	2	1%	2	1%	1	1%
Impetigo/furunculosis	43	4%	9	3%	15	5%	13	8%	6	3%	0	0%
lice	134	12%	2	1%	53	19%	41	26%	36	19%	2	2%
scabies	21	2%	5	1%	5	2%	0	0%	11	6%	0	0%
Tinea Capitis	18	2%	7	2%	3	1%	1	1%	6	3%	1	1%
wounds infected,	21	2%	6	2%	13	5%	1	1%	1	1%	0	0%
Skin other (psoriasis etc)	16	1%	4	1%	3	1%	2	1%	6	3%	1	1%
psychomotoric retardation	4	0%	0	0%	1	0%	0	0%	1	1%	2	2%
physiological murmur	12	1%	5	1%	2	1%	1	1%	1	1%	3	2%

Further details on disease and treatment can be found in the Annex.

The high prevalence of stunting in Kaule and Hattibang is concerning. Stunting is the result of chronic or recurrent undernutrition, usually associated with poor socioeconomic conditions, poor maternal health and nutrition, frequent illness, and/or inappropriate infant and young child feeding and care in early life. Stunting holds children back from reaching their physical and cognitive potential. In contrast to the high incidence of underweight and stunting in Kaule and Hattibang, the prevalence of anaemia not as high as might been expected (33% in Kaule and 30% in Hattibang).
A multi-strategy approach to target the determinants of stunting is therefore recommended. The WHO (2018)[3], published a report on how to reduce stunting in children, addressing several aspects, e.g. access to nutritious food, hygiene, clean and sufficient drinking water, proper sanitation, social protection and social safety nets, income generation programs, maternal nutrition status, etc. are given. Further actions are needed in especially in Kaule and Hattibang on how to decrease the prevalence of stunting. This might include education on nutritious food, but also actions related to improve availability of nutritious food to the groups with the highest prevalence of malnutrition. In contrast with Kaule and Hattibang, the prevalence of underweight and stunting was rather low in Sapana. However, in Sapana, a high prevalence of anaemia was noted (50% in Sapana,

[3] WHO, 2018 Reducing stunting in children: equity considerations for achieving the Global Nutrition Targets 2025. https://apps.who.int/iris/bitstream/handle/10665/260202/9789241513647-eng.pdf

compared to 25% overall). This high prevalence is concerning and needs further investigation. Initial thoughts are that due to better economic circumstances, not the best food choices are made. Further emphasis should be given towards a healthy diet, reducing chips and cookies in the diet, and eating more fruits and vegetables; this will improve health and the physical condition, but will also reduce the prevalence of dental caries.

The high prevalence of caries and carries with pain in all villages, but especially in Thakaltar and Sapana/Malpur needs further attention, with further education on good dental care but also some specialized dental care.

Several children will be referred to the National City Hospital in Bharatpur.
During the medical camp 1 child with a severe third degree burn of the foot was treated with debridement and dressings on the spot and was referred to hospital for follow up. Another child with a clinical suspicion of Tuberculosis was also referred directly. One child was referred with a cardiac murmur who was diagnosed with a ventricular septum defect (a birth defect of the heart in which there is a hole in the wall (septum) that separates the two lower chambers (ventricles) of the heart). Further follow-up will be given in close collaboration with Gangalal Hearth Hospital in Kathmandu. Other children who will need follow-up will be referred in the months after the medical camp (one hydrocele for urology, 3 children with eye problems and Hb checks in 3 months). Also, we identified children who need special attention due to their home situation or psychomotoric retardation. These children will be discussed in our meetings with SVSI to monitor them and in case of problems try to decide on available options to ensure the child's bests wellbeing. 4 children with specific problem will be discussed in the Netherlands with specialists on the subjects to ensure the best way forward in these specific medical situations.

Some additional inventories were made during the medical camp. The results of these inventories are given below.

