

FINAL REPORT

for

Fondation Eagle



Saving young lives in the villages of Malawi

world medical fund for children

Registered charity number 1063756 in England & Wales and SC046207 in Scotland

F.E. reference: 557
Date of acceptance: 27th October 2020
Amount: £26,290. Received on the 5th November 2020.
Name: Mobile Clinics: Saving young lives in the villages of Malawi and the provision of PPEs.
Location: Nkhotakota district, Malawi.
Project period: December 2020 to July 2021.
No of beneficiaries: 20,802
Conversion rate: Value of the £UK to MKW has varied from 984Mk to 1,115Mk – effective rate for most transactions for this project has been 1,005Mk. Value of the £UK to CHF is calculated at £UK = 1.18CHF

Budgets & Expenditure:

Item	Request	Expenditure	Supplier	Balance
Face shields	1,405	1,373	Pharmavet	32
Gowns	81	-	-	81
N95 masks	4,433	4,466	Onsa	(33)
Surgical masks	680	1,169	Onsa	(489)
Sanitiser	2,403	1,432	Pharmavet	971
Medicines	16,137	15,027	Pharmavet	-
"	"	2,263	"	(1,153)
Children with cancer	2,112	1,728	Local	384
TOTALS	27,251	27,458		(207)

The total expenditure was £27,251 against a grant of £26,291 plus an underspend on a previous project of £960 – making an overspend of £207.

Face shields; our clinical team experimented with goggles but found that continued usage lead to inflammation and discomfort so they have gone back to using face masks.



Our work:

The need for our mobile clinics grows exponentially; especially now when faced with the COVID pandemic, people tell us they feel far safer at our mobile clinics than at hospitals or health centres.

As we so often hear “You always turn up, you always have the best clinical staff and nurses and you always have all the medicines in stock...”.

The problem for we face every day is the demand far exceeds what we can deliver. In a perfect world we would run another vehicle, employ two more doctors/clinical officers and four more nurses – but as ever, the barrier is the cost.

On an average clinic day five years ago, 350 sick children would be seen by two clinicians. Allowing one hour's travel each way and working an eight-hour day that gave around two minutes diagnostic time per child.

Since then, we have significantly raised the quality of care we deliver from working with just a stethoscope and an otoscope - to today where we carry a portable ECG (Electrocardiograph) that provides A4 print outs, an ultrasound machine and have our own FBC (Full Blood Count) machine. This means we can diagnose and treat a far wider range of more serious conditions – but it does mean spending considerably more time with each child patient.

This means we have to limit the number we see at every clinic site - otherwise the clinic would never end. One significant change we have introduced in our Modus Operandi is triage by our mature and highly experienced nurses (to weed out those parents and guardians who bring their children for a free check-up when little or nothing is wrong) so that the most needy seriously ill and dying children are seen.

Children with cancer:

With our advanced diagnostic equipment (in particular the ultrasound device) we are now far better equipped to identify those children who have cancer. We are continuing the successful protocol of referral to the oncology unit in Lilongwe with nine children and their accompanying parent/guardians benefitting from this initiative.

Malawi and COVID:

The conditions in Malawi seemed tailor made for disaster when faced with the COVID pandemic with widespread under-nourishment, a low level of health in general, the population living in close proximity in the towns and cities with no lockdowns and a significant number of the population with damaged immune systems.

We cannot yet explain why the pandemic appears to be less virulent in Malawi and other sub-Saharan African nations. We understand how Sars-CoV-2 enters human cells by binding on to the Ace-2 receptors (that play a role in blood pressure control) in the upper respiratory tract which is where the virus first makes its home before migrating to other major organs.

Sars-CoV-2 then attacks various organs but the most damage is from the overreaction from the immune system, the “cytokine storm” of proteins released by the body in response to infection that bring inflammation as part of the healing process.

There have certainly been deaths; we hear of high-profile public figures dying and our clinicians have lost friends and colleagues. Whilst we have not seen the explosion of infections we anticipated, the official figures may not reveal the true extent of the effects of the pandemic.

The official data to August 2021.

Nation	Population	Cases	Deaths
Malawi	20 million	52,357	2,185
UK	68 million	4,500,000	132,000

We will continue to base our assessment of the situation on what we see working in the front lines.

Vaccines:

Malawi was fortunate to be one of a small group of nations in sub-Saharan Africa given early access to vaccines; the take up however was less than expected and many precious phials of vaccine have had to be destroyed because their expiry date was passed.

We were able to ensure our team were amongst the first to be vaccinated, aided doubtless by our Chief Clinical Officer's excellent working relationship with the government district hospital.

