

Medical Checks for Children

Medical Report Nepal SVSI 2024



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Introduction

From November 25th to November 30th 2024, Medical Checks for Children (MCC) performed a medical camp in Chitwan and Chepang hills for the third time. The MCC team checked and treated free of cost 1000 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 colleges in Bharatpur.
- Selection of translators/local helpers.
- Ordering medication listed by MCC
- Arrangements for food, drinks and lodging of the MCC team
- 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), Carolien Nijboer (pediatric nurse), Marieke Merele (Pediatrician), Elise Mouw (general practitioner), Patrick Nuyens (general practitioner), Minke Diegenback (youth doctor), Stella van 't Klooster (general practitioner) and Ester van de Belt (graphic designer).

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 carousel:

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 third medical camp in Chitwan and Chepang hills MCC saw in total 1000 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

Location	25-11-24	26-11-24	27-11-24	28-11-24	29-11-24	30-11-24	Total
Siddi	216	174	0	0	0	0	390
Kaule	3	0	209	138	0	0	350
Hattibang	0	0	0	0	191	0	191
Sapana School	0	0	0	0	0	69	69
Total	219	174	209	138	191	69	1000

Children and caretakers of multiple villages visited the medical camp, which were grouped into 4 locations.

In the announcement of the medical children of age below 12 years were invited to come with their caretakers. Of the 100 children, 25% was below the age of 5 years (28% in 2023), 51% of the children was between 5 and 10 years of age, and 16% 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 (93% of the children was accompanied by a parent, 6% 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): 31% for all children and 30% for children under 5, with the highest prevalence of underweight in Kaule and Hattibang were more than a third of the children are underweight. Overall prevalence of underweight is equivalent to the overall prevalence of underweight in 2023 (31%).
- High prevalence of stunting (low height for age): 50% for all children with stunting equally distributed between the age groups. The highest prevalence in Hattibang (57% for all children and for children under 5) and Kaule (60% for all children and 66% for children under 5), compared to 32% for children under 5 in Nepal reported by Unicef¹. Overall prevalence of stunting is higher than the years before.
- Prevalence of wasting (low weight for height): 4% for all children and 6% for children under 5, with a higher incidence in Kaule of 6% in all children and 9% for children under 5, compared to 12% for children under 5 in Nepal reported by (WHO, 2019¹). Overall prevalence of wasting is equivalent to the overall prevalence of wasting in 2022 (10%).
- A prevalence of anemia of 27% (overall 25% in 2023) for all children and 27% for children under 5, with a higher prevalence in Kaule (34% for all children and 32% for children under 5) and Hattibang (34% for all children and 37% for children under 5).
- Other frequent diagnoses: pneumonia (1%), ear infections (4%), dermatomycosis (3%), impetigo/furunculosis (4%), infected wounds (6%), other skin diseases like lice (19%) and scabies (1%), with the highest prevalence in Hattibang and Kaule. Compared to earlier years

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

we also subjectively felt that the skin problems were more frequent and needed treatment in a lot of cases.

- With regard to dental diagnoses: 27% of the children had caries and 2% caries with pain. Highest prevalences were noted in Sapana (43% caries and 4% caries with pain) and in Siddi (36% caries and 1 % caries with pain). Because of limited treatment options in the remote areas, the numbers might be even higher due to underscoring.
- Most frequent treatment given to the children was deworming (58%), iron (8% of the children and 3% of the mothers), multivitamin (56%), antibiotics (4%), various cremes for skin diseases (19%).
- Only 35% of the children received deworming in the last 6-months compared to 47% in 2023.