Table 3 Children with and without birth certificate per geographical location

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	367		Total= 79		Total= 124		Total= 62		Total= 54		Total= 48	
	N	%	n	%	n	%	n	%	n	%	n	%
With birth certificate	206	56%	33	42%	58	47%	29	47%	41	76%	45	94%
Without birth certificate	161	44%	46	58%	66	53%	33	53%	13	24%	3	6%

According to the data of UNICEF, 77% of the people in Nepal have a birth certificate. Based on the inventory made, significant lower people in the Chepang hills seem to have a birth certificate, with lowest percentages in Siddhi, Kaule and Hattibang (42%, 47% and 47%). Having a birth certificate is considered critical for various reasons, such a government services, access to healthcare and education, but also protection against early marriage.

To get a further insight in the age of mothers, mothers attending the medical camp were asked their age when their first child was born. The results are given in the table below.

Table 4 Age of mothers when first child was born per geographical location.

	Total	Siddhi	Kaule	Hattibang	Thakaltar	Sapana
	367	Total = 79	Total = 124	Total = 62	Total = 54	Total=48
Minimum Age – first born	10	10	15	15	14	16
Maximum Age – first born	49	49	35	31	36	30
Mean Age- first born	19	20	19	19	19	21

What is already know on this subject[4] is that in developing countries, short birth intervals are prevalent and mostly unintended. Nepal is predominantly a patriarchal country with diversified cultural and religious practices. Limited qualitative works suggests gender disparity is high, and women often do not have full control of their own reproductive life. Indeed, the median age at marriage increased by only 1 year during the past decade from 16.6 years in 2001 to 17.5 years in 2011. The early marriage is usually followed by the first childbirth without much delay. The median maternal age at first birth is 20.2 years. This is confirmed by our data that shows a similar mean age.

In addition, mothers were asked were they delivered, in a clinic, with help of a midwife or at home with help of family.

Health facility delivery is one of the essential strategies to improve maternal health and reduce the risk of maternal and child morbidity and mortality. The increment in health facility delivery is essential for reducing maternal death from pregnancy complications. Delivery in a health facility also ensures safe birth and increases the survival of mothers as well as newborn.

[4] https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2016.00205/full

Table 3 Children with and without birth certificate per geographical location

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	367		Total= 79		Total= 124		Total= 62		Total= 54		Total= 48	
	N	%	n	%	n	%	n	%	n	%	n	%
Delivery in clinic	152	41%	43	54%	17	14%	38	61%	11	20%	43	90%
Delivery with midwife	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Delivery at home (family)	215	59%	36	46%	107	86%	24	39%	43	80%	5	10%

None of the mothers reported to have got midwife assistance during delivery. In Kaule and Thakaltar most mothers deliver at home, while the mothers coming to Sapana School and Hattibang mostly deliver in a clinic.

In our questionary 59% of the mothers delivered at home and this percentage was even higher in Kaule 86%) and Thakaltar (80%), in the Chepang hills. The high percentage of home deliveries is concerning as it is a risk factor for maternal and child health. Addressing this problem is not easy and multifactorial as it involves not only education and birth care but also needs governmental involvement in ensuring there are health care facilities available where safe delivery can take place.

As the Government of Nepal has promoted safe motherhood through incentives such as free delivery care and transportation incentives scheme for women of poor households for delivering in a health facility, cooperation with governmental agencies in Kaule and Thakaltar is of the utmost important to try to change this practice.

An inventory of child mortality was made under the mothers attending the medical camp. No calculation of under 5-year child mortality can be made, as we need for this the yearly birth and mortality data. However, it was questioned how many children died before the age of 5 and in additional their total number of living children.

Table 4 Age of mothers when first child was born per geographical location

	Total	Siddhi	Kaule	Hattibang	Thakaltar	Sapana
	367	Total = 79	Total = 124	Total = 62	Total = 54	Total=48
Child mortality < 5 years	107	8	45	27	18	9
Total children	862	162	368	128	127	77
Child mortality percentage	11%	5%	11%	17%	12%	10%
Mean number of children per mother (min-max)	2	2 (1-5)	3 (1-12)	2 (1-6)	2 (1-8)	2 (1-6)

Child mortality seems to be highest in Kaule, Hattibang and Thakaltar. It is not sure if data from Siddhi are accurate, as this was the first day of the medical camp, and the administrator was a bit hesitant to ask the questions on child mortality.

From this circumstantial evidence together with the high rate of home deliveries, it seems evident that birth care should be a focus for SVSI for the future.