PPEs

The vitally needed protection for our team arrived safely from Switzerland; shipping goods to central Africa and their importation can be a major challenge but the whole process and link-up with Onsa Medical went very smoothly.



As we work on the front lines it was vital to ensure our team were properly protected as soon as the vaccines became available.

Vaccination:



Benjamin, our paediatrician receiving his jab.



Triage at our clinics; the “Red and Blue” methodology we developed last year is proving to be a great success.



Christina, one of our highly experienced nurses giving medication to a baby.

Case study:

Hookworm related Cutaneous Larva Migrans

Patient Particulars

Name: Feston B.
Age: 8 years
Sex: Male
Weight: 22 Kg
HIV Status: Unknown
Clinic Site: Nkhono

Complaints

Itchiness and discomfort at his back for more than one month

History of Presenting Complaints

The boy started complaining of generalised skin itchiness around 4 weeks ago. Two days later, there was a local pruritus at his back and then his friends were able to see some marks at his back which had characteristic meandering, snake-like burrows.

Past Medical History

No previous hospital admission

Drug History

Nothing of note

Family and Social History

The boy is the first born in a family of 3 children. The family moved from Balaka district which is in the southern region of Malawi to Nkhotakota. The father is a fisherman, and the mother is a housewife. The family doesn't have a bathroom and the children take baths in shallow waters of Lake Malawi close to where they live. It is common to encounter stray dogs in these settlements.

Physical Examination

Generally, the child was stable and not in obvious pain. His body temperature was 36.9°C, Respirations of 20 cycles per minute and Pulse rate of 91 beats/minute. His back and feet had serpiginous, erythematous lesions with excoriations and lichenification.



Diagnosis

Hookworm-related Cutaneous Larva Migrans

Management

Albendazole 400mg daily for 3 days

Discussion

This is a very common condition we see at every clinic. A larva of the cat or dog hookworm (*Ancylostoma brasiliense* or *caninum*) is the usual cause of cutaneous larva migrans in most African countries.

- It is the most common tropically acquired dermatosis whose earliest description dates back more than 100 years.
- The condition is endemic in Lake shore areas of Lake Malawi.
- In Lake shore areas where we conduct mobile clinics the condition is common in children who walk barefoot on sandy beaches.

It is mostly a self-limiting skin condition but, in some cases, treatment is indicated if it is persisted and causes discomfort. The boy under discussion needed urgent treatment and proper health education as the condition had persisted for more than a month. This is probably due to recurrent infections.

The lesions caused by the larva may itch, sting or be painful. The boy described the sting and painful sensation as unpleasant and disturbed his sleep on most of the days. It is not surprising to see that affected body parts this boy included the back. Children along the Lake in these areas tend to lie on their backs on sandy beaches after enjoying baths in shallow waters of the Lake.

The important part of the management given to the boy and his parents was health education. He was advised to avoid lying, sitting, and walking barefoot on sandy beaches and to cover the ground with an impenetrable material when sitting or lying down.

References

1. **Norma Saxe, Susan Jassop, Gail Todd.** *Handbook of Dermatology for Primary Care - A Practical Guide to Diagnosis.* Cape Town : Oxford University Press, 2017. ISBN 978 0 19 5761337.
2. **al, David T Robles et.** emedicine. *Medscape.* [Online] Medscape, October 9, 2020. [Cited: April 22, 2021.] <https://emedicine.medscape.com>.

Case study:

Asthmatic Attack with Severe Exacerbation

Patient Particulars

Name: Aubrey C.
Age: 14 years
Sex: Male
Weight: 33 Kg
HIV Status: Non-Reactive
Clinic Site: Namakwati

Complaints

Coughing for 7 days
Fever for 7 days
Difficulties in breathing for 2 days

History of Presenting Complaints

- The child is asthmatic and 7 days prior to the time we saw him he started coughing which was dry in nature.
- He had run out of anti-asthmatic medications.
- Two days prior to the day we saw him he started having shortness of breath but had no obvious noisy breath.

Past Medical History

Had two previous hospital admissions due to pneumonia and asthmatic attack
No previous surgeries

Drug History

He has been taking Salbutamol tablets daily but had run out of them; he has never used salbutamol inhaler before.

Family and Social History

He was an only child and his mother died due to HIV related illness when he was 6 years old. Since then, his grandmother has been taking care of him; he is in grade 5 of primary school.