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

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Underweight	313	31%	102	26%	133	38%	72	38%	6	9%
Stunting	504	50%	178	46%	209	60%	109	57%	8	12%
Wasting	38	4%	10	3%	22	6%	5	3%	1	1%
Anaemia	265	27%	71	18%	119	34%	64	34%	11	16%
pneumonia (clinical)	14	1%	5	1%	8	2%	1	1%	0	0%
active worm infection	6	1%	3	1%	1	0%	1	1%	1	1%
otitis media acuta	5	1%	1	0%	3	1%	1	1%	0	0%
otitis media with effusion	14	1%	5	1%	5	1%	4	2%	0	0%
otitis externa	24	2%	8	2%	10	3%	6	3%	0	0%
cariës n.o.s.	273	27%	139	36%	64	18%	40	21%	30	43%
fluorosis	40	4%	12	3%	18	5%	6	3%	4	6%
caries with pain	18	2%	5	1%	2	1%	8	4%	3	4%
wounds n.o.s.	7	1%	1	0%	3	1%	3	2%	0	0%
eczema n.o.s.	9	1%	5	1%	2	1%	2	1%	0	0%
dermatomycosis	28	3%	12	3%	7	2%	6	3%	3	4%
Impetigo/furunculosis	37	4%	15	4%	15	4%	7	4%	0	0%
lice	185	19%	55	14%	67	19%	61	32%	2	3%
scabies	13	1%	9	2%	2	1%	2	1%	0	0%
Tinea Capitis	26	3%	5	1%	13	4%	8	4%	0	0%
wounds infected,	56	6%	16	4%	35	10%	4	2%	1	1%
Skin other (psoriasis etc)	52	5%	16	4%	11	3%	24	13%	1	1%
psychomotoric retardation	6	1%	5	1%	1	0%	0	0%	0	0%

A quick analysis was made of differences between children visiting the medical camp for the first time or for the second or third time, however, the overall group of children visiting the second time was rather small (203 children over the 6 days, and different age groups), which makes it difficult to draw conclusions.

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

Further explanation of some of the results**Malnutrition**

Like previous years 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.

A multi-strategy approach to target the determinants of stunting is therefore recommended. The WHO (2018)², 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 like discussed in 2024 and with FEMI are needed in especially in Kaule and Hattibang on how to decrease the prevalence of stunting.

We are looking forward to seeing results of the Green Food Foundation to analyse the situation for Siddi, Hattibang and Kaule and their recommendations.

Of the children seen in the medical camp 31% showed underweight, 50% stunting and 4% wasting. Especially the prevalence of stunting is high. In addition, we saw several severely malnourished children, 4 of them were immediately brought to the hospital.

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

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

Malnutrition is thought to account for one third of all deaths of children under five (UN Millennium Development Goals). Malnutrition has been related to poor cognitive and school performance. The main factors contributing to malnutrition are rural poverty, lack of sanitation, poor living conditions and a lack of intake of energy, proteins, iron and multivitamins.

² 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>

Anaemia

27% of the checked children was suffering from anaemia, and 5% (53 children) had severe anaemia (Hb < 5 mmol/L).

In the villages in the Chepang hills, the high prevalence of anaemia might be due several factors, such as the occurrence of acute worm infections (1% scored during the medical camp, which might be an underestimation) but mainly to the lack of important vitamins and minerals from fruit and vegetables in the diet.

Anaemia is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal. Haemoglobin is needed to carry oxygen and if you have too few or abnormal red blood cells, or not enough haemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body's tissues. This results in symptoms such as fatigue, weakness, dizziness, and shortness of breath, among others. The most common causes of anaemia include nutritional deficiencies, particularly iron deficiency, but also deficiencies in folate, vitamins B12 and A are also important causes. Furthermore, infectious diseases as malaria and parasitic infections are common causes.

School performance of children (and work productivity in adults) might be affected due to anaemia, which can have a future impact on social and economic development of the individual and family.

To reduce anaemia in the population, a multifactorial approach is necessary. This includes improving the nutritional status (more nutritious food) and encouraging deworming programs. Deworming in particular, see paragraph below, is the easiest and cheapest intervention that should be tackled first.

Deworming

Of all children seen during the medical camp, only 35% received deworming treatment in the last 6 months compared to 47% in 2023. 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%.

For only 1% of the children an acute worm infection was noted, but this might be an underestimation, as children or parents just don't know as they do not see the faeces of the elderly children.