Conclusions and recommendations

Based on the number of children visiting the medical camp and the observations made, it seems that there is certainly a need for accessible and high-quality healthcare for children in Chepang hills. Several recommendations can be made for the future.

1. Malnutrition
Significant malnutrition is observed in the Chepang hills, especially in the Kaule and Hattibang. MCC sees rarely this high prevalence in any of our medical camps. Also compared to more general data from UNICEF on malnutrition in Nepal, the recorded values for weight and height compared to age are very low. Therefore, there is an urgent need to address malnutrition in Kaule and Hattibang.
Food security depends on 2 main pillars. First, knowledge building on nutritious food to understand which foods are important to stay healthy and strong. Second, access to nutritious food, so having enough money or resources to grow or buy different kinds of food, which is highly dependent on the economic situation of the families. It is advised to make further investigations on the local food situation (food availability, knowledge, and agriculture situation) in the villages and evaluate the present school lunch on its nutrients, based on which further actions can be considered. This might be done through cooperation with existing initiatives, from the Nepali Government with the world food program, but is also advised to work together NGO's working in the field (like the Green Food Foundation or others) to improve the knowledge (education) and availability of food in the Chepang hills, with a focus on Kaule, Siddhi and Hattibang. Aim should be to build a sustainable plan to reduce malnutrition in these villages.

2. Deworming
In Nepal, deworming programs are in place, however, only for the children younger than of 5 years and not all children are reached. In villages we visited, 47% of all children received deworming treatment in the last 6 months, which was 65% for children below 5, and 34% of the children between 5 and 10 years and 38% for the children above 10 years of age. Still the question from 2022 need answering as to investigate what the reasons are for not receiving deworming treatment, and to consider connecting with governmental deworming programs, or otherwise implement a lost-cost deworming program. The numbers of 2023 are equivalent to the numbers of 2022.
According to WHO large-scale deworming is the best way to reduce the suffering caused by intestinal worms. Improving basic hygiene, sanitation, health education and providing access to safe drinking-water are also keys to resolving the health and nutritional problems caused by intestinal worms.
We therefore advise SVSI to take this point for further investigation for the next medical camp, connect with the local government, health posts and other parties involved in order to build a program and to increase the number of children reached by the local deworming program.

2. Anemia
In addition to the growth abnormalities observed, additional attention should be paid to reduce the prevalence of anemia. There are differences observed between the villages in the Chepang hills, where anemia prevalence is moderate, while in Sapana/Malpur the prevalence of anemia is high. Anemia is an indicator of both poor nutrition and poor health. With anemia the blood will have a reduced capacity to bring sufficient oxygen through the body and can make a person feel tired or weak and as a result, lower school performance in children and reduced work productivity.
The underlying cause for anemia can be different, it can either be due to a lack of sufficient and nutritious (fruits and vegetables) food, but also on the occurrence of worm infections (hygiene and

deworming related). Reducing anemia can be done by addressing the topics as given above on deworming and malnutrition.

4. Hygiene and dental care

The prevalence of caries and hygiene related diseases (worm infections, skin diseases) can be prevented by providing information about dental care and hygiene. These topics will be addressed in future medical camps but should also be addressed by SVSI in any health promotion or WASH programs in the Chepang hills. Also, in this area of attention cooperation with existing health facilities or NGOs would be a sustainable option for the future.

5. Special needs children

Like last year only a limited number of children with a psychomotoric retardation (total 5) and a few children with disabilities were seen during this first medical camp. We believe there will be more children with disabilities or psychomotoric retardation living in the villages. In future medical camps, special emphasis should be given to invite these children. In case villages are invited instead of schools, this might be communicated to the villages at an early stage and discuss their presence with the village heads or other responsible persons in the communities. Another option might be to do inventory during the year in the villages to identify these children and to understand why only a limited number visited the medical camp, and how SVIS can stimulate their presence.

We are very grateful for all work performed by Sujan, Dhruba and all others of the SVSI team and all translators of the Chitwan Medical College during the medical camp in in Chitwan and Chepang hills. We could not have performed our work without their presence and hard work.

