

FOUNDATION EAGLE FINAL REPORT

PROVISION OF SOLAR POWER AND MEDICAL EQUIPMENT FOR A MATERNITY CLINIC AT CHILAWENI, MALAWI.

Foundation Eagle reference: FF 0508-29

Name of charity:	The AMECA Trust
Charity No:	1121240
Report Date:	3 rd June 2021
Report Period:	16/09/19 – 03/06/21
Contract date:	25 th November 2019
Total Grant:	£10,840
Received on:	29 th November 2019
Expenditure:	£11,847

Beneficiaries:

38,000 people in 23 catchment villages, 24% of whom consist of Women of Child Bearing Age.

Background Summary:

Funding was granted by Foundation Eagle for the purposes of:

- 1) Purchase and installation of Solar Power for the Maternity Unit.
- 2) Purchase of medical equipment including an oxygen concentrator for the Maternity Unit.



Following a request for much needed maternity services at Chilaweni, S Lunzu, construction of a maternity clinic and four staff houses began and, in spite of the Covid pandemic, was completed by November 2020, within the stated budget. The Maternity Clinic was handed over to the Blantyre District Health Office in early January and was opened to operational services on Monday 11th January 2021. The first baby was born two days later on the 13th January 2021.

In Malawi, maternity units are routinely very poorly equipped, existing equipment is often broken and poorly maintained, resulting in a lower standard of maternity service delivery and to low staff morale. Furthermore, frequent power cuts result in midwives having to deliver babies in the dark during the night. Staff are unable to operate medical equipment requiring mains power, compromising patient safety and leading to unnecessary referrals of mothers and babies to tertiary facilities.



Consultation with the Blantyre District Nursing Officer on equipment requirements for the maternity unit.

The generous grant funding from Foundation Eagle provided the ability to install solar power at the newly built maternity unit and to equip the unit to a high standard, including the purchase of an oxygen concentrator and baby bed warmer resuscitation table. As detailed in the Interim report, the grant from Foundation Eagle enabled high quality equipment to be purchased from the Netherlands, from a foundation dedicated to assisting providing low income countries with affordable medical equipment.

Beneficiaries and Benefits:



Fully equipped individual patient delivery bay.



Felista, the first baby, born January 2021, 2 days after opening.

Grant funding enabled the purchase of an oxygen concentrator which can deliver high flow oxygen when required, for mothers and newborn. Bottled oxygen is unaffordable and unsustainable; the distance of the maternity clinic to urban facilities which can refill oxygen cannisters makes this option unworkable and therefore all rural healthcare facilities in Malawi require oxygen concentrators. The oxygen concentrator is capable of dual flow, therefore delivering oxygen simultaneously, to 2 patients at once, if required. Similarly, suction machines are required to clear airways in newborn infants.



Beginning to equip the Post Natal Ward



AMECA midwife mentor using one of the new blood pressure machines for a postnatal check

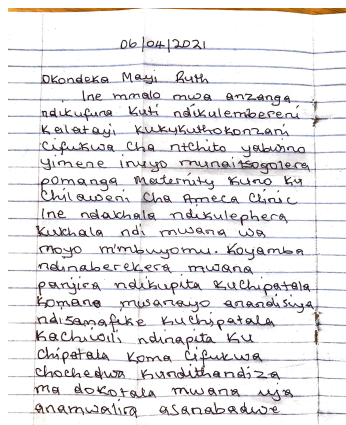


Baby resuscitation bed being explained to patient guardian



Postnatal baby weight check.

The equipment funded by Foundation Eagle has been greatly appreciated by both The Blantyre District Health Office and by maternity staff at the unit. Good quality equipment has enhanced the quality of teaching given through the mentoring programme that AMECA is funding for staff at the unit and been invaluable for the delivery of high flow oxygen and for suction machines to mothers and infants, when required.



This letter from a grateful mother explains how she lost two previous babies before a successful delivery at the new maternity clinic, giving birth to a 3.2 Kg baby boy.

Staff at the maternity unit receive many positive comments from mothers on the excellent facilities, equipment and care at the facility.

Staff are furthermore more confident in working in a well-equipped environment which allows them to administer airway assistance to their patients and to newborn babies.

Power Supply:

AMECA funded the delivery of mains power to Chilaweni in 2017. Solar power is required as mains power delivery remains extremely unreliable in Malawi, with frequent lengthy power cuts. Continuous power is required to ensure that the maternity staff can run oxygen concentrators and suction machines for mothers and newborn, when required. Although a backup generator was considered, the Blantyre District Health Office is unable to afford the onerous fuel costs and therefore solar panels were the only viable option for continuous and affordable power delivery. The maternity clinic and staff housing were connected to mains power in December 2020, but funding from Foundation Eagle was required to enable the purchase of solar power.

The solar panels were fitted to the roof of the maternity unit, following a delay on the delivery of the battery from South Africa. Thorough training was given to key staff by Hi-Tech, who supplied the solar installation. The system provides 6 solar panels of 300 watt, four 12 Volt 200 AH solar high storage batteries and a 1.5 Kw hybrid inverter with build in regulator.