The presence of intestinal parasites in a population is indicative of lack of proper sanitation, low economic standards and poor educational background. The parasite consumes the nutrients from the children they infect and worsens malnutrition and retards the physical development. There is a strong relationship between a parasitic worm infection and anaemia. The parasitic infection can also cause abdominal pain, diarrhoea, intestinal obstruction, and various other health problems. Prolonged infection affects growth, development, and educational achievements.

During the medical camp MCC provided deworming treatment to all children above 2 years of age, and who did not receive deworming treatment in the last 6 month. In total deworming treatment was provided to 579 children.

SVSI might consider taking further action to increase the general deworming status of the children in this area. All children above 2 years of age should be treated every 6 months. Several actions can be considered, such as connecting with health authorities to emphasize the needs to provide deworming treatment in this area every 6 months. If government is not providing deworming

treatment, a project might be started to provide deworming treatment at the schools, together with sharing information on hygiene and sanitation.

Referrals to hospital

In total 7 children will be referred to the National City Hospital in Bharatpur, in the months after the medical camp (inguinal hernias, umbilical hernias, cardiac investigations, severe hearing problems). Also, we identified 13 children who need special attention due to their home situation, chronic disease 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 best wellbeing.

All information of the children and caretakers was shared with SVSI during the medical camp, and an overview of all referral cases was shared with SVSI after the medical camp.

Comparison 2023 versus 2024

A comparison of some of the data of 2023 with 2024 for Kaule and Hattibang was made, at request of SVSI.

Table 3 Comparison of prevalence of disease among all children in Kaule and Hattibang in 2023 and 2024

	2023				2024			
	Kaule		Hattibang		Kaule		Hattibang	
	Total=	274	Total=	159	Total=	350	Total=	191
	n	%	n	%	n	%	n	%
Underweight	123	45%	55	35%	133	38%	72	38%
Stunting	128	47%	92	58%	209	60%	109	57%
Wasting	27	10%	8	5%	22	6%	5	3%
Anaemia	59	22%	47	30%	119	34%	64	34%
pneumonia (clinical)	6	2%	1	1%	8	2%	1	1%
active worm infection	2	1%	0	0%	1	0%	1	1%
otitis media acuta	6	2%	1	1%	3	1%	1	1%
otitis media with effusion	4	1%	5	3%	5	1%	4	2%
otitis externa	1	0%	0	0%	10	3%	6	3%
cariës n.o.s.	32	12%	25	16%	64	18%	40	21%
caries with pain	3	1%	3	2%	2	1%	8	4%
eczema n.o.s.	3	1%	6	4%	2	1%	2	1%
dermatomycosis	4	1%	2	1%	7	2%	6	3%
Impetigo/furunculosis	15	5%	13	8%	15	4%	7	4%
lice	53	19%	41	26%	67	19%	61	32%
scabies	5	2%	0	0%	2	1%	2	1%
Tinea Capitis	3	1%	1	1%	13	4%	8	4%
wounds infected,	13	5%	1	1%	35	10%	4	2%
Skin other (psoriasis etc)	3	1%	2	1%	11	3%	24	13%

Some further details on the comparison between 2023 and 2024 of data for malnutrition, anemia and deworming can be found in Annex B.

We might conclude a slight improvement of the underweight data for Kaule, which is in an indicator of malnutrition, but unfortunately slight worse data for stunting, which is an indicator of chronic malnutrition. For anemia, an increase in the number of children with low Hb was noted in 2024 compared to 2023, for most age groups of Kaule and Hattibang.

The positive change in underweight for Kaule, might be a result of the feeding program started; some improvement was noted over all age groups. However, the figures for stunting and anemia might need some more time before it improves. In addition, there are slight differences in the populations between 2023 and 2024 (we saw in 2024 more children in the age between 5 and 10 years compared to 2023), which might impact the analysis as well.

As a general comment, it might be too early to draw conclusion on the results of measures taken based on the conclusions of 2023. We might need another year of implementation of measures with emphasis on improving the quantity and quality of food and further implementation of deworming to reach all children, before actual differences can be noted.