Nadine van Dijk & Iris van de Gevel

Annex A- Detailed results

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

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
Age	**N**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
<=1 year	115	10%	26	7%	37	14%	33	21%	12	6%	7	5%
>1 and <5 years	330	30%	110	31%	99	36%	51	32%	32	16%	38	29%
<5 years	427	38%	138	38%	131	48%	76	48%	39	20%	43	33%
>=5 and <=10 years	531	48%	163	45%	132	48%	61	38%	105	54%	70	54%
>10 years	160	14%	59	16%	12	4%	22	14%	50	26%	17	13%
Gender												
Boy	532	48%	174	48%	122	45%	78	49%	94	48%	64	49%
Girl	586	52%	186	52%	153	56%	81	51%	100	52%	66	51%

Table 3: Prevalence of weight/age at or under P3 (underweight) per geographical location by age and gender

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total = 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Underweight	331	30%	80	22%	123	45%	55	35%	41	21%	32	25%
No underweight	623	56%	219	61%	138	50%	83	52%	102	53%	81	62%
Unknown	164	15%	61	17%	14	5%	21	13%	51	26%	17	13%
Underweight children per age												
<=1 year	28	24%	3	12%	13	35%	8	24%	0	0%	4	57%
>1 and <5 years	105	32%	31	28%	45	46%	15	29%	6	19%	8	21%
<5 years	126	30%	34	25%	55	43%	20	26%	6	15%	11	26%
>=5 and <=10 years	204	39%	46	28%	67	52%	35	57%	35	34%	21	30%
>10 years	1	33%	0	0%	1	50%	0	0%	0	0%	0	0%
Underweight children per gender												
Boy	152	46%	36	45%	54	44%	28	51%	17	41%	17	53%
Girl	179	54%	44	55%	69	56%	27	49%	24	59%	15	47%

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

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Stunting	443	40%	130	36%	128	47%	92	58%	73	38%	20	15%
No stunting	667	60%	229	64%	143	52%	66	42%	120	62%	109	84%
Unknown	8	1%	1	0%	4	1%	1	1%	1	1%	1	1%
Stunting children per age												
<=1 year	43	37%	4	15%	18	49%	14	42%	5	42%	2	29%
>1 and <5 years	133	41%	45	41%	46	47%	24	48%	16	50%	2	5%
<5 years	167	39%	48	35%	59	46%	37	49%	19	49%	4	9%
>=5 and <=10 years	211	40%	55	34%	64	49%	42	69%	38	37%	12	17%
>10 years	65	41%	27	46%	5	42%	13	59%	16	32%	4	25%
Stunting children per gender												
Boy	227	51%	64	49%	66	52%	47	51%	37	51%	13	65%
Girl	216	49%	66	51%	62	48%	45	49%	36	49%	7	35%

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

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Wasting	70	6%	16	4%	27	10%	8	5%	8	4%	11	8%
No wasting	748	67%	231	64%	210	77%	127	80%	108	56%	72	55%
Unknown	300	27%	113	31%	38	14%	24	15%	78	40%	47	36%
Wasting children per age												
<=1 year	10	9%	2	8%	5	14%	2	6%	0	0%	1	14%
>1 and <5 years	30	9%	6	6%	14	14%	4	8%	1	3%	5	13%
<5 years	37	9%	9	7%	17	13%	5	7%	1	3%	5	12%
>=5 and <=10 years	31	8%	6	5%	10	9%	2	4%	7	9%	6	15%
>10 years	2	29%	1	100%	0	0%	1	33%	0	0%	0	0%
Wasting children per gender												
Boy	29	41%	5	31%	16	59%	1	13%	3	38%	4	36%
Girl	41	59%	11	69%	11	41%	7	88%	5	63%	7	64%

Table 6: Prevalence of anaemia per geographical location by age and gender

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Anaemia	283	25%	65	18%	59	22%	47	30%	47	24%	65	50%
No anaemia	835	75%	295	82%	216	79%	112	70%	147	76%	65	50%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Hb <5,0 mmol	3	0%	0	0%	1	0%	1	1%	0	0%	1	1%
Anaemia per age												
<=1 year	41	36%	7	27%	7	19%	16	48%	6	50%	5	71%
>1 and <5 years	84	25%	21	19%	24	24%	15	29%	9	28%	15	39%
<5 years	115	27%	28	20%	28	21%	27	36%	13	33%	19	44%
>=5 and <=10 years	141	27%	32	20%	29	22%	16	26%	26	25%	38	54%
>10 years	27	17%	5	8%	2	17%	4	18%	8	16%	8	47%
Anaemia per gender												
Boy	143	51%	35	54%	23	39%	25	53%	25	53%	35	54%
Girl	140	49%	30	46%	36	61%	22	47%	22	47%	30	46%

