Medical Checks for Children

Medical Report
The Philippines, 2014

Ines von Rosenstiel / Roelof van Ewijk, October 2014

Introduction

From 23 th to the 30th of October, for the third time a Medical Checks for Children (MCC) team visited Barangay 105, Tondo in Manila, the Philippines, a poverty stricken low housing area. MCC checked and treated 867 children between 0 and 12 years old free of cost.
The Barangay and its families live is an area with limited access to medical facilities. During 2013/2014 the dumpsites around former Smokey Mountain had closed down and the slum dwellers were moved into Temporary Housing complexes. Around 50 to 100 families live in each building, there is no water point per building. The main source of income is scavenging and charcoal production. There are very little latrines, sanitation nor sewage, creating major health problems.
This third medical mission of MCC in the Philippines was organized in close collaboration with the local St. Martin de Porres Foundation, led by Father Boyet, and headed by Eunice Cheng Chua, Executive Director.
The Dutch team consisted of 10 members: the organizing leader Yvonne Verdonk (neonatal nurse), medical leaders Ines von Rosenstiel (pediatrician) and Roelof van Ewijk (pediatric resident), Ewout Weve (general physician), Nalini Radhakishun (pediatric resident), Anita Smith (child youth nurse), Arnoud Rikkers (former banker), Reina van Geels (tropical doctor), Mahsa Bagher (consultant) and Mahasti Sadaghat (consultant).
Technical equipment, toothbrushes and some of the supplies were brought from the Netherlands by MCC team members. The medication was ordered by Roelof van Ewijk at a local generic drug company.

The 2013 new build Centre Salvatore was again the location for the medical checks. The ground floor consists of a central hall, kitchen, an office for the nurse and doctor, and a fully equipped dentist office. At the second floor there is a big multifunctional room, and an administrative office. The third floor has a dormitory and several class rooms. The fourth floor with the 2014 colorfully painted dormitory was offered to the MCC team. The fifth floor is an open air space, covered with a roof, where several workshops are hosted to the people of Tondo together with vocational training programs.
From June 2013 onwards a structural major feeding program is in place to feed a huge group of malnourished children, in combination with multivitamins and anti-worm treatment programs.

Support from the local team included the following (amongst others):

- Selection of patients and care givers in the nearby communities
- Facilitating board and lodging for all MCC team members at check site
- Prior announcement of the medical mission in the location
- Guiding patients and facilitating transportation to local clinics/ hospital for further diagnostic examination and critically ill admittance
- Making copies of all necessary paperwork and administrative support
- Giving support in ordering and delivering extra medication during the medical mission
- Giving support to the MCC team during the medical mission
- Arranging the communication and collaboration with the local hospitals for medical follow up

On the 23th of October, as a kickoff of this year's medical mission, the Philippine and the Dutch team delivered presentations to share the results of last year's medical mission and follow up of the more severe cases. As a wonderful surprise the operated or rehabilitated children from 2013 MCC mission actually entered the room with their caretakers to present themselves to the team. For the new volunteers of MCC the new slum tour, headed by Nympha and Remy, provided the context of the medical mission and was again a unique experience, giving insights in the hard living and working conditions of the scavenger families. Roelof (main lecturer), Yvonne and Ines participated in interactive, lively workshops with the local volunteers and nurses on leading childhood killers such as diarrhea, pneumonia and asthma. The GAPPD approach by WHO/UNICEF was presented and further discussed. Posters of GAPPD were left behind to facilitate implementation of the strategy.

The Philippine team consisted of one driver and 39 volunteers/translators making the mission a great success.
The MCC team was again very happy with the sublime organization of the local team. Great compliments and special thanks go to Luisa and Eunice for the excellent follow up of the 2013 malnourished and special cases, who are followed-up with great care, precision and detailed reports.
We hope the volunteers will continue to inspire their communities in the same way they inspired us as they play a vital role in spreading awareness and knowledge about child health and hygiene. And last but not least, we would like to thank the children and their caregivers who came to the check for their friendly, warm presence.