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. For detailed comments see also our medical report from 2023.

Cooperation with existing initiatives from the Nepali Government, or with the world food program. 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. This year 64% of the children did not receive the prophylactic antiworm treatment compared to 47% in 2023. Still the same questions 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. We do feel it is of major importance to focus on this intervention which offers big gains compared to little costs.

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.

2. Anemia

In addition to the growth abnormalities observed, additional attention should be paid to reduce the prevalence of anemia which has the highest incidence in the Chepang villagers. 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. This year we noticed a rise in skin related infections not only fungal but also infected wounds and lice. Head lice infest the hair and scalp. The infestation is spread by close personal contact and possibly by shared combs, brushes, hats, and other personal items. Lice infestation usually causes severe itching in the infested area. Together with reduced hygiene, long hair and no means to wash the hair, this can result in infected wounds on the head.

In Nepal the majority of fungal cases were seen in patients who took bath once a week (53.84%), and the least cases were observed in those that practiced cleanliness regularly (12.82%). Similarly, skin infections were observed in those patients with poor innerwear and socks changing habits. All these are problems we see in the Chepang Hills. Besides that, contact with the cattle and poultry farm plays a major role in spreading fungal infections. Like all other health issues in these areas also skin infections are multifactorial. But starting with hygiene and living conditions is also the first step.

The high prevalence of caries and carries with pain in especially in Siddi and Sapana needs further attention, with further education on good dental care but also some specialized dental care. Partnering up with dental NGO's could be strategy that was implemented in the past already. Also providing schools with information and education material to implement toothbrush/toothcare projects at schools are feasible.

5. Sapana area

Sapana school is located in a region central to all the needs and vices of modern lives. For us it is a different way of medical care than in the remote areas. Children are looked after, are clean and have caring parents who in a lot of cases have enough means to provide for them.

But the burden of dental caries among children is increasing here due to consumption of sugary substances, poor oral care practices, and inadequate health service utilization not the absence of health care. We know from studies around private schools in the Barathpur area up to 68% of the children had caries with only 40% of them receiving regular checkups. We feel this is also case in the Sauraha area. Association of dental caries is found with level of education, brushing habits, sugar consumption, snack consumption bottle feeding at infancy and occupation.

As a developing country undergoing rapid urbanization, Nepal is in a transitional phase where undernutrition coexists with obesity. This is also visible in the Chitwan area where along main streets children who go to school can buy a lot of food options also the sugar and fat containing options.

We know from studies also in Bharatpur secondary schools that majority of overweight was among female students of 13-15 years age group from private school and that the numbers in public schools were much lower. Which seems logical when considering socio-economic status as a risk factor for obesity.

This means that the Sapana/Chitwan area is facing modern world health problems associated

with a different kind of malnutrition. Sugar-sweetened beverage consumption is on the rise in and the sales of total per capita volumes of packaged food – which are usually processed which in most cases increases the content of added or free sugars, saturated and trans-fat, salt and diet energy density, while decreasing protein, dietary fiber, and micronutrients. Preventing obesity requires a comprehensive approach that addresses cultural norms, raises awareness of associated health risks, and promotes the production, availability, and affordability of healthy foods.

5. Special needs children

Last year only a limited number of children with a psychomotoric retardation (total 6) and a few children with disabilities were seen during this first medical camp. This year we felt the awareness for these children due to the active role of SVSI increased! As we introduced the SVSI field coordinators to all the children with special needs during our medical camp, we hope follow-up of these children will be easier. And communities will feel safe to bring them also to future medical camps and health care facilities in general.

