

File Form 673

Maternity & pathology equipment for Borkeo Referral Hospital and training for 25 regional midwives in life-saving skills, Ratanakiri Province Final Report for the Eagle Foundation – June 2024

Donor name: Fondation Eagle

Fondation Eagle reference: FF 673

Name of Charity: IMPACT UK

Introduction: Borkeo Referral Hospital, situated in Ratanakiri, one of Cambodia’s least developed and most remote provinces, has experienced limited investment in recent years. We are deeply grateful to Fondation Eagle for enabling IMPACT Cambodia to upgrade the delivery equipment in the Maternity Unit and provide potentially life-saving refresher training to 25 of the region’s midwives. Additionally, your grant has equipped the hospital with two essential pathology instruments; a Hemogram and a Biochemistry machine, which are now being utilised by all hospital departments to diagnose a wide range of illnesses, infections and diseases.

Date of grant accepted: 27/06/2023 (funds received by IMPACT UK 05/07/2023)

Amount: GBP 33,807

Conversion rate, date & amount in local currency: USD 43,272 Exchange rate based on 1 GBP = 1.28 USD (16/06/2023)

Expenditure: GBP 33,807

Name and exact location of the project: Borkeo Referral Hospital, Ratanakiri Province, Cambodia

Period of Project: 05/07/23 – 04/07/24

Project beneficiaries: Borkeo Referral Hospital serves a population of 76,841 people (20,467 are women of reproductive age and 9,444 are under the age of five). 5,039 people have benefited from the equipment so far:

Health Care services provided at the Maternity Unit, Borkeo Referral Hospital - September 2023 - May 2024	
Antenatal care	819
Number of delivery	419
Postnatal care	419
Health education services: Including birth spacing, contraception and general maternal healthcare	861
Diagnostic services provided in the Pathology Laboratory	2,496
Midwives and nurses received training	25
Total	5,039

Location of Project: Ratanakiri Province, situated in northeastern Cambodia, spans an area of 10,782 km² and is located 588 km from the capital, Phnom Penh. The province is traversed by two major rivers, the Tonlé San and Tonlé Srepok. It shares borders with Laos to the north and Vietnam to the east, with the Ou Yadv international border checkpoint providing a vital link for trade and investment between Cambodia and Vietnam. Agriculture is a key sector in Ratanakiri, with crops like corn; cassava; soybeans; cashew nuts; and rubber attracting interest from local and foreign investors. The Province is rich in cultural and natural resources and is home to indigenous communities, presenting substantial opportunities for tourism development.



Ratanakiri Province is renowned for its gem mining. The name Ratanakiri' is derived from the Sanskrit words 'Ratana' and 'Giri', meaning 'mountain of gems'. This region is rich in precious stones such as blue zircon, amethyst, peridot and black opal. Borkeo district, in particular, was historically a hub of gem mining activity. Today, gemstones can be purchased in shops and markets throughout the Province. However, the local gem miners do not profit as much from their work compared to brokers and market vendors.

Demographics and Traditional Lifestyles: The majority of Ratanakiri's population consists of minority groups. In Borkeo District, 83% belong to ethnic minorities such as the Jarai, Tampuan, and Phnorn. The remaining 17% are Khmer and other minority groups, who are relatively recent arrivals. These newcomers typically reside in Borkeo Town along the national road, near amenities like hospitals, schools, and pagodas. In contrast, the indigenous people prefer to live in less crowded areas, often deep in the jungle, on hills, and in mountainous regions, forming small, isolated villages with 40 to 90 families each and reliant on traