Introduction:
In the third week for August 2009 Medical Checks for Children (MCC) visited Mtjakuja, a small village in the North of Tanzania (Africa).
The MCC team checked and treated 1190 children, aged 9 years and below, free of cost. The medical camp was organized for seven days starting the 16th of August, at two different locations in Mtakuja. This was the first mission on this location.

The MCC team consisted of nine members from The Netherlands: Karlien Bongers (medical-end-responsible and mission leader, general surgeon), Iris van de Gevel (organization-end-responsible, toxicologist/regulatory affairs manager), Anne Vlietstra (family doctor), Sven Daam (family doctor), Gijs Baaten (GGD-doctor infectious diseases), Eva Bouwsma (ANIO gynaecology), Femmy Meenhorst (medical radiological technician), Marjan Bolt (medical analyst) and Miguette Jadoul (project leader).

The medical checks were organized in close cooperation with FD Kilimanjaro. FD Kilimanjaro has a partnership on location, to form The Mtakuja Development with the aim to eradicate poverty from the community of Mtakuja. The village is located in the Kilimanjaro Region of northern Tanzania. It has approximately 4250 inhabitants as of 2008, of whom more than 50% are younger than 20 years of age. Mtakuja consists of several sub villages: Mserikia, Riserv, Mabatini, Josho, Upareni and Remiti.
The nearest hospital is TPC hospital, approximately 6 to 11 km from Mtakuja (2 - 3 hours by foot, 1-2 hours by bike).
Since there was a profound local organization, FD Kilimanjaro, MCC board decided to send a full mission instead of an explorative mission.

Technical equipment and some of the supplies were brought from Europe by MCC team members. Most of the medication was ordered by Joris de Vries from TPC hospital with help of Dr. Harry Mwerinde. Additional medication was purchased from local pharmacies in Moshi. An overview of all purchased medicine can be found in Appendix D.

The cooperation of FD Kilimanjaro (in person of Joris de Vries) existed out of the following (amongst others):

- Transfer of knowledge about expected diseases, through contacts with the local hospital (TPC hospital).
- Transfer of data on demographics.
- Education and selection of female translators/village health workers.
- Providing board and lodging of all MCC team members.
- Transportation of the MCC team from Kilimanjaro airport to TPC and transportation to the check locations.
- Selection of the check locations.
- Announcement of the medical camp in the villages.
- Making copies of all necessary papers.
- Giving support in ordering and delivery of medication.
- Giving all kinds of support to the MCC team during the medical camp.

The MCC team was very satisfied with the cooperation with FD Kilimanjaro. Our special thanks go to Joris de Vries, because his support and enthusiasm gave MCC the opportunity to work in the medical camp and examine and treat all children. Special thanks go to the translators: Stella Msarikie, Elda Mmary, Hysinta Massawe, Benedicta Kibola, Zulfa Tao, Felista Haule, Sister Makinyange, Mama Peris, Elizabeth Alexander, Irene Umanga, Elisabeth and Antonia Stevin. We would also like to thank Zablon Sarakikya (Agricultural Program Officer, FD Kilimanjarjo), doctor Harry Mwerinde of TPC Hospital, and Mr. Kweka and Mr. Stanley of the TPC pharmacy. We enjoyed working together with all of them. We 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 health and its importance for children in reaching their developmental potential.

We are grateful to all the parents, 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.

Background information of The United Republic of Tanzania:

- **Tanzania** is located in East Africa along the Indian Ocean and it is bordered by eight countries: Kenya and Uganda (to the north), Rwanda, Burundi and the Democratic Republic of Congo (to the west) and Zambia, Malawi and Mozambique (to the south).Tanzania was formed in 1964 when the mainland Tanganyika and the archipelago of Zanzibar united.

Tanzania covers a total area of 945,000 km^2. To put this in perspective, this is nearly 23 times the size of Holland. Tanzania's population is close to 40million people with an annual growth of 2 %.
At the time of the last census in 2002, about 44% of population was younger than 15 years old. Life expectancy at birth is approximately 51.
National languages are Swahili and English, while Arabic is also spoken on Zanzibar.
About 45% of the people are Christian, 35% Muslim and 20% follow traditional religious beliefs.
Despite a peaceful history, substantial foreign aid and a democratic system, Tanzania continues to be a poor country. As of 2008, it ranks 159th on the Human Development Index, the UNDP's ranking based on scores for three basic human development aspects: health, knowledge and standard of living. According to the World Bank, the per capita income was about US$980 in 2008.
Agriculture is by far the single most important industry for Tanzania, employing 75% of the population. The main cash crops include coffee, cashew nuts, sisal, tobacco, tea, coconuts and cloves.
Tourism is what Tanzania is best known for to most people. There are few – if any – countries that can match it when it comes to nature and wildlife with such sites like the Serengeti Plains, the Ngorongoro Crater, Selous Game Reserve, Gombe Stream National Park, Mt. Kilimanjaro and the islands of Unguja (often simply referred to as Zanzibar) and Pemba.
Moshi is the capital of the Kilimanjaro Region in the north of Tanzania, bordering Kenya. Kilimanjaro International Airport (KIA) is about an hour to the west on the road to Arusha. Moshi's population is about 150,000.

- **Health Issues:**

In the United Republic of Tanzania, the health of children and women is threatened by poor nutrition, gender inequalities and female illiteracy levels.
Inequity in access to social services is mainly due to skewed income distribution, high levels of income poverty and non-functional social protection for the poor. The low income of the majority of the populations hinders their accessibility to health services as medicines and other services are unaffordable. At the national level, low financial capacity limits adequate resource allocations to the sector leading to inadequate service provisions.