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 A-1: Summary of checked children per geographical location, age and gender

Age	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
<=1 year	110	11%	31	8%	50	14%	27	14%	2	3%
>1 and <5 years	252	25%	83	21%	96	27%	49	26%	24	35%
<5 years	323	32%	103	26%	128	37%	67	35%	25	36%
>=5 and <=10 years	513	51%	203	52%	174	50%	107	56%	29	42%
>10 years	164	16%	84	22%	48	14%	17	9%	15	22%
Gender										
Boy	489	49%	190	49%	168	48%	104	54%	27	39%
Girl	511	51%	200	51%	182	52%	87	46%	42	61%

Table A-2: Prevalence of weight/age at or under P3 (underweight) per geographical location by age and gender

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Underweight	313	31%	102	26%	133	38%	72	38%	6	9%
No underweight	527	53%	204	52%	172	49%	103	54%	48	70%
Unknown	160	16%	84	22%	45	13%	16	8%	15	22%
Underweight children per age										
<=1 year	23	21%	6	19%	10	20%	7	26%	0	0%
>1 and <5 years	86	34%	22	27%	44	46%	19	39%	1	4%
<5 years	96	30%	24	23%	49	38%	22	33%	1	4%
>=5 and <=10 years	216	42%	78	38%	83	48%	50	47%	5	17%
>10 years	1	25%	0	0%	1	33%	0	0%	0	0%
Underweight children per gender										
Boy	165	53%	55	54%	62	47%	45	63%	3	50%
Girl	148	47%	47	46%	71	53%	27	38%	3	50%

Table A-3: Prevalence of length/age at or under P3 (stunting) per geographical location by age and gender

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Stunting	504	50%	178	46%	209	60%	109	57%	8	12%
No stunting	493	49%	212	54%	140	40%	80	42%	61	88%
Unknown	2	0%	0	0%	0	0%	2	1%	0	0%
Stunting children per age										
<=1 year	51	46%	12	39%	26	52%	13	48%	0	0%
>1 and <5 years	136	54%	35	42%	68	71%	31	66%	2	8%
<5 years	164	51%	41	40%	84	66%	37	57%	2	8%
>=5 and <=10 years	258	50%	94	46%	100	57%	62	58%	2	7%
>10 years	82	50%	43	51%	25	52%	10	59%	4	27%
Stunting children per gender										
Boy	262	52%	89	50%	106	51%	65	60%	2	25%
Girl	242	48%	89	50%	103	49%	44	40%	6	75%

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

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Wasting	38	4%	10	3%	22	6%	5	3%	1	1%
No wasting	700	70%	245	63%	269	77%	149	78%	37	54%
Unknown	262	26%	135	35%	59	17%	37	19%	31	45%
Wasting children per age										
<=1 year	6	6%	1	3%	3	6%	2	7%	0	0%
>1 and <5 years	16	6%	2	2%	12	13%	1	2%	1	4%
<5 years	19	6%	3	3%	12	9%	3	5%	1	4%
>=5 and <=10 years	18	4%	7	5%	9	6%	2	2%	0	0%
>10 years	1	14%	0	0%	1	50%	0	0%	0	0%
Wasting children per gender										
Boy	15	39%	2	20%	10	45%	2	40%	1	100%
Girl	23	61%	8	80%	12	55%	3	60%	0	0%

Table A-5: Prevalence of anemia per geographical location by age and gender

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Anemia	265	27%	71	18%	119	34%	64	34%	11	16%
No anemia	732	73%	318	82%	231	66%	127	66%	56	81%
Unknown	2	0%	0	0%	0	0%	0	0%	2	3%
Hb <5,0 mmol	1	0%	0	0%	1	0%	0	0%	0	0%
Anaemia per age										
<=1 year	27	25%	8	26%	10	20%	8	30%	1	50%
>1 and <5 years	70	28%	14	17%	33	34%	19	39%	4	17%
<5 years	87	27%	17	17%	41	32%	25	37%	4	16%
>=5 and <=10 years	145	28%	42	21%	65	37%	32	30%	6	21%
>10 years	33	20%	12	14%	13	27%	7	41%	1	7%
Anaemia per gender										
Boy	133	50%	34	48%	58	49%	36	56%	5	45%
Girl	132	50%	37	52%	61	51%	28	44%	6	55%

Table A-6: Prevalence preventive anti-worm treatment in the last half-year per geographical location by age and gender