Physical Examination

He was dyspnoeic with oxygen saturation of 90% on room air. His respiratory rate was 30 cycles per minute. He had no cyanosis and no nasal flaring. His chest examination revealed some chest in-drawings, bilateral wheezes and some crackles. He was pink in conjunctivae and in his palms. Nothing of note was detected on abdominal examination

Differential Diagnosis

1. Asthmatic Attack with Severe Exacerbation
2. Sever Pneumonia

Management

1. Ten puffs of salbutamol inhaler through spacer and repeated after 10 minutes
2. Amoxicillin 500mg TDS for 5 days

3. Paracetamol tablets 500mg TDS for 3 days
4. Salbutamol inhalers to continue puffs at home
5. Prednisolone 30mg OD for 7 days.



We kept the child in a well-ventilated room as a short stay patient to monitor his response to the treatment we gave him.

After the second round of puffs the child was stable and his oxygen saturation on room air picked to 96%.

We continued to keep him in short stay for 3 hours and then he was sent home.

He was taught about inhaler and spacer technique and told to take 2 puffs of salbutamol inhaler 4 hourly for 3 days and when symptoms reappear.

Conclusion

We have changed our asthma treatment protocol; in the past we followed the traditional regimen in Malawi which is to prescribe Salbutamol tablets. We have now followed the advice of our medical advisers and moved to prescribing inhalers because they are far more effective. It does increase the costs but the benefits to the patient completely justify the extra expense.

At times we have to improvise - at the clinic where we saw the boy we had the inhalers but not the spacers – a simple solution was to use a plastic water bottle which works just as well.

Our protocol is now to manage children with asthma as chronic patients and ensure they come to each 4 weekly clinic to receive their inhalers and other needs.

This will help us monitor them and focus on their individual needs.



Drug Usage:

Acyclovir 200mg	2,400	ORS	3,500
Albendazole - 400	8,000	Paracetamol 250mg	40,000
Ampicillin Caps	28,000	Paracetamol syrup	700
Amoxicillin 250mg Caps	44,000	Phenobaritone Tab	36,000
Amoxicillin syrup	850	Praziquantel Tablet	3,500
BBA cream 100ml	2,250	Prednisolone Tab	8,000
Benzathine 2.4 inj	350	Promethazine Inj	30
Benzylpenillin 5 inj	185	Quinine Inj	30
Calamine lotion 100ml	135	Quinine syrup	40
Ciprofloxacin 250mg	6,000	Quinine Tablet	2,000
Clarithromycin 500mg	5,500	Salbutamol 4mg	2,000
Chloramphenicol Caps 250mg	40,000	Syringes 5cc	200
Cloramphenicol Eye Drop	2,400	Syringes 10cc	200
Cloxacillin Caps 250mg	37,000	Tetra Eye Ointment	440
Cloxacillin syrup	950	Urin Dip Stcks	4
Cotrimoxazole 480mg	40,000	Ventolin inhaler	700
Cotrimoxazole syrup	1,000	Whitefield Ointment	30
Dexa Eye drops	800	Zinc Tablets	1,000
Erythromycin Tab	55,000		
Erythromycin syrup	1,150		
Eusol Sol	40		
Flucloxacillin syrup	800		
Funbact A cream	50		
Gentamycin Eye Drop	480		
Griseofulvin 125mg	2,000		
GV Paint 500ml	10		
Hand sanitiser 100ml	900		
Hydrocortisone Cream	200		
Hemovit Iron syrup	250		
Indomethacine 20mg	10,000		
Ketaconazole tabs 100mg	21,000		
Lignocaine Inj	30		
Methylated spirit	40		
Metronidazole 250mg	10,000		
Metronidazole syrup	700		
Miconazole cream	100		
Multivitamins	20,000		
Multivitamin syrup	400		

Cases Treated	
Abscess	189
Anaemia	513
Arthritis	91
Asthma	602
Bilharzia	715
Burns	38
Dental Carries	14
Diarrhoea – bloody (Dysentry)	501
Diarrhoea - non bloody	335
Ear Infection	1,049
Ear wax	53
Epilepsy	62
Eye Condition - Allergy	289
Eye Condition – Bacterial	1,105
Gastroenteritis	604
Heart Abnormalities	11
Infected Sores/ Ulcers	312
Larve migrans	288
Malaria	4,687
Malnutrition	745
Mascular Skeletal pain	140
Mumps	22
Nephrotic Syndrome	12
Oral Candidiasis	165
Oral Sores	134
Respiratory Tract Infections	3,351
Rheumatic Heart Disease	45
Sepsis	325
Skin Condition - Viral	462
Skin condition - Allergy	407
Skin Condition – with Bacterial Infection	682
Skin Condition – with Fungal Infection	805
TB Suspects	122
Tonsillitis	45
Urinary Tract Infection	867
Worms	1,015
TOTAL	20,802