During the first few weeks of operation, staff at the maternity clinic had to learn to ration the use of power during mains power outages; one power cut lasted a couple of days and the solar batteries ran out of power due to the fact that the weather was particularly overcast. Staff are now aware of the limitations of solar and are able to manage a continuous supply of power for lights and equipment when required. Hi-Tech has provided an excellent service and staff are able to ask for and receive advice if needed.



Solar panels on roof



Hi-Tech engineers teaching healthcare staff on use of solar controls

Staff are delighted to be able to deliver babies during the night, without having to rely on torches. Solar power backup is frequently required and ensures that vital equipment, such as the oxygen concentrator and the suction machines, can always be utilised if and when required.



One unexpected advantage of the installation of solar power at the maternity unit has been the ability of staff from the primary healthcare unit on site to utilise power for their equipment when needed. This photo shows the lab technician being able to use the microscope to diagnose a patient and therefore transfer the patient rapidly and appropriately to a tertiary facility, if required.

Covid-19:

During 2020, the anticipated surge in case numbers of Covid-19 patients in most of sub-Saharan Africa and moreover in Malawi never materialised and the country functioned more or less as normal. Malawi's borders were closed from the end of March 2020, until the beginning of September 2020. This in itself did not result in a delay in construction, but some decisions on finishes could not be made until AMECA could return to Malawi in September when borders re-opened. A small surge in Covid cases was experienced in January 2021, but this was short-lived and had no bearing on maternity services.

The AMECA Trust would like to convey its gratitude to Foundation Eagle for this grant donation, which has made such a difference to maternity service delivery at the maternity unit at Chilaweni.



FINANCIAL INFORMATION:

Foundation Eagle Grant Final Project Expenditure:

28/10/19	Malawi.Kom, Netherlands.	Euro 3,264.30 ¹	£2,879.84	Medical equipment + Oxygen Concentrator. Refer to invoices.
19/10/21	Sakaramenta, Blantyre, Malawi	Kwacha 5,168,010 ²	£5,440	Hospital furniture, refer to invoice.
09/12/2020	Hi-Tech Electronics Ltd Blantyre, Malawi	Kwacha 3,321,180.55 ³	£3,528.64	Solar panels, batteries + installation. Refer to invoice.
		TOTAL	£11,848.48	

Note ¹ Paid in Euros to Malawi.Kom from AMECA sterling account. (Oct 2019 rates)

Note ² Paid in Kwacha to Sakaramenta from AMECA Kwacha account in Malawi

Note ³ Paid in Kwacha to Hi-Tech Ltd from AMECA Kwacha account in Malawi

Summary of Estimated Budget submitted to Foundation Eagle:

Equipment Component	Cost as per quotation	Cost in £ Sterling
Solar panels & batteries	3, 321, 180.55 Kwacha	£3,528.64
Oxygen Concentrator	Euro 906.00	£781.91
6 Patient screens	2,158,002 Kwacha	£2,292
3 Theatre Stools	418,584 Kwacha	£444.66
6 Bedside lockers	1,638,768 Kwacha	£1,740.85
2 Infusion sets	30 Euro	£25.86
3 stethoscopes	6.30 Euro	£5.43
2 Instrument trolleys	31 Euro	£26.72
Baby weigh scales	20 Euro	£17.24
Adult weighing scales	10 Euro	£8.62
Patient Trolley	400 Euro	£344.83
10 delivery sets	400 Euro	£344.83
Baby Resuscitation Table	100 Euro	£86.20
Baby mask and ambubag	5 Euro	£4.31
Adult mask and ambubag	5 Euro	£4.31
2 Manual BP monitors	20 Euro	£17.24
2 Digital BP monitors	25 Euro	£156.25
Portable commode chair	10 Euro	£8.62
3 Delivery beds with stirrups	1,050 Euro	£905.17
Examination lamp	25 Euros	£21.55
2 Curette sets	20 Euros	£17.24
2 Step stools for patient beds	20 Euros	£17.24
2 Patient suction machines	200 Euros	£172.40
TOTAL		£10,967.81

Foundation Eagle Grant: £10,840

Final Expenditure: £11,847

There were fluctuations in currency exchange between the original budget submitted to Foundation eagle and the final invoices paid. The original hospital furniture itemized for the budget also did not include the purchase of 6 over-bed tables for patients and 2 baby cots. Furthermore the 3 theatre stools quoted for on the original budget were not purchased. This accounts for the over-spend of £880.67 which was paid for from AMECA's reserve funding.

Operational Logistics:

AMECA operates on the ground in Malawi without offices or staff, therefore greatly minimising expenditure. However, the challenges are tough in terms of being able to address all aspects of the Maternity Project and navigate the complexity of balancing the requirements of the DHO whilst trying to adhere to the myriad of logistics and requirements of operating in Malawi.

Ruth Markus. CEO The AMECA Trust.
June 3rd 2021.