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Anti-worm	354	35%	140	36%	104	30%	82	43%	28	41%
No anti-worm	643	64%	250	64%	244	70%	109	57%	40	58%
Anti-worm per age										
>1 and <5 years	164	65%	35	42%	70	73%	47	96%	12	50%
<5 years	187	58%	43	42%	79	62%	52	78%	13	52%
>=5 and <=10 years	131	26%	70	34%	23	13%	28	26%	10	34%
>10 years	36	22%	27	32%	2	4%	2	12%	5	33%
Anti-worm	164	65%	35	42%	70	73%	47	96%	12	50%

Table A-7: Child with care taker at the day of the check?

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
No	11	1%	0	0%	8	2%	3	2%	0	0%
Yes	930	93%	331	85%	342	98%	188	98%	69	100%
Teacher	57	6%	57	15%	0	0%	0	0%	0	0%

Table A-8: Children checked last year?

	Total		A Siddi		B B Kaule		C Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
No	796	80%	313	80%	268	77%	174	91%	41	59%
Yes	203	20%	77	20%	81	23%	17	9%	28	41%

Table A-9: Disease prevalence among all children per geographical location

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Underweight	313	31%	102	26%	133	38%	72	38%	6	9%
Stunting	504	50%	178	46%	209	60%	109	57%	8	12%
Wasting	38	4%	10	3%	22	6%	5	3%	1	1%
Anaemia	265	27%	71	18%	119	34%	64	34%	11	16%
syndrome n.o.s.	2	0%	1	0%	0	0%	1	1%	0	0%
pneumonia (clinical)	14	1%	5	1%	8	2%	1	1%	0	0%
bronchitis	3	0%	0	0%	3	1%	0	0%	0	0%
Respir. Other	1	0%	0	0%	1	0%	0	0%	0	0%
diarrhoea without dehydration	1	0%	0	0%	1	0%	0	0%	0	0%
active worm infection	6	1%	3	1%	1	0%	1	1%	1	1%
GI other	1	0%	0	0%	1	0%	0	0%	0	0%
otitis media acuta	5	1%	1	0%	3	1%	1	1%	0	0%
otitis media with effusion	14	1%	5	1%	5	1%	4	2%	0	0%
otitis externa	24	2%	8	2%	10	3%	6	3%	0	0%
tympanic perforation	1	0%	0	0%	1	0%	0	0%	0	0%
candida stomatitis	1	0%	0	0%	1	0%	0	0%	0	0%
hearing impairment	2	0%	0	0%	2	1%	0	0%	0	0%
other	1	0%	0	0%	1	0%	0	0%	0	0%
caries n.o.s.	273	27%	139	36%	64	18%	40	21%	30	43%
pain n.o.s	7	1%	5	1%	0	0%	2	1%	0	0%
fluorosis	40	4%	12	3%	18	5%	6	3%	4	6%
caries with pain	18	2%	5	1%	2	1%	8	4%	3	4%
wounds n.o.s.	7	1%	1	0%	3	1%	3	2%	0	0%
eczema n.o.s.	9	1%	5	1%	2	1%	2	1%	0	0%
dermatomycosis	28	3%	12	3%	7	2%	6	3%	3	4%
Impetigo/furunculosis	37	4%	15	4%	15	4%	7	4%	0	0%
lice	185	19%	55	14%	67	19%	61	32%	2	3%
scabies	13	1%	9	2%	2	1%	2	1%	0	0%
Tinea Capitis	26	3%	5	1%	13	4%	8	4%	0	0%
wounds infected,	56	6%	16	4%	35	10%	4	2%	1	1%
Skin other (psoriasis etc)	52	5%	16	4%	11	3%	24	13%	1	1%
psychomotoric retardation	6	1%	5	1%	1	0%	0	0%	0	0%
hypotonia	1	0%	1	0%	0	0%	0	0%	0	0%
Neuromusc other	1	0%	1	0%	0	0%	0	0%	0	0%
physiological murmur	3	0%	0	0%	2	1%	1	1%	0	0%
pathological murmur (suspected)	1	0%	0	0%	1	0%	0	0%	0	0%
strabismus	1	0%	0	0%	1	0%	0	0%	0	0%
keratoconjunctivitis	2	0%	1	0%	1	0%	0	0%	0	0%
eye other	1	0%	1	0%	0	0%	0	0%	0	0%
inguinal hernia	1	0%	0	0%	1	0%	0	0%	0	0%
urinary infection	1	0%	1	0%	0	0%	0	0%	0	0%
urogen other	1	0%	0	0%	0	0%	1	1%	0	0%
old fracture	4	0%	0	0%	4	1%	0	0%	0	0%
skeletal other	1	0%	1	0%	0	0%	0	0%	0	0%
hernia(umbilical etc)	3	0%	1	0%	1	0%	1	1%	0	0%

Table A-10: Treatment among all children per geographical location

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
ferro	83	8%	26	7%	33	9%	15	8%	9	13%
mother iron	29	3%	6	2%	17	5%	5	3%	1	1%
multivitamins	561	56%	191	49%	230	66%	129	68%	11	16%
anti-worm	579	58%	237	61%	211	60%	92	48%	39	57%
acute worm	7	1%	4	1%	1	0%	1	1%	1	1%
anti-lice	160	16%	46	12%	54	15%	58	30%	2	3%
anti-scabies	4	0%	0	0%	2	1%	2	1%	0	0%
scabies soap	7	1%	6	2%	0	0%	1	1%	0	0%
amoxicillin	27	3%	11	3%	13	4%	3	2%	0	0%
augmentin	11	1%	9	2%	2	1%	0	0%	0	0%
paracetamol	15	2%	4	1%	8	2%	3	2%	0	0%
co-trimoxazol	2	0%	2	1%	0	0%	0	0%	0	0%
ORS	2	0%	0	0%	2	1%	0	0%	0	0%
eardrops	27	3%	7	2%	12	3%	8	4%	0	0%
nystatine	1	0%	0	0%	1	0%	0	0%	0	0%
hydrocortisone cream	13	1%	7	2%	2	1%	4	2%	0	0%
dactarin cream	31	3%	12	3%	10	3%	6	3%	3	4%
dactacort cream	20	2%	2	1%	12	3%	6	3%	0	0%
iodine	2	0%	1	0%	1	0%	0	0%	0	0%
fusidin cream	77	8%	20	5%	44	13%	12	6%	1	1%
sudo cream	0	0%	0	0%	0	0%	0	0%	0	0%
neutral cream	45	5%	3	1%	17	5%	24	13%	1	1%
griseofulvine	4	0%	3	1%	0	0%	1	1%	0	0%
eyedrops	1	0%	0	0%	1	0%	0	0%	0	0%

Table A-11: Referred children per geographical location

	Total		Siddi		Kaule		Hattibang		Sapana School	
	1000		Total= 390		Total= 350		Total= 191		Total= 69	
	N	%	n	%	n	%	n	%	n	%
Dentist	4	0%	4	1%	0	0%	0	0%	0	0%
Specialist in hospital	2	0%	1	0%	0	0%	1	1%	0	0%
Revisit	7	1%	3	1%	2	1%	2	1%	0	0%
Social program	18	2%	7	2%	6	2%	3	2%	2	3%
Other...	1	0%	1	0%	0	0%	0	0%	0	0%

Annex B – Comparison of data 2023 and 2024

Table B-1: Summary of checked children per geographical location, age and gender

Age	2023				2024			
	Kaule		Hattibang		Kaule		Hattibang	
	Total= 274		Total= 159		Total= 350		Total= 191	
	n	%	n	%	n	%	n	%
<=1 year	37	14%	33	21%	50	14%	27	14%
>1 and <5 years	99	36%	51	32%	96	27%	49	26%
<5 years	131	48%	76	48%	128	37%	67	35%
>=5 and <=10 years	132	48%	61	38%	174	50%	107	56%
>10 years	12	4%	22	14%	48	14%	17	9%
Gender								
Boy	122	45%	78	49%	168	48%	104	54%
Girl	153	56%	81	51%	182	52%	87	46%