Life expectancy at birth	m/f 50/51 years
Median age of total population	17.5 years
Healthy life expectancy at birth	m/f 40/41 years (2003)
Maternal mortality ratio (MMR):	578 per 100 000 live births
Neonatal mortality ratio	32 per 1 000 live births
Births attended by skilled health personnel	43.0 (%) (2004)
Infant mortality rate	68 per 1 000 live births
Under-5 mortality	134 per 1 000 live births m:117 f:126 (2004) 118 per 1 000 live births (2006)
Probability of dying between 15 and 60 years	m/f 518/493 per 1 000 population
Underweight children	21.8 %
Stunted children	37.7 %

Level of food poverty	22% below food poverty line 39% below basic needs poverty line
HIV prevalence	7 % (2004)
Total expenditure on health per capita	$ 45
Total expenditure on health	as % of GDP 5.5
National Immunization program coverage	89 % (vitamin A not included) (2003) national malaria program since 2003

Figures are for 2006 unless indicated. Source World Health Statistics 2008

- **Millenium goals:** source: www.mdgmonitor.org

Goal 1: Eradicate Extreme Poverty and Hunger:	
GDP per capita	730 US$
Annual GDP growth	5.9 %
Population below PPP $1 per day	57.8 %
Level of food poverty: below food poverty line below basic needs poverty line	22 % 39 %
Goal 2: Achieve universal primary education	
Net enrolment ratio in primary education (both sexes)	98 %
Percentage of pupils starting Grade 1 and reach Grade 5 (both sexes)	82.8 %
Goal 3: Promote gender equality and empower women	
Gender parity Index in primary level enrolment (ratio of girls to boys)	1.0
Literacy rates of 15-24 years old (both sexes)	77.5 %
Seats held by women in national parliament	30.4 %
Goal 4: Reduce child mortality	
Mortality rate of children under 5 years old (per 1,000 live births)	118
1-year-old children immunized against measles	93 %
Goal 5: Improve maternal health	
Maternal mortality ratio (per 100,000 births)	950
Goal 6: Combat HIV/AIDS, malaria and other diseases	
People living with HIV,15-49 yrs old	6.2 %
Prevalence of tuberculosis (per 100,000 people)	459
Goal 7: Ensure environmental sustainability	
Land area covered by forest	39.9 %
Access to improved drinking water sources (% of total population)	55 %
Goal 8: Develop a global partnership for development	
Internet users (per 100 people)	1.0

Background information of The Mtakuja Development Project of FD Kilimanjaro:
The Mtakuja Development Project is a partnership between Mtakuja village and the Dutch NGO FD Kilimanjaro with the aim to eradicate poverty from the community of Mtakuja. The project lifespan is expected to be five years (2008-2013).
The project outcomes will have to be sustainable and benefit everybody in the community.
The 4250 people (2008) residing at Mtakuja in the Kilimanjaro Region of northern Tanzania, in most years unsuccessfully meet the perennial challenge of feeding themselves. The current situation is defined by a misalignment of local opportunities, expectations and cultural determinants that point the villagers towards farming for subsistence on the one hand, and an environment that is ill-suited to rain fed farming, on the other. Furthermore, there is a lack of access to surface water to develop low-cost irrigation schemes. As a result, most families in Mtakuja survive on one or two meals a day, with more than one-third of families just having one meal a day for extended periods of the year.
The Goals of The Mtakuja Development Project is poverty reduction through food security (first), increase in income generation (next), and improving access to quality education and health care services in a sustainable manner as to assure that many developments will

endure beyond the five year lifespan of the project, ultimately resulting in a thriving community enjoying an improved standard of living of their choice for all.
To enable the community to break out of poverty, FD Kilimanjaro seeks to dramatically increase agricultural production through the introduction of irrigated farming. The development of an irrigation scheme is considered critical to enable the community to increase production and sustainably increase income through agriculture activity, which in turn is expected to jump start a range of other income generating activities and business ventures.
The project is supported by local business and local government and seeks to partner with local (Tanzanian based) NGOs when appropriate to implement specific programs. To implement the project, the international non-governmental organization FD Kilimanjaro has been registered in Tanzania.
The project builds on a long history of involvement of the Stichting FEMI – the lead sponsor and founder of FD Kilimanjaro – in the region, in particular focused on communities located on the TPC plantation. There is strong and wide-ranging local support for the project, this local network will hopefully prove to be the project's greatest strength.

The project has been structured around five programs: (1) Sustainability & Community Participation, (2) Food Security & Income, (3) Education, (4) Health and (5) Vulnerable People. The early emphasis is on assuring the community's involvement and ownership of the project, human capacity building, support for primary education and starting an agricultural pilot area for the introduction of irrigated farming and hence create the basis for sustainable income generation.

Results Year One (2008) The Mtakuja Development Project of FD Kilimanjaro:
- A population survey: 808 interviews with household heads done during in July and August 2008 to gather data and signal the start of the project (see Appendix A)
- School lunches: from June 2008 at two primary schools in Mtakuja
- Additional instruction provided by the teachers at the two primary schools with support from the project.
- Increase of attendance rate at Mtakuja Primary School after the start of the school lunch program from 75 % to 92 %.
- Increase of Standard 7 final exam pass rate at Mserikia Primary School in December 2008 (81% – compared to national average just above 50%).
- The identification of 14 of borehole locations for drilling in the village.
- 210 People enrolled in Village Community Banking (VICOBA) training forming 7 groups in March.
- First seminar on the creation of a *Water and Power Users Association* which was attended by 39 Ward, Village, Community and Religious leaders.
- Planting of 500 tree seedlings by the three primary schools in Mtakuja.
- Memo of Understanding between TPC Ltd., FD Kilimanjaro and Mtakuja Village guiding the three-way partnership under which TPC will supply the pilot area with electricity from its private electrical network.

Medical Checks for Children on location:
The medical checks of the 1190 children were performed in seven days at two different locations. 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 (saturation occasionally)
3. Blood test (haemoglobin)
4. Physical examination
5. Giving medication (pharmacy)
6. Education on tooth brushing (a tooth brush was given to each child)

An additional seventh station was added to the MCC carrousel:

7. HIV/AID counselling

And for quick data analysis the eighth station was for data entry, based on which every evening a quick scan of children's health could be made.
At each station, mainly at physical examination and pharmacy, education was given to the children and their care takers on good nutrition and hygiene.
The MCC team paid special attention to the prevalence, treatment and prevention of anaemia, growth abnormalities, worm infections and HIV/Aids.

All sub villages of Mtakuja (see Table 1) are poor rural areas. According to the population survey of FD Kilimanjaro, done during July and August 2008 through 808 interviews with household heads (see Appendix C) MCC checked (nearly) all children of Mtakuja.
Mtakuja consists of several sub villages: Mserikia, including the sub villages Mafuriko and Mbeya Kubwa, Risavu, Mabatini, Josho and Upareni.
Remiti, solely existing of Masai, is technically not a "subvillage". The neighborhood was presented in the survey of FD Kilimanjaro but not in this medical report.

Mserikia	Mafuriko	285	**Mabatani**	136
	Mbeya Kubwa	294	**Josho**	272
Risavu		84	**Upareni**	119

Table 1: Place of the 1190 checked children per geographical area.

Diagnosis and categories of ailments:
During the week, MCC checked 1190 children.
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, 99.7 % of the children had the age of twelve years or younger and 50% of the children had the age of five or younger.

Age category	Total (%)	Mafuriko	Mbeya Kubwa	Risavu	Mabatani	Josho	Upareni
< 1 year	**94 (8)**	36 (13)	28 (9.5)	6 (7)	2 (1.5)	16 (6)	6 (5)
1 – 5 years	**499 (42)**	115 (40)	132 (45)	35 (42)	53 (39)	107 (39)	57 (48)
6 – 12 years	**593 (50)**	134 (47)	134 (45.5)	42 (50)	81 (60)	147 (54)	55 (46)
> 12 years	**4 (0.3)**	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	1 (1)
	Total (%)	**Mafuriko**	**Mbeya Kubwa**	**Risavu**	**Mabatani**	**Josho**	**Upareni**
Boy	**581 (49)**	151 (53)	152 (52)	46 (55)	67 (49)	114 (42)	51 (43)
Girl	**609 (51)**	134 (47)	142 (48)	38 (45)	69 (51)	158 (58)	68 (57)
School	**346 (29)**	49 (17)	32 (11)	32 (38)	66 (49)	116 (43)	51 (43)
No school	**844 (71)**	236 (83)	262 (89)	52 (62)	70 (51)	156 (57)	68 (57)
Total	**1190**	**285**	**294**	**84**	**136**	**272**	**119**

Table 2: Age and gender distribution of 1190 checked children, total and per area. Figures represent absolute numbers with percentage of children in the area between brackets.

We identified 346 (29%)children who are going to schools with the food program of FD Kilimanjaro. Of course, these children, called "school" in the presented tables have the a school-age age and cannot be compared with the no-school children because of age differences.

It should be noted that identification of school children and no-school children started at the second day of the medical camp. Part of the children identified as no-school children might actually be school children.
Except of the 456 (38%) cases of anaemia, 276 other major diseases were diagnosed (see table 3).
The diagnosis "(suspected) HIV/Aids", "(possible) malaria" and "TB" were either children who told us spontaneously or on request, they were on treatment for the disease, or the MCC doctor suspected the mentioned disease.
Most of the ailments, except the dental problems, could be treated on the spot.
We referred 130 children to medical specialists in the TPC Hospital for further diagnoses and/or treatment (103 children to a specialist, 27 children to the dentist) and 4 children were referred to the Liliane foundation.

Major diagnoses	Active worm	(suspected) HIV/Aids	(possible) malaria	Pneumonia	TB	Path. Murmur	Painful caries
Mafuriko	25 (8.8)	1 (0.4)	5(1.8)	26 (9.1)	-	2 (0.7)	12 (4.2)
Mbeya Kubwa	25 (8.5)	2 (0.7)	8 (2.7)	15 (5.1)	2 (0.7)	1 (0.3)	8 (2.7)
Risavu	3 (3.6)	-	2 (2.4)	-	-	5 (6.0)	1 (1.2)
Mabatani	16 (11.8)	5 (3.7)	2 (1.5)	-	2 (1.5)	7 (5.1)	-
Josho	27 (9.9)	-	7 (2.6)	22 (8.1)	2 (0.7)	7 (2.6)	3 (1.1)
Upareni	10 (8.4)	1 (0.8)	5 (4.2)	6 (5.0)	-	1 (0.8)	1 (0.8)
Total	**106 (8.9)**	**9 (0.8)**	**29 (2.4)**	**69 (5.8)**	**6 (0.5)**	**23 (1.9)**	**25 (2.1)**

Table 3: Disease prevalence among all 1190 children, total and per area. Figures represent absolute numbers with percentages of children between brackets.

1: Growth abnormality and malnutrition:
(underweight: 15% (176/1189), wasting: 9.1% (78/860), stunting: 21% (251/1188))
The World Health Statistics of 2008 shows in Tanzania a prevalence of 21.8 % underweight children and 37.7 % stunted children reflecting chronic malnutrition. 22% of the people in Tanzania live below the "food poverty line".
The survey of FD Kilimanjaro in the Mtakuja (see appendix C) shows that 37% of the families live on just one meal a day, 42% get two and 21% get three meals a day. The same survey noted that the typical household's diet is additionally very low in diversity of food products.
A recent report of the World Bank shows that one percent decrease in adult height due to childhood stunting correlates with 1.4 percent loss of productivity. The report shows furthermore the fact that stunting in general is associated with as much as eleven points decrease in Intelligence Quotient (IQ).
Percentages of growth retardation is correlated with poverty, malnutrition, living conditions, hygiene and the prevalence of chronic diseases.
According to UNCCA the two major causes of malnutrition are poor feeding practices and inadequate childcare. Adequate food intake and education programs addressing nutrious food need to be provided.
Malnutrition is thought to account for one third of all deaths of children under five years of age (UN Millennium Developmental Goals). 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.
- 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.

It has to be noted that reference data were only available for certain heights, weights and ages (as specified above), leading to the following general prevalence's of growth abnormalities in Mtakutja:

subvillage	Underweight	Wasting	Stunting	subvillage	Underweight	Wasting	Stunting
Mafuriko	52 (18)	26 (9.1)	71 (25)	**Mabatani**	16 (12)	7 (5.1)	21 (15)
Mbeya Kubwa	34 (12)	11 (3.7)	76 (26)	**Josho**	54 (20)	27 (9.9)	56 (21)
Risavu	4 (4.8)	4 (4.8)	10 (12)	**Upareni**	16 (13)	3 (2.5)	17 (14)
School	24 (6.9)	13 (3.8)	32 (9.2)	**Unknown**			
No school	152 (18)	65 (7.7)	219 (26)	**or not applicable**	11 (0.9)	330 (28)	2 (0.2)
				Total	**176 (15)** (1189)	**78 (6.6)** (860)	**251 (21)** (1188)

Table 4a: Indices for growth abnormalities and malnutrition of 1190 checked children, total, per area, and for schoolchildren. Figures represent absolute numbers with percentage of children in the area between brackets.