Medical Checks for children on location

Table 1: Number of checked children per day

Date	Number of children
25 October 2014	182
26 October 2014	142
27 October 2014	140
28 October 2014	160
29 October 2014	125
30 October 2014	118
Total	867

The children were seen free of cost, at the MCC carousel as follows:

1. Registration
2. Height and weight (saturation occasionally)
3. Blood test (hemoglobin)
4. Physical examination
5. Distribution of medication (pharmacy)
6. Food station
7. Education on hygiene, tooth brushing (a tooth brush was given to each child) and hand washing

Data collection

Each child was accompanied by a caretaker. Anthropometric measurements were recorded, and a finger prick sample was taken to determine the hemoglobin (Hb) concentration. Each child was thoroughly examined by a medical doctor. Prior treatment of deworming and actual medication, including iron and multivitamin intake, were noted. An extended patient history was recorded, with specific attention to respiratory, cardiologic, gastrointestinal, infectious, and developmental / neurologic problems. Caretakers were asked to bring medical reports of known diseases. Local volunteers, who spoke English fluently, were assigned as translators. At the end of the MCC carrousel, the data of the checked children were put in the MCC data base, added on by a specific file for follow up patients.

Diagnosis and categories of ailments

During the week, MCC checked 867 children. Other than the population checked in 2012 and 2013 this year's children selected showed a higher percentage of younger children under 5 years of age and a remarkable high percentage of major birth defects, such as cleft lip / palate, anorectal malformations, hernias, clubfeet, congenital heart defects, hemangiomas and far more handicaps and disabilities due to birth asphyxia or sequelae of tuberculosis. Disabilities included emotional, developmental and physical impairments. Aside from the more basic healthcare needs catered for by the MCC public health program the team's effort was additionally focused on the children with special needs of the often complex cases.

The main alleged causes were respiratory diseases (121/867), such as asthma (5%, N=42), bronchitis (4.0%, N=38), pneumonia (4%, N=35), tuberculosis (0.5%, N=4). Other diseases diagnosed were active worm infection (5.0%, N=40.), otitis media with effusion (4.0%, N=31), otitis media acuta (1%, N=8), tonsillitis (01%, N=5) and diarrhea (3 %, N=27) of which 2 children with dehydration.
Also skin disease was a common clinical finding (21%), with the more specific clinical diagnoses: infected wounds (3%, N=27), dermatomycosis (3%, N=26)), impetigo (4%, N=35), scabies (1%, N=13) and eczema (3%, N=26). Caries was present in 26 %, N=225 children, of which in 70 children pain was accompanied (8 %, N=70).
Finally, among the children examined 28 % were free of clinically detectable disease.

The overall health and nutritional status of the children was moderately poor, with **43 % (N=369) stunting, 36% underweight (N=311)**, and **18% anemia (N=152)** of which 2 children had a deep anemia (<5 Hb mmol/l). Due to the high risk of mortality and morbidity of children under five, the focus of MCC is on checking vulnerable young children. Compared to previous years this goal was even better hit with 59.5 % (N=516) of the children being five years or younger, including 197 babies.

Table 2: Age and gender distribution of checked children

Age in years	N	%
≤ 1	197	23
> 1 - ≤ 5	457	53
> 5 - ≤ 10	317	37
> 10 - < 18	93	11
Boys	439	51
Girls	427	49
Total	867	100

Table 3: Prevalence of main diagnoses

Diagnosis	N	%
Anemia	152	18
Underweight (w/a)	311	36
Wasting (w/h)	118	14
Stunting (h/a)	369	43
Caries without pain	155	18
Caries with pain	70	8
Active worm infection	40	5
Pneunomia	35	4
Asthma	80	9
Clinical vitamin deficit	47	5
Otitis media	39	5
External otitis	3	0.2
Dermatomycosis	26	3
Scabies	13	1
Infected wounds	27	3
Impetigo	35	4

w/a: weight/age, w/h: weight/height, w/a: weight/age

Further diagnostic evaluation

Multiple X-rays were ordered on the spot and several children were referred to the laboratory for diagnostic tests. A CT scan was ordered for a child with a severe case of hydrocephalus. Several children need further evaluation with CT scan of MRI, therefore sponsors are being sought.

Treatments

Most of the ailments could be treated on the spot and consisted mainly of multivitamins, iron, mebendazol (anti-worm), and antibiotics.