Table 7 Prevalence preventive anti-worm treatment in the last half-year per geographical location by age and gender

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Anti-worm	522	47%	137	38%	103	38%	65	41%	149	77%	68	52%
No anti-worm	596	53%	223	62%	172	63%	94	59%	45	23%	62	48%
Anti-worm per age												
>1 and <5 years	262	79%	86	78%	77	78%	46	90%	24	75%	29	76%
<5 years	279	65%	91	66%	81	62%	51	67%	27	69%	29	67%
>=5 and <=10 years	183	34%	41	25%	22	17%	13	21%	78	74%	29	41%
>10 years	60	38%	5	8%	0	0%	1	5%	44	88%	10	59%

Table 8 Child with care taker at the day of the check?

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total = 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
No	11	1%	6	2%	2	1%	3	2%	0	0%	0	0%
Yes	964	86%	215	60%	273	100%	156	98%	190	98%	130	100%
Teacher	143	13%	139	39%	0	0%	0	0%	4	2%	0	0%

Table 9: Disease prevalence among all children per geographical location

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
Underweight	331	30%	80	22%	123	45%	55	35%	41	21%	32	25%
Stunting	443	40%	130	36%	128	47%	92	58%	73	38%	20	15%
Wasting	70	6%	16	4%	27	10%	8	5%	8	4%	11	8%
Anaemia	283	25%	65	18%	59	22%	47	30%	47	24%	65	50%
HIV pos.	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
AIDS	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%
syndrome n.o.s.	5	0%	1	0%	1	0%	2	1%	0	0%	1	1%
pneumonia	12	1%	4	1%	6	2%	1	1%	1	1%	0	0%
bronchitis	7	1%	1	0%	2	1%	0	0%	3	2%	1	1%
BHR/asthma	4	0%	1	0%	2	1%	0	0%	1	1%	0	0%
Respir. Other	6	1%	1	0%	4	1%	1	1%	0	0%	0	0%
acute diarrhoea	2	0%	1	0%	1	0%	0	0%	0	0%	0	0%
chronic diarrhoea	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%
diarrhoea without dehydration	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
constipation	1	0%	0	0%	0	0%	0	0%	0	0%	1	1%
active worm infection	8	1%	1	0%	2	1%	0	0%	1	1%	4	3%
otitis media acuta	17	2%	6	2%	6	2%	1	1%	1	1%	3	2%
otitis media with effusion	22	2%	10	3%	4	1%	5	3%	3	2%	0	0%
otitis externa	2	0%	1	0%	1	0%	0	0%	0	0%	0	0%
(adeno)tonsillitis	1	0%	0	0%	0	0%	0	0%	1	1%	0	0%
candida stomatitis	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
hearing impairment	3	0%	1	0%	0	0%	0	0%	1	1%	1	1%
other	3	0%	1	0%	1	0%	0	0%	0	0%	1	1%
cariës n.o.s.	225	20%	64	18%	32	12%	25	16%	60	31%	44	34%
pain n.o.s	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
caries with pain	32	3%	8	2%	3	1%	3	2%	3	2%	15	12%
wounds n.o.s.	2	0%	0	0%	1	0%	1	1%	0	0%	0	0%
eczema n.o.s.	18	2%	3	1%	3	1%	6	4%	3	2%	3	2%
dermatomycosis	11	1%	2	1%	4	1%	2	1%	2	1%	1	1%
Impetigo/furunculosis	43	4%	9	3%	15	5%	13	8%	6	3%	0	0%
lice	134	12%	2	1%	53	19%	41	26%	36	19%	2	2%
scabies	21	2%	5	1%	5	2%	0	0%	11	6%	0	0%
Tinea Capitis	18	2%	7	2%	3	1%	1	1%	6	3%	1	1%
wounds infected,	21	2%	6	2%	13	5%	1	1%	1	1%	0	0%
Burn wound fresh	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%
Skin other (psoriasis etc)	16	1%	4	1%	3	1%	2	1%	6	3%	1	1%