	Underweight	Wasting	Stunting
Attending school (N=321)	**22 (6.9)**	**9 (2.8)**	**29 (9.0)**
Not attending school (N=276)	**42 (15.2)**	**15 (5.4)**	**56 (20.3)**
Total (N=597)	64 (10.7)	24 (4.0)	85 (14.2)

Table 4b: Indices for growth abnormalities and malnutrition of 597 checked children older than 5 years, for schoolchildren and for children not attending school. Figures represent absolute numbers with percentages between brackets.

Data on stunting were complete as opposed to underweight and wasting data. However, estimation of age is sometimes troublesome without official documents stating date of birth and children or even parents not knowing children's age, making the stunting data less reliable than wasting data.

In comparison of the Tanzania data, with 21.8 % underweight children and 37.7 % stunted children, the population of Mtakutja seems with the prevalence of underweight in 15% and stunting in 21% of the children a little bit better. The children attending a school with the FD Kilimanjaro food program did better on all parameters for growth abnormality with underweight in 6.9 % for school children and 15.2 % for children who attend no or another school, wasting 2.8% versus 5.4% and stunting in 9% versus 20.3%.

During the medical check-ups, we gave all children and their guardians hygiene and nutritional advise, with emphasis on hand-washing, vitamin C and vegetable intake, so their children may grow healthy and strong. We noticed the policy of a lot of mothers to feed their babies up to the age of one year or even more, almost only with breast milk. For babies, we advised exclusive breastfeeding up to six months and then start with the introduction of normal food. For babies without a mother or a mother without enough milk we discussed the possibilities of breastfeeding by another mother. We noticed this policy is quite normal in early days in the hospital but when a baby is at home a lot of fathers are against getting milk from another woman because of culture believes and the fear of being in dept with the husband of the milk giving woman.

2: Anaemia (456, 38 %) (see table 5a and 5b)

Anaemia is the most prevalent micronutrient disorder. In Tanzania no national policy has been implemented 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, malaria, as well as other nutritional deficiencies, are especially important.
As pointed out in the paragraph about growth abnormalities, the survey of FD Kilimanjaro (see appendix C) shows that 37% of the families live on just one meal a day and 42% get only two meals a day. The same survey noted that the typical household's diet is additionally very low in diversity of food products low in fat and low in sources of vitamin C. Maize and some green leafy vegetables dominate the menu on a daily basis; complemented by beans, rice, fish and green bananas on a weekly basis and some meat on a monthly basis.
As in other populations, we found a larger percentage of anaemia in children less than one year of age (57.4%) and children one to five years of age (51.1%). Because of emotional problems, haemoglobin levels were not determined in 26 children (2.1%); four of them were diagnosed as anaemic based on signs and symptoms.

Age category	Total (%)	Mafuriko	Mbeya Kubwa	Risavu	Mabatani	Josho	Upareni
< 1 year	**54 (57)**	16 (44)	20 (71)	4 (67)	2 (100)	10 (63)	2 (33)
1 – 5 years	**258 (52)***	60 (52)	73 (55)	13 (37)	29 (55)	62 (60)	21 (37)
6 – 12 years	**144 (24)****	30 (22)	47 (35)	6 (14)	20 (25)	29 (20)	12 (22)
> 12 years	**-**	-	-	-	-	-	-
Hb ≤ 5.0 mol/l	**84 (7.1)**	17 (6.0)	27 (9.2)	6 (7.1)	10 (7.4)	19 (7.0)	5 (4.2)
Total	**456 (38)**	106 (37)	140 (48)	23 (27)	51 (38)	101 (37)	35 (29)

* Including 3 children with signs and symptoms of anaemia, but with unknown Hb level
** Including 1 child with signs and symptoms of anaemia, but with unknown Hb level

Table 5a: Anaemia prevalence, total and per age category and area.
Figures represent absolute numbers with percentage of children in age category between brackets.
In the analysis above, haemoglobin levels at or below the CDC criteria were considered to represent anaemia.

	Anaemia
Attending school (N=321)	70/321 (21.8)
Not attending school (N=276)	74/276 (26.8)

Table 5b: Indices for growth abnormalities and malnutrition of 597 checked children older than 5 years, for schoolchildren and for children not attending school.
Figures represent absolute numbers with percentages between brackets.

Anaemia was less prevalent in children attending school (70/321, 21.8%) compared with children not attending school with the FD Kilimanjaro food program (74/276, 26.8%). This difference most probably reflects the benefits of the school food program, which confirms the importance of nutrition in respect to anaemia and, hence, to health in general.

We treated the children with anaemia (and their mothers if they were breast fed) with supplements for three months. Of 1190 children, 156 (13%) were given iron tablets or iron syrup, 433 (36%) were given multivitamins. Iron supplements were given to 58 (4.9% of 1190) mothers breast-feeding a child with anaemia.

In 84 children (7.1%) the haemoglobin level equals or was less than 5.0 mmol/l. These children were referred to the TPC Hospital for further diagnostic procedures. We asked for a re-check of the haemoglobin level, HIV test, malaria test and exclusion of sickle cell anaemia (an inborn malformation of the red blood cells). At the time of the writing of the report we were not informed about the test results yet.
As pointed out in the paragraph of growth abnormalities, we gave during the medical check-ups all children and their guardians nutritional advise with emphasis on vegetable intake and vitamin C. 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 Tanzania are lemon and passion fruit.
For babies, we advised exclusive breastfeeding up to six months, then start with the introduction of normal food and we discussed the possibilities of donation of breast milk by another woman when the normal supply is lacking.

3: Worm treatment (861 (72%) prophylactic and 102 (8.6%) therapeutic)(see table 3)
A strong relationship exists between a Helminth, an Ascaris Lumbricoides, a Hookworm or a T. Trichiura infection and anaemia. In the last years a de-worming program was established in Tanzania where there is a high prevalence of these infections in (school-aged) children. This de-worming program doesn't have a 100% coverage.
Despite the de-worming program, we treated the 861 (72%) children who were not in the de-worming program on the spot with Albendazol. An active worm infection was suspected in 102 (8.6%) children. They were treated with anti-worm tablets for 5 days.
Health education on the spot was aimed at increasing awareness of worm transmission, the disabilities caused by intestinal helminth and the importance of the de-worming program every half year.
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 (2-5 years), school age children, adolescent girls and women of childbearing age.