Table 4: given treatments

Treatment	N	%
Multivitamins	459	53
Iron	41	5
Mother iron	20	2
Preventive anti-worm treatment	321	37
Acute anti-worm treatment	66	8
Amoxicilin	79	9
Clarithromycin	24	3
Ivermectine (scabies treatment)	14	2
Ventolin	80	9
Prednisone	20	2.5
Anti-bacterial cream	52	6
Anti-fungal cream	26	3
Hydrocortisone	24	3

Referrals

Due to the high number of disabled children and children with congenital defects in this year selection the amount of referrals and follow up cases showed a steep increase compared to 2013. A higher percentage of these children will require a second opinion or assessment/ management plan by an interdisciplinary team in the Philippines and/or the Netherlands.

Table 5: Follow-up of all children per geographical location

	All N = 867		Tondo N = 867	
Follow-up	N	%	N	%
1. Dentist	66	8	66	8
2. Specialist in hospital	23	3	23	3
3. Revisit	33	4	33	4
4. X-thorax	4	0	4	0
5. ECG	0	0	0	0
6. Urine + Kidney function	1	0	1	0
7. Bloodtest after 3 months	15	2	15	2
8. International organisation	12	1	12	1
9. Other	174	20	174	20

MCC referred 41 acute and more chronically ill children to the medical specialists in metro Manila for further diagnoses, or follow-up, such as compliance of further treatment, urine check, and full blood count re-checks (15 children) after 3 months.

Acute situations

One critically ill child arrived at the check site in a life threatening situation and was admitted to the local hospital after initial successful stabilization at Centre Salvatore. The boy suffered from respiratory and circulatory insufficiently due to a cyanotic spell with Tetralogy of Fallot accompanied by pneumonia. After further stabilization with morphine and continuation of oxygen therapy in the local hospital, he was admitted to the intensive care ward of the MCH. After treatment with intravenous antibiotics he was released home and put on high priority waiting list for operation at the Philippine heart center. The local investment after last year's mission in an oxygen container and portable monitor were highly valued in the life saving setting.

One schoolboy, who could hardly walk due to extreme pain in his buttocks, was admitted to the orthopedic hospital with the diagnosis of pyomyositis. He was treated with high doses of painkillers, long-term intravenous antibiotics and surgical intervention.

A toddler was send to clinical outpatient pediatric department because of extreme muscle weakness due to low potassium. She was hospital admitted due to life threatening hypokalemia despite oral supplementation. Her case will be further discussed with a Dutch nephrologist.

A 27 day old malnourished infant with full blown sunset phenomena due to a severe hydrocephalus was referred to the Hydrocephalus foundation, were he had a CT scan and was put on the urgent operation list. Sponsorship for the operation is needed. Meanwhile a nasogastric tube was inserted on the checks for feeding needs, as he also has a severe failure to thrive.

Follow up

Eight patients with **cleft palate** were identified, which will probably be referred to an oral surgeon from the United States, who might come in 2015 to conduct these operations. Miss E. Cheng Chua, the director of the local organization, will be the contact person for the caregivers.

Three children with **clubfeet** will be referred to the orthopedic hospital in metro manila for casts or operation. Knowledge transfer into the community for timely action with casts, the Ponseti method, as a noninvasive, low cost procedure to correct the clubfoot is urgently needed.

Three children with Potts disease and disabilities will be discussed with an orthopedic surgeon, efforts for enhancement of their quality of life with additional operations is of great importance.

Three children with **anorectal malformations** will be discussed with the local surgeon. Two already have a protective colostomy. Money for a later repair needs to be found.

Five patients with (possible) **heart diseases** were identified. Acute consultation of the critically ill boy with tetralogy of Fallot, one girl with ventricular septal defect and a girl with pulmonary hypertension were seen by dr. M. Esguerra in the Philippine heart Centre, on the days of the medical checks. The other patients will be seeing a cardiologist in time for further evaluation. When there will be a clear indication for operation, and all relevant data are gathered, the Nieuwendijk foundation will be asked for sponsoring these specific heart cases.

Ten patients with an **inguinal hernia** were referred for ultrasound in time and put on a special list for possible surgical repair in the future. Three patients with more acute eye problems (congenital cataract and tumor in the eye) will be referred to an eye doctor in the coming weeks.)