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
psychomotoric retardation	4	0%	0	0%	1	0%	0	0%	1	1%	2	2%
epilepsy	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%
physiological murmer	12	1%	5	1%	2	1%	1	1%	1	1%	3	2%
pathological murmur (suspected)	2	0%	0	0%	1	0%	1	1%	0	0%	0	0%
refractory problem	3	0%	0	0%	0	0%	0	0%	3	2%	0	0%
strabismus	2	0%	1	0%	0	0%	1	1%	0	0%	0	0%
keratoconjunctivitis	2	0%	0	0%	2	1%	0	0%	0	0%	0	0%
urinary infection	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
urogen other	2	0%	1	0%	1	0%	0	0%	0	0%	0	0%
artralgia n.o.s.	1	0%	0	0%	0	0%	1	1%	0	0%	0	0%
new fracture	1	0%	0	0%	0	0%	1	1%	0	0%	0	0%
skeletal other	2	0%	1	0%	0	0%	1	1%	0	0%	0	0%

Table 10: Treatment among all children per geographical location

	Total		Siddhi		Kaule		Hattibang		Thakaltar		Sapana	
	1117		Total= 360		Total= 274		Total= 159		Total= 194		Total= 130	
	N	%	n	%	n	%	n	%	n	%	n	%
ferro	123	11%	28	8%	19	7%	15	9%	21	11%	40	31%
mother iron	36	3%	3	1%	12	4%	11	7%	6	3%	4	3%
multivitamins	536	48%	157	44%	152	55%	101	64%	82	42%	44	34%
anti-worm	476	43%	194	54%	121	44%	73	46%	37	19%	51	39%
acute worm	9	1%	1	0%	2	1%	0	0%	2	1%	4	3%
anti-lice	119	11%	2	1%	46	17%	39	25%	30	15%	2	2%
anti-scabies	16	1%	4	1%	2	1%	0	0%	10	5%	0	0%
niclosamide	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
scabies soap	4	0%	0	0%	4	1%	0	0%	0	0%	0	0%
amoxicillin	27	2%	9	3%	13	5%	1	1%	2	1%	2	2%
augmentin	16	1%	6	2%	6	2%	3	2%	1	1%	0	0%
malaria treatment	1	0%	0	0%	1	0%	0	0%	0	0%	0	0%
ivermectine for lice	6	1%	1	0%	4	1%	0	0%	1	1%	0	0%
paracetamol	16	1%	1	0%	5	2%	3	2%	0	0%	7	5%
inhaler	3	0%	0	0%	2	1%	0	0%	1	1%	0	0%
metranidazol	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
co-trimoxazol	1	0%	1	0%	0	0%	0	0%	0	0%	0	0%
ORS	2	0%	1	0%	1	0%	0	0%	0	0%	0	0%
eardrops	26	2%	10	3%	7	3%	5	3%	3	2%	1	1%
mupirocine=Bactroban	3	0%	2	1%	1	0%	0	0%	0	0%	0	0%
hydrocortisone cream	13	1%	5	1%	1	0%	5	3%	1	1%	1	1%
dactarin cream	25	2%	8	2%	7	3%	2	1%	6	3%	2	2%
dactacort cream	7	1%	2	1%	1	0%	2	1%	1	1%	1	1%
fusidin cream	44	4%	7	2%	20	7%	11	7%	6	3%	0	0%
sudo cream	2	0%	0	0%	1	0%	0	0%	1	1%	0	0%
neutral cream	17	2%	3	1%	2	1%	4	3%	7	4%	1	1%
griseofulvine	2	0%	2	1%	0	0%	0	0%	0	0%	0	0%
eyedrops	3	0%	0	0%	3	1%	0	0%	0	0%	0	0%

Table 11: Follow-up of all children

Referral	n
Directly to hospital	3
To City Hosptial in Bharatpur	7
Potentially to dentist	4
Eye clinic	3
Dentist	4
Home visit / special need / social	9
Re-check Hb	5
To discuss in the Netherlands	4