4: Pneumonia (69; 5.8%) (see table 3)
The 69 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.
For a doctor normally working in Europe it is amazing how few children have asthma in Tanzania. We saw 7 (0.6%) children with symptoms of bronch(iol)tis. None of the children were diagnosed with asthma.
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 2 months up to 12 months, and 40 breaths per minute or more in a child of 12 months up to 5 years, lower chest wall indrawing and stridor which is a harsh noise made when the child inhales) for recognition and treatment of a pneumonia were transferred to the local workers and care takers.

5: Suspected pathological Cardiac Murmurs (23; 1.9%) (see table 3)
The MCC carrousel includes a cardial examination. We suspected 23 children of having a pathological heart murmur, mainly due to a septal defect. Of these 23, 19 were 7 to 10 years old.
Mitral regurgitation and 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 children and their care takers with the suspected pathological heart murmurs were stressed on teeth brushing procedures. Besides this, they were told and got a written explanation to give their child antibiotics when going to a dentist for a teeth extraction.

6: Stomach ache and other gastrointestinal complaints (see table 6)
During our health checks we encounter a rising percentage of (older) schoolchildren with complaints of stomach pain. In the absence of weight loss, bloating or fever these pains could be stress induced. Pressure on adolescents to succeed academically is well known, alongside 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.
Of the 36 children diagnosed with constipation, 28 (78%) were children attending the schools with the FD Kilimanjaro food program. The adding of more fat (sunflower oil for example) and stimulation of more fluid intake (water) can probably solve these complaints.

Diagnosis	Frequency	%	Diagnosis	Frequency	%
constipation	36	3	acute diarrhoea	2	0.2
dysenteria	8	0.6	giardia	1	-

Table 6: Indices for constipation and dysenteria of 1190 checked children, total

7: Ear-Nose-Throat (ENT) (36; 3%) (see table 7)
The prevalence of acute ear infections was comparable with the prevalence in the Netherlands.
Chronic or recurrent ear infections are a common condition encountered by the ENT surgeons in the third world. Effective initiatives for better hygiene and nutrition will play a part in diminishing chronic ear infections and their complications. Treatment of middle ear infections with antibiotics have a big impact in preventing deafness as well.

Diagnosis	Frequency	%	Diagnosis	Frequency	%
OMA	3	0.2	tympanic perforation	2	0.2
OME	5	0.4	hearing impairment	5	0.4
otitis externa	16	1.3	adenotonsillitis	2	0.2
			candida stomatitis	3	0.2

Table 7: Indices for ENT of 1190 checked children, total

8: Skin diseases (93; 8%)
Among the skin diseases the following disorders are the most common in children in Africa, pyoderma, tinea capitis, scabies, viral skin disorders (mainly moluscum contagiosum) pedicolosis capitis, dermatitis and reactions due to insect bites.
A peak of prevalence for pyoderma is observed among 5-9 year olds, with a progressive constant decrease over three years of age.
Pyoderma, scabies and tinea capitis are more common in overcrowded households and orphanages. The role of traumatic sores as a predisposing factor for pyoderma is well known. Especially legs and les commonly ears (because of septic ear piercing) is common of posttraumatic pyoderma. The 20 (1.7%) children with a skin infection were treated with macrolides for pyoderma.
Antifungal cream (eventually in combination with hydrocortison) was given for fungal infections (dermatomycosis) and hydrocortison crème was given for different forms of dermatitis. We saw no lice infection.

Diagnosis	Frequency	%	Diagnosis	Frequency	%
wounds n.o.s.	17	1.4	dermatomycosis	53	4.5
eczema n.o.s.	12	1.0	impetigo	3	0.3
seb. eczema	1	0.1	scabies	7	0.6

Table 8: Indices for skin diseases of 1190 checked children, total

9: Eye problems (20 kerato-conjunctivitis, 2 amblyopia)
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.

10: Urinary tract infections (5, 0.5 %) and genital organs
We performed nine urine screening test in the children with urination related complaints. Some protein will appear in the urine if the level of protein in blood becomes high (infections) even when the kidney is functioning properly. Antibiotics, severe emotional stress and strenuous exercise can interfere with the test. In 5 children we found a urine infection which we treated with antibiotics. Two girls (with vaginal discharge) were suspected of sexual abuse and they were sent to TPC Hospital for further investigation.
We saw one boy with severe complications after an operation for hypospady. He will be re-operated on expense of FD Kilamanjaro. One boy with cryptorchidism and one boy with a hernia inguinalis were diagnosed and referred as well.

11: Dental (painful caries: 25, 2.1%)
This Medical Check for Children mission to Tanzania did not include a dentist.
The number of cases mentioned probably underestimate the prevalence of dental disease in the children we checked with severe toothaches and caries. We stressed the care takers of the children with painful caries to take their child to the dentist in TPC Hospital.
We had the impression that the more wealthier the people were, the more painful caries we saw. Maybe this is due to the more buying of sweets and cookies when there is more money available.
After the check local volunteers gave out toothbrushes and educate the people in teeth brushing.

12: Neuromusculair and Skelet problems
In the population of 1190 children we found only two children with a psychomotoric retardation, one child was born with it, in the other child it was due to meningitis at the age of three months (he was operated for a hydrocephalus and has a drain that is still working) . We expect in this kind of population more children with neurologic problems.
Four children were referred to the Dutch organisation, the Liliane Fundation, for arranging physiotherapy (two children with psychomotoric retardation, one boy with a back problem (scoliosis) and one girl with a disabled right arm).

Diagnosis	Frequency	%	Diagnosis	Frequency	%
psych.mot. retardation	2	0.2	hip dysplasia	2	0.2
syndrom n.o.s.	2	0.2	new fracture	2	0.2

Table 9: Indices for neuromusculair and skelet problems of 1190 checked children, total

13: HIV-AIDS, TB and malaria
The diagnosis "suspected HIV/Aids", "possible malaria" and "TB" were either children who told us spontaneously or on request they were on treatment for the disease or the MCC doctor suspected the mentioned disease.
Five children told us that they were HIV positive, of which one had developed AIDS. In four children, HIV was suspected; these children were referred to the hospital for diagnosis and treatment.
Seven children told us a recent blood smear had been tested positive for malaria parasites.
In 22 children malaria was suspected, they were referred to the TPC Hospital.
One child had been diagnosed with TB. We suspected TB in five children and referred them.