Four children with **haemangiomas** in the face region will be discussed with a

Dutch plastic surgeon for possible treatment.
Eight children with spastic hemiplegia/**tetraplegia** and handicaps due to severe birth asphyxia were referred to Eunice and Louisa for possible enrolment into physiotherapy and feeding programs due to a severe shortage of rehabilitation facilities in the community.

Dental referrals

In total 13 were referred to the Philippine voluntary dentist, all visitations and treatments free of costs. The criteria for referral to the dentist were (1) children under 7 and caries with pain accompanied with wasting, stunting and/or underweight, (2) children above 7 and caries with pain, (3) abscess and caries.

1: Growth abnormality and malnutrition

Malnutrition has been related to poor cognitive and school performance. There is strong evidence to suggest that malnutrition places children under the age of 5 at increased risk of death. Literature from the Philippines shows that 4 Million children are chronically malnourished. The main factors contributing to malnutrition in Manila are urban slum poverty, lack of sanitation, poor living conditions (overcrowding), child labor and child abuse, lack of protein intake, iron and multivitamins.
The prevalence of stunting, wasting and underweight in our high risk population was very high 43%, 17 % and 39 % respectively. A recent 2014 Philippines statistic refers to overall underweight in children of 20.2 percent, illustrating the inequalities of our vulnerable population living in a fragile community.

Apart from the above mentioned factors leading to malnutrition, the prevalence of stunting is also correlated with chronic exposure to chemicals such as lead and cadmium on the dumpsites. Clinically many children and their care givers mentioned loss of appetite in their children, which, apart from being related to pinworms and caries with pain, is a leading symptom of lead pollution. The lead exposure in the Barangay 105 zone, although exact data are missing, is mainly caused by the deplorable housing conditions near the Marcos highway with heavy traffic and air pollution of diesel trucks, busses and jeepneys. Also charcoal burning, carbon monoxide, heat, and waste add to the cumulative exposure of the children to chemical pollutants.

Malnutrition is thought to account for one third of all deaths of children under five (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 should be noted that reference data were only available for certain heights, weights and ages (as specified above), leading to the following general prevalence of growth abnormalities in the communities we visited.

On the location checked, the typical diet is rich in carbohydrates, mainly rice and street food but deficient in proteins and other food categories. In 2000, the World Food Program released figures that 60% of urban slum households in the Philippines were unable to fulfil basic nutritional requirements. On the other hand overweight is also on the rise, and should be monitored. Obesity in childhood in preschool age ranges at 3.3 percent in the Philippines, and is a perennial problem of highly urbanized cities. It should be addressed by promoting behavioral modification of diet, physical fitness activity and other healthy lifestyle habits.

This group of children showed high prevalence of all 3 types of malnutrition. San Martin de Porres offers an effective feeding program with healthy foods supplemented with multivitamins and iron. In comparison to the 2013 population there was an increase in children with wasting, which can partly be explained by the high percentage of selected children with syndromes and/or developmental problems, such as spasticity.
For many malnourished children, St Martin des Porres highly effective feeding program will secure them with a nutrious diet.

We treated all children with growth abnormalities with multivitamins for 3 months, and spread the knowledge to the care takers about the necessity of fruit and green vegetables in their child‘s diet. Advices were customized to the availability and costs of local fruits highlighting pineapple, papaya and mango rich in vitamin A and C.
During the check days all children were provided a warm meal with spaghetti and tomato sauce, donated by San Martin de Porres, accompanied with a fruit (apple/orange/pear), so none of the children left with an empty stomach.

During the medical checks, we paid special attention to issues of hygiene and nutritional advice. We emphasized hand-washing, fruit and dark green vegetable intake. We noticed that a lot of mothers fed their babies up to the age of one year or more, exclusively with breast milk. For babies, we advised exclusive breastfeeding up to six months and then to start with the introduction of additional foods. Philippine data shows that 73 % of all children are breast fed up to 6 months, and up to an average of 20 months. Most probably the children are breast fed long time, since this is a way of birth control.

2: Anemia

Anemia is the most prevalent micronutrient disorder. To date, no research figures exist on the number of children in the Philippines with anemia as a result of poor health and nutrition as well as poor environment.
The prevalence of anemia in the group of children we checked this year in Tondo was 18 %. Last year anemia percentage was around the same, and twice as low as the first years check in 2012 with 45%. One of the main reasons could be the fact that a considerable amount of children we checked are or were already enrolled in the local feeding program, which includes vitamin supplementation and anti-worm treatment. Other possible attributable effects of environmental changes, dietary changes and other changes in the communities cannot be excluded. Especially the children under 5 years of age, 99 children in number, make up 66 percentages of the 152 children detected with anemia and are at highest risk.

Anemia is largely attributable to poor dietary quality (diets low in key nutrients) and high disease loads. To date, 95% of the anemia is due to iron deficiency. There is no data on lead intoxications in our children checked.
In the Philippines there is no national policy to provide iron supplements to pregnant women and young children up to 5 years of age. While iron deficiency is frequently the primary factor contributing to anemia, it is important to recognize that the control of anemia requires a multi-faceted approach which, through integral interventions, addresses the various factors that play a significant role in producing anemia in a given community. In addition to iron deficiency, other nutritional deficiencies, infectious diseases, such as worm infections, and other chronic infections, particularly tuberculosis, play a significant role.

Table 6: Number and percentage of anaemic children per age category

	Anemia	
Age in years	N	%
≤ 1	54	27
> 1 - ≤ 5	45	17
> 5 - ≤ 10	41	13
> 10	12	3

We treated the children with anemia (and their mothers if they were breast feeding) with multivitamins if they were underweight, stunting or wasting. If there was only anemia iron supplements were given for three months. Only 2 children showed a hemoglobin level below 5.0 mmol/l and will need a recheck after 3 months.
To combat anemia, vitamin C intake is important because vitamin C facilitates the uptake of iron in the gut (just as milk and tea counteracts it).

3: Worm treatment

In the location checked, the prevalence of worm infestations was moderate. We treated therapeutically 66 children (8 %), because care takers saw worms in the stool or because of other clinical signs. Prophylactically we treated 624 children (72%) with one tablet of Mebendazol 100 mg, because they did not have a deworming treatment within 6 months. A considerable group of children (27%) were already enrolled in a local bi-annual anti-worm campaign.
Pinworm infections and other helmiths are widespread in the Philippines and most common amongst children, especially those who play in soil containing mature eggs and who do not have good hygiene habits.
If whipworm infection is serious, it causes intestinal lower or epigastric pain, lack of concentration, and fatigue. In severe and prolonged infections impaired physical or mental development in children results, most likely to be multifactorial, incorporating vitamin deficiencies and malnutrition caused by the abnormal functioning of the intestine.
On some occasions a whipworm may be noticed when it crawls up into the throat, and exits through the nose or mouth, as described by several caregivers in Tondo.
A strong relationship exists between Ascaris Lumbricoides, or T. Trichiura infection and anemia.
On the spot health education was aimed at increasing awareness of worm transmission, the different problems caused by intestinal helminth and the importance of deworming every six months.
Ways of improving personal hygiene and sanitation through hand washing, nail trimming, wearing of shoes/boots and use of a latrine and clean water supplies were encouraged, with realization of the deplorable housing conditions of many families and the environmental hazards of the dumpsite.
Although all members of a population can be infected by intestinal parasites, those who are at most risk and would benefit most from preventive interventions such as the deworming campaign are the pre-school and school children.

4: Respiratory diseases

In total 121 children suffered from respiratory diseases such as bronchitis and asthma (9%, N=80), and pneumonia (4%, N=35). Evidence from literature supports our findings that living near or on a hazardous waste site with persistent organic pollutants (POP) increases the risk of respiratory disease in children. POP include dioxins, furans, polychlorinated biphenyls and chlorinated pesticides. These substances are very persistent in both the environment and in the human body. They also have adverse health effects on several different organ systems, including the immune function. A depressed immune system is expected to increase the incidence of infectious diseases. Several studies demonstrate elevations in respiratory infections, matching the high prevalence of symptoms such as reported chronic cough and cold in our population.

Exposure of (semi)volatile compounds in air pollution also results in increased risk of recurrent middle ear infections (39 children, 5 % infection).

A high number of children were diagnosed with toxic asthma (a total of 80 children (7.0%). This is almost the amount of children compared to the group in 2013. On the spot we could treat several children with salbutamol nebulizing treatment, who could be monitored clinically together with the portable saturation device. For the more severe cases we started a 3 day rescue treatment with oral corticosteroids (prednisone) additive to the Ventolin oral reliever treatment.

The non-availability of inhaled corticoid containing medications for effective asthma treatment is a great worry. MCC will put effort in to look for treatment alternatives and building real life, local asthma management protocols.

The peak of asthma patients and pneumonia was between the first year of life and 5 years.

Table 7: Number of asthmatic children per age category

	Asthma
Age in years	N
≤ 1	9
> 1 - ≤ 5	17
> 5 - ≤ 10	10
> 10	6
Total	42

Table 8: Number of pneumonia per age category

	Pneumonia
Age in years	N
≤ 1	5
> 1 - ≤ 5	13
> 5 - ≤ 10	10
> 10	7
Total	35

Although we cannot change the cumulative exposure of the children living near the dumpsite on such a large scale with the high amount of outside and inside air pollution, transferring knowledge is essential to the caregivers how to manage the asthma effectively. For the 2015 medical mission we like to further optimize the treatment protocol of toxic asthma, together with a pediatric pulmonologist on the next MCC team.

5: Skin diseases

Skin disease was a common clinical finding (21%)), with the more specific clinical diagnoses: wounds (5%, n=46) dermatomycosis (3 %, N=26), impetigo (4%, N=35), scabies (1%, N=13) and eczema (3%, n=26). Antifungal cream (sometimes in combination with hydrocortisone) was given for fungal infections (dermatomycosis) and hydrocortisone cream was given for different forms of dermatitis and eczema, infected wounds were treated with Fusidin cream from the Netherlands.
In the Philippines benzyl benzoate lotion is the first line scabies treatment, which was given out to the care givers of young children. Older children with a weight above 15 kg were treated with a tablet ivermectine. Preferably, soaps are needed to wash clothes and bed linen at high temperature (60ºC) to kill off the scabies mites. A good alternative is to put infected clothes and bedding into a sealed plastic bag for 3 days in the sun.

6: Dental problems

In general high caries prevalence was found: 225 children (26%), of which in 70 children pain was accompanied (8%). This percentage is lower than in the precious years, which is a positive development. Most probably the positive oral health status also reflects the cooperation within the barangay with the local dentist coming to St Martin del Porres every one or two weeks. Fluor is not added in the drinking water in Manila. The prevalence of caries was mainly due to either deplorable dental care and/or the intake of sweets and sugary beverages.
MCC was grateful to the local Philippine dentist, who was working with us that very week. We could directly refer the children to her after the medical check, supplying additional painkillers after extraction procedures.
We stressed the importance of proper dental hygiene and the banning/limitation of sugary products, beverages and fast food to the children, their caregivers and their teachers. We are aware of the fact that sweets are (globally) the main way for the care givers to please the

children in their harsh situation. Therefore, many small changes need to be made, starting with structured oral health promotion activities within the Barangays.
On the medical check days volunteers took part in the health promotion activities with teaching proper hygiene to all children and handing out colorful toothbrushes.

Education health workers, caregivers and other local helpers

One of the most important tasks of MCC is to encourage the reaching out of health education to the caregivers and older children.
Based on WHO estimates, 25% of the global burden of disease is due to preventable environmental exposures with the greatest burden to children in low-income and developing countries. Health care and social welfare providers in Tondo are at the front of observing adverse environmental impacts on children. Training and specialty expertise on environmental health in the dumpsite pediatric community is largely desired.
During the week the mixed Philippine-Dutch team shared knowledge about common diagnoses of frequent illnesses and treatments. We especially focused on anemia and malnutrition, balanced diet, infections, parasites, helminthes, and respiratory infections. Nutritious food, deworming, iron and vitamin supplements, as well as hygiene should be key components of local public health promotion. Specific disease and its management, such as pneumonia, diarrhea and asthma were addressed by separate workshops and will be intensified in 2015 medical mission.

Future medical needs and conclusions

The results above show the ongoing need for preventive medical help and community health care for the children in Tondo. MCC is again positively impressed by the high standard medical services which have been put in place since their first visit 2 years ago, together with the local knowledge, skills and ownership of the medical carrousel elements.