Table B-2: Prevalence of weight/age at or under P3 (underweight) in Kaule and Hattibang in 2023 and 2024

	2023				2024			
	Kaule		Hattibang		Kaule		Hattibang	
	Total= 274		Total= 159		Total= 350		Total= 191	
	n	%	n	%	n	%	n	%
Underweight	123	45%	55	35%	133	38%	72	38%
No underweight	138	50%	83	52%	172	49%	103	54%
Unknown	14	5%	21	13%	45	13%	16	8%
Underweight children per age								
<=1 year	13	35%	8	24%	10	20%	7	26%
>1 and <5 years	45	46%	15	29%	44	46%	19	39%
<5 years	55	43%	20	26%	49	38%	22	33%
>=5 and <=10 years	67	52%	35	57%	83	48%	50	47%
>10 years	1	50%	0	0%	1	33%	0	0%
Underweight children per gender								
Boy	54	44%	28	51%	62	47%	45	63%
Girl	69	56%	27	49%	71	53%	27	38%

Table B-3: Prevalence of length/age at or under P3 (stunting) in Kaule and Hattibang in 2023 and 2024

	2023				2024			
	Kaule		Hattibang		Kaule		Hattibang	
	Total=	274	Total=	159	Total=	350	Total=	191
	n	%	n	%	n	%	n	%
Stunting	128	47%	92	58%	209	60%	109	57%
No stunting	143	52%	66	42%	140	40%	80	42%
Unknown	4	1%	1	1%	0	0%	2	1%
Stunting children per age								
<=1 year	18	49%	14	42%	26	52%	13	48%
>1 and <5 years	46	47%	24	48%	68	71%	31	66%
<5 years	59	46%	37	49%	84	66%	37	57%
>=5 and <=10 years	64	49%	42	69%	100	57%	62	58%
>10 years	5	42%	13	59%	25	52%	10	59%
Stunting children per gender								
Boy	227	51%	64	49%	106	51%	65	60%
Girl	216	49%	66	51%	103	49%	44	40%

Table B-4: Prevalence of anemia in Kaule and Hattibang in 2023 and 2024

	2023				2024			
	Kaule		Hattibang		Kaule		Hattibang	
	Total=	274	Total=	159	Total=	350	Total=	191
	n	%	n	%	n	%	n	%
Anemia	59	22%	47	30%	119	34%	64	34%
No anemia	216	79%	112	70%	231	66%	127	66%
Unknown	0	0%	0	0%	0	0%	0	0%
Hb <5,0 mmol	1	0%	1	1%	1	0%	0	0%
Anemia per age								
<=1 year	7	19%	16	48%	10	20%	8	30%
>1 and <5 years	24	24%	15	29%	33	34%	19	39%
<5 years	28	21%	27	36%	41	32%	25	37%
>=5 and <=10 years	29	22%	16	26%	65	37%	32	30%
>10 years	2	17%	4	18%	13	27%	7	41%
Anemia per gender								
Boy	23	39%	25	53%	58	49%	36	56%
Girl	36	61%	22	47%	61	51%	28	44%

Table B-5: Prevalence preventive anti-worm treatment in the last half-year in Kaule and Hattibang in 2023 and 2024

	2023				2024			
	Kaule		Hattibang		Kaule		Hattibang	
	Total= 274		Total= 159		Total= 350		Total= 191	
	n	%	n	%	n	%	n	%
Anti-worm	103	38%	65	41%	104	30%	82	43%
No anti-worm	172	63%	94	59%	244	70%	109	57%
Anti-worm per age								
>1 and <5 years	77	78%	46	90%	70	73%	47	96%
<5 years	81	62%	51	67%	79	62%	52	78%
>=5 and <=10 years	22	17%	13	21%	23	13%	28	26%
>10 years	0	0%	1	5%	2	4%	2	12%
Anti-worm	77	78%	46	90%	70	73%	47	96%