As mentioned before, at the time of the writing of this medical report we were not informed about the definitive test results from TPC Hospital. We understood, no new malaria and unfortunately, one new HIV case was diagnosed in the group of children who went to the TPC Hospital.

Education health workers, caretakers and other local helpers:
One of the important tasks of MCC is to encourage the continuation of education of the caretakers and older children. During our week we had teaching sessions on common diagnoses of frequent illnesses and medication. We especially focused on anaemia and malnutrition, on balanced diet, infection, parasites and failure to thrive. Our information mainly consisted of knowledge and practical advice about nutritious food and vitamin supplements, as well as hygienic and health promotion issues.

Future medical needs:
- The people in Mtakutja need more clean water for drinking and hygiene purposes.
We strongly advise FD Kilimanjaro to provide safe drinking water options in the village. Providing a source of clean drinking water at the schools is especially 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, over and over again, the importance of regular (half yearly) de-worming off all children up to fourteen year of age. Maybe FD Kilimanjaro can help to organize up an anti-worm program for the whole village.
- Like all the locations we visited, also in Mtakutja 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 nutrious food.
Maybe FD Kilimanjaro can help to start a health education program for pregnant woman and young mothers with special attention for breastfeeding and good motherhood.
- There is a need to find a method for keeping relevant information with the child (like the need of antibiotics before dental extraction in children with a cardial septal defect).
- Maybe in the future, a dental camp can be planned shortly after the check of Medical Checks for children. In this way MCC can select the children with the most urgent dental problems.
- We recommend FD Kilimanjaro the addition of more fat, fibers (e.g. fruit and vegetables) and a vitamin C source to the school lunches.
- We recommend investigating the possibilities for FD Kilimanjaro to join a Vitamin A program, in order to reduce the occurrence of eye-problems.
- We recommend further investigations of the higher incidence of chronic health problems seen in Mbeya/Kubwa, Josho and Mafuriko (e.g. anaemia in children 1-5 years and stunting) when compared to the other villages.

Last words:
My first trip to Tanzania has been again one of the wonderful experiences in my live and in the lives of the team members.
Over the last five years I have participated in medical missions at different places in Asia and Africa. Witnessing the evolution of the programs and the development of local expertise is exciting.
It is stimulating to work with team members from different background, exchanging ideas and to learn from each other.
I enjoy learning from the local cultures and experiencing the beauty of people at the different destinations. I am inspired by the efforts of our hosts facing the vast medical demands with limited supplies.
Both medical and non-medical volunteer work is fantastic and I am proud to work with such kind and generous individuals.
My special personal thanks go to Iris van de Gevel and Joris de Vries, who organised the MCC mission in a perfect way working together in a very tide time schedule, to Anne Vlietstra for taking over some of my medical responsibilities, to Inès von Rosenstiel for her contribution

to the Medical Checks for Children as an organisation and to Gijs Baaten who did a huge amount of work in analysing the computer data.
I hope to return to Tanzania next year to see the smiling faces of the children and work together again with all the people who put their time and energy in creating a better world for all of us.
I am looking forward to return to the children of Mtakuja in 2010.

Karlien Bongers, MD, General Surgeon, mission leader MCC mission Tanzania-Mtakutja 2009
Amsterdam, 14 October 2010

Appendix A: Summary of The Population Survey of Mtakuja
(derived from the Baseline Survey Presentation, September 2008)

In a span of 7 weeks, four teams of interviewers and Swahili-English translators conducted more than 800 interviews and collected data for 909 households in Mtakuja.
With the help of 10-cell unit leaders ("mabalozi"), community leaders representing a number of households, originally 10, but these days more often about 15, they visited all households in an efficient manner. Interviews lasted about 12 minutes each, and covered topics like demographics, health, education, income and consumption, employment and wishes for the project.
Data collection: June 26th to September 3rd 2008
Number of Households covered: 909
Interview Process: In-person interviews with household head(s) with translators present

Area	Population	% of Total Population	Number of households	Average household size
Mtakuja Village	4171	100	909	4.6
Sub Village				
Mserikia*	1664	40%	384	4.3
Riserv	503	12%	127	4.0
Mabatini	523	13%	116	4.4
Josho	737	18%	135	5.5
Upareni	461	11%	91	5.1
Remiti**	283	7%	56	5.1

*Mserikia includes the sub villages Mafuriko and Mbeya Kubwa.
**Remiti is technically not a "sub-village", but presented here to reflect its unique status within the village as a neighborhood solely existing of Masai

Gender	Total	Percentage of Population	Younger than 16	16 and older
Male	2177	52%		
Female	1986	48%		
All			1925 46%	2225 54%
Male			1009 24%	1158 28%
Female			916 22%	1067 26%

Household Head	Percentage	Household Head	Percentage
Male	73%	**Female**	27%
Married (Monogamous)	57%	Widowed (Monogamous)	16%
Married (Polygamous)	5%	Widowed (Polygamous)	2%
Single (Parent)	10%	Single (Parent)	9%

Household Head Religion (%)	**Christian**	**Muslim**			
	80%	20%			
Household Head Ethnicity (%)	Pare	Chagga	Lower Arushini	Masai	Other
	11%	17%	11%	12%	50%

Basic Needs					
1. Food	2. Water	3. Shelter	4. Education	5. Health care	6. Work

1. Food:
A significant minority of households report to take only one meal a day, with the average of number of meals per day below 2 for the entire village.

It is likely that breakfast ("Chai") was both included and at other times excluded as a meal from the answer, depending on the interpretation of the respondent. Chai often means a cup of tea with milk and a lot of sugar if available, with or without one of the following maize-based items: chapati ("pancake"), uji (a thin porridge) or ugali (cornmeal).

Average number of meals a day	1.8		
	1 meal a day	**2 meals a day**	**3 meals a day**
# of Households	293	337	168
Percentage	37%	42%	21%

The typical household's diet is additionally very low in diversity of food products. Maize and some green leafy vegetables dominate the menu on a daily basis; complemented by beans, rice, fish and green bananas on a weekly basis and some meat on a monthly basis.

Maize	99 %		Fish	58 %
Green Leafy Vegetable	76 %		Rice	58 %
Beans	65 %		Green bananas	48 %
			Meat	18 %

2. Water:

hand pump in the south of the village for their domestic use water (from Mafuriko, Mbeya Kubwa, including Remiti)	1947 people
water from taps/pumps at 5 km in the neighboring village Mvuleni/Newland /Chekereni	1763 people
Only 3 days a week .access to 3 or 4 water taps that are located in their sub village and connected to the water system of Moshi town. (from Upareni)	461 people
78% of all people in Mtakuja who cultivate their own plot of land	
Not irrigating the land due to a lack of water.	92%
Irrigating the land (outside the boundaries of Mtakuja village or in some very few cases to plots on the edge of the village, close to the Chekereni village water sources)	8 %

3. Shelter:

A brief overview of household possessions shows that many people go without mattresses, and less basic items like tables, bikes and mobile phones. 54 % of the houses are build of mud. Except for the residents of Remiti, nearly all households have a self dug hole in the ground for a toilet. This pit is nearly always covered, and in most cases located *within the homestead*. However, nearly a quarter of households use covered pits away from the homestead, which typically means it is a shared facility with neighbors.

The village is extremely dependent on firewood for fuel, leading to environmental stress (deforestation), health dangers (respiratory, burns) and requiring a lot of productive time (collecting the wood).

4. Education:

	No education	**Completed Primary School**	**Completed Secondary School**	**Completed University**
All	330	1328	9	4
All (%)	17%	68%	>0.5%	>0.5%
School aged Children (5 – 15 years)	**Attending school**	**Not attending school**		
All	1404	157		
All (%)	90%	10%		

Primary School education is free (students pay no tuition), but parents do incur some cost for the purchase of text books, work books, uniforms and meals when applicable.

Prohibitive costs (in the case of Primary Education this means auxiliary cost like those for materials, uniforms, etc.) are the most common given reason for a child of school age not attending school.
A number of 5 year olds is also not yet attending school; typically parents would say they would start next year.
The two primary schools have to accommodate children with great differences in age in each classroom/grade.
The adult population (16 and older) has on average not finished Primary School, and only a fraction has completed Secondary School.
Self reported literacy rates for Swahili (73%) and English (9%), language skills will still vary significantly from person to person.

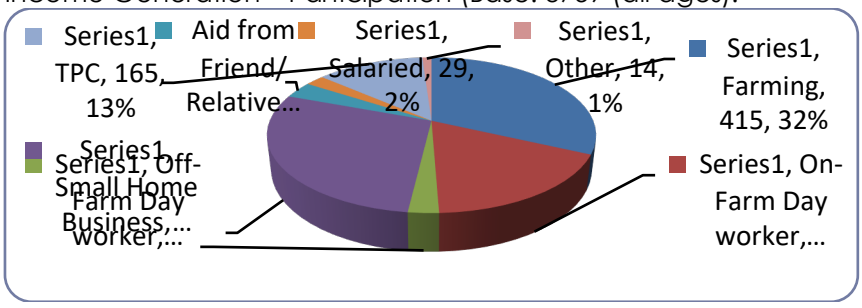
5. Health care:
Access to health care services and treatment is a problem in Mtakuja, with significant numbers of households reporting not having had access to either during the past month.

Percentage of households that reported that just in the last month there was an instance in which a member of the household was **unable to seek health care due to a lack of transportation**	28 %
Percentage of households that reported that just in the last month there was an instance in which a member of the household could **not acquire needed medication**	37 %

Households that boil water before consumption	**47%**
Households that do not treat their water before consumption	51%

The accuracy of the disease data is questionable. One indication of limited quality of the disease data would be the lack of reports of HIV/AIDS among villagers, unfortunately there are likely more than the 4 reported cases of HIV/AIDS in Mtakuja.
Malaria is the most common reported disease.
8% of families report a burn incident in the past year.

6. Work:
Income Generation – Participation (Base: 3759 (all ages):



More than three-quarters of the households have access to and cultivate their own plot of land ("shamba").
More than half of those cultivating their own plot report owning the plot.
Use of agricultural inputs like irrigation, fertilizer and commercial seeds is low.
Livestock ownership is for many households limited to chickens, with minorities of households owning cows, goats, sheep, pigs and donkeys.Nearly 300 households own no livestock at all.
The most commonly cultivated plot is 1 acre in size, 91% of the plots are smaller than 5 acres in size.

Poverty:
It appears to be a clear trend in the village, which is also observed locally and seen when spending some time in the village: The village gets poorer the further south one goes.
One possible cause for this is the increase in rainfall to the north, making rain-fed agriculture somewhat more successful in Mabatini, Josho and in particular Upareni.

Per the above, there are clearly observable differences between the sub villages, but also on household levels, with some households being better off than others.

	"Households in this group…
Group 1 17 %	…typically have one meal a day, live in a house made of mud walls and corrugated iron roofs, although a third of them have roofs made of leaves and grass. Half of the households do not own any bed nets and more than half do not have a single mattress. Only a quarter of them have a bike. While some of them may have some chickens, few have cows, sheep or goats. Just one or two households were able to irrigate the plot of land they were farming, and only few buy seeds for planting."
Group 2 42 %	…typically have one or two meals a day, most live in a house made of mud walls with corrugated iron roofs, but some have brick or concrete walls. While many do not own bed nets or mattresses, most families do, and half of the households own a bike. For these households it is exceptional to own cows, sheep and goats, but half of them do have chickens. Only a handful of households made use of irrigation, a quarter of them buy seeds to plant."
Group 3 29 %	…a minority of these households have one meal a day, most have two or three. Their houses typically have corrugated iron roofs, supported in more than half the cases by stone brick or concrete walls. Three quarters of the families own a bike, but still nearly a fifth of the families do not own bed nets nor mattresses. Most families own chickens, and many own goats, sheep or cows. A small minority irrigates their own farm plot, a third of them buy their seeds."
Group 4 12%	…will very likely have three meals a day, none of them have less than two. Their houses are typically made of stone bricks or concrete and nearly always have a corrugated iron roof. Still a handful of these families do not own bed nets nor mattresses. Most own a bike, and more than half owns goats or sheep, typically alongside chicken and not rarely cows. While half of the households buy seeds for planting, still less than a sixth of them irrigate."

Appendix B: Overview of purchased medication

				Inventory at start of mission			Inventory at end of mission			
Medication	**Content per unit**		**Unit**	**Bought in Tanzania**	**Import from NL**	**Total**	**Total left over**	**Total used**	**In stock for next year (at TPC)**	**Returned to TPC Hospital**
Globin-Z iron vit sirup	200	ml	bottle	320	0	320	204	116	0	204
Ferrosulphate capsules	1000	caps	box	30000	0	30000	6411	23589	6411	0
Zincovit susp	200	ml	bottle	57	0	57	0	57	0	0
Megavit susp	100	ml	bottle	48	0	48	0	48	0	0
Enervit susp	100	ml	bottle	495	0	495	214	281	0	214
Emdevit susp	100	ml	bottle	96	0	96	0	96	0	0
Rinavit susp	100	ml	bottle	124	0	124	0	124	0	0
Multivit tablets	1000	caps	box	25000	0	25000	1260	23740	0	1260
Albendazole 200	3600	tabs	box	3600	0	3600	1564	2036	1064	500
Albendazole 400	960	tabs	box	960	0	960	0	960	0	0
Ivermectin	1	tabs		0	20	20	8 *	12	0	0
Amoxicilline susp	100	ml	bottle	100	0	100	47	53	47	0
Amoxicilline caps 250	10	caps	strip	3000	0	3000	1920	1080	1920	0
Cotrimoxazol syrup	100	ml	bottle	3	0	3	1	2	0	1
Cotrimoxazol tabl	200	tabs	box	200	0	200	100	100	100	0
Metronidazol tabl	1000	tabs	box	976	0	976	800	176	800	
Erytromycin susp	100	ml	bottle	9	0	9	9	0	0	9
Erytropham susp	100	ml	bottle	1	0	1	0	1	0	0
Erytromycine tabl	100	tabs	box	200	0	200	100	100	0	100
Eye/ear drops chloramphenicol	10	ml	flacon	30	0	30	16	14	16	0
Eye/ear drops ciprofloxacine	5	ml	flacon	30	0	30	10	20	10	0
Labstatin (nystatine susp)	30	ml	bottle	20	0	20	16	4	16	0
Hydrocortison cr	15	gr	tube	42	0	42	5	37	5	0
Elycort hydrocortison cream	15	gr	tube	45	0	45	7	38	7	0
Supricort fluocinolon + neomycine cream	15	gr	tube	7	0	7	0	7	7	0

Dactacort cr	15	gr	tube	42	0	42	5	37	37	5
Iodine tincture	30	ml	bottle	6	0	6	2	4	0	2
Iodine tincture	40	ml	bottle	4	0	4	0	4	0	0
Bactroban cream	15	gr	tube	24	0	24	0	24	0	0
Flamazine	10	gr	tube	0	20	20	18 *	2	0	0

Medication	
Globin-Z iron vit sirup	Per 1 ml: 50 mg elemental iron per 5ml : 43 elemental iron per 200 mg ferro ammonium citrate, 1mg vitamin b1, 1 mg vitamin b2, 0.5 mg vit b6, 1 mg vitb12, 0.25 mg folic acid, 5 mg zinc sulphate
Ferrosulphate capsules	Per capsule: Ferrosulphate at 200mg = 64 mg elemental iron
Zincovit susp	Per 5ml: vitamin A 800 IU, vitamin d3 100 IU, vitaminE 2.5 IU, thiamine 0.75mg, riboflavine 0.75mg, pyridoxine 0.5 mg, cyanocobalamine 0.5 mcg, D-panthenol 0.5 mg, nicothiamide 7.5 mg, lysine 5 mg, potassium 50 mcg, copper sulphate 100 mcg, zinc 22.2 mg
Megavit susp	Per 5 ml: vitamin A 5000IU, vitamin d3 400 IU, vitamin b1 3 mg, vitamin b2 0.856 mg, vitamin b6 2 mg, vitamin b12 5 mcg, niacinamide 20 mg, vitamin c 10 mg, D-panthenol 5 mg
Enervit susp	Per 5ml : vitamin A 1000IU, vitamin B 0.5 mg, riboflavine 0.5 mg, nicotinamide 5 mg, vitaminC 20 mg, vitamin D 200IU
Emdevit susp	Per 5ml: vitamin A 2000 IU, vitamin D 200 IU, vitamin E 1.5 mg, vitamin b1 2.25 mg, vitamin b2 1.2mg, vitamin b6 1 mg, vitamin b12 0.01 mg, vitamin c 70 mg, nicotinamide 9 mg
Rinavit susp	Per 5ml: vitamin A 1000U, vitamin b 1.5mg, riboflavine 1.5mg, nicotinamide 10 mg, vitb12 2.5 mcg, vitamin C 40mg, vitamin d 200 U
Multivit tablets	Per tablet: thiamine 1mg, pyridoxine 0.5mg, riboflavine 1 mg, vitamin C 15 mg, nicotinamide 7.5 mg, cal-d-panthenaat 1 mg
Albendazole 200	Per tablet: 200 mg
Albendazole 400	Per tablet: 400 mg
Ivermectin	Per tablet: 3 mg
Amoxicilline susp	Per 5 ml: 125 mg
Amoxicilline caps 250	Per tablet: 250 mg
Cotrimoxazol syrup	Per 5 ml: 200mg sulfamethoxazol, 40mg trimethoprim
Cotrimoxazol tabl	Per tablet: sulfamethoxazol 400mg, trimethoprim 80mg
Metronidazol tabl	Per tablet: 200 mg
Erytromycin susp	Per 5 ml: 125 mg
Erytropham susp	Per 5 ml: 100 mg erytromycin
Erytromycin tabl	Per tablet: 250 mg
Eye/ear drops chloramphenicol/ ciprofloxacine	Chloramphenicol 0.5% / Ciprofloxacin 0.3%
Labstatin (nystatine susp)	Nystatine
Hydrocortison cr	Hydrocortison 1%
Elycort hydrocortison cream	Hydrocortison 1%
Supricort fluocinolon + neomycine cream	Fluocinolon acetonide, neomycine
Dactacort cr	Miconazol, hydrocortison
Bactroban cream	Mupirocine
Flamazine	Silversulfadiazine