One of the additional projects could be to enhance the knowledge about asthma in children due to the toxic environmental living conditions and its major burden on the quality of life. High risk population level recommendations and access to relievers/rescue medication are necessary and should be advocated. Special attention should also be given to health literacy of the parents and concrete signs of shortness of breath explained when to look for acute help.

For minor birth defects, such as clubfeet, knowledge and information could be spread in the community by local health workers with the advice to see a nurse or doctor early after birth. Early intervention in the first weeks of life to children with clubfeet and treatment with casts is a cost- saving, very effective treatment option and limits the costly operations and sequalae later in life.

Capacity building and strengthening of the local health services

MCC is strongly pledging for a second and third nurse to assist the head nurse Luisa for the year- round care of the children at St Martin des Porres. Due to growing numbers of children within the feeding program and the many extended, high quality services already given, up scaling of nursing man / woman power is urgent. A private team member‘s donation fills the acute void by paying a year’s salary of a second nurse, which has been hired already. Funding opportunities for additional nursing needs be on the future agenda.
People‘s utilization of local health service depends not only whether there is a (small) fee or access to medicines, but also where they expect to find responsible, knowledgeable and friendly health staff. That is what MCC found with St Martin des Porres, and is strongly motivated to support their future plans of expansion of their services to the community.

The medical report Philippines 2014 could (by efforts of St. Martin de Porres) be translated into Tagalog, so that more partners in the communities and local health workers will have access to the results and follow-up in the years to come.

General recommendations

- Preventing leading causes of disease: HELMITHS.
  It is important to stress the importance of regular (6-monthly) de-worming of all children above 2 years up to fourteen year of age. Maybe the health centre can help to implement a structural anti-worm program for the whole Barangay area. The children who were dewormed by MCC will need a second anti-worm pill in 6 months from now (March2015).
- Preventing leading cause of disease: MALNUTRITION.
  Good eating habits, with discouragement of fast food and sugary beverages with emphasis on nutritious foods, including fruits and vegetables rich in iron and vitamins. Health promotion classes for mothers could be started in the local Barangay hall, maybe extended by a health education program for pregnant mothers with special attention to breast feeding and good motherhood.
- Preventing leading causes of disease: CARIES. Special emphasis needs to be put on health promotion family classes directed to personal hygiene in everyday life, the importance of hand washing with soap and dental care.
- Influencing health-related behaviors: knowledge, beliefs, skills, attitudes, values and support.
- Information gathering within the community about air pollution and its risks for asthma and respiratory infections. Targeted information on how to manage asthma effectively, with the local health centre being the spill for asthma medication, spacers, nebulizers, oxygen and saturation device.
- Scavenger children are affected by severe environmental risks, such as air pollution, inadequate sanitation, disease vectors, chemical waste and injuries, additional to poor nutrition, stress, domestic violence and poor schools. Due to their cumulative high health risks they need all the support they can get.

Final remarks

The 2014 medical mission in the Philippines was another rewarding experience touching the hearts of all the team members. Both the Dutch and the Philippine group learned from last years, which made the logistics even more smoothly and effective. Cooperation and collaboration with the local and Dutch expert team is exiting, as well as the first steps taken to look at mutual treatment protocols (asthma). The scavenger population teaches us much about life: living in appalling conditions yet welcoming us with warm smiles on their faces and being responsible, child loving parents.
It is stimulating to work with team members from different cultural backgrounds, exchanging ideas and learning from each other in such a friendly, warm and respectful way. The positive energy, sense of belonging and forming ONE caring team for the children in need touched everybody's heart.
We are inspired by the efforts of our host country facing the vast medical demands with limited supplies and seeing the local clinic bloom.

In October 2015 the MCC team will return to Tondo, Manila to see the children once again and work together with all the wonderful people who put their time and energy into creating a better world for us all.

Special thanks go to the core team: Ms. Eunice Cheng-Chua and Ms. Luisa Celi, and the rest of the local team with whom the MCC team would love to work together again next year. We hope to see fruitful cooperation with the local community and Barangay health centre in the coming years in order to achieve future goals.
On behalf of the MCC team Philippines 2014

Ines von Rosenstiel and Roelof van Ewijk, medical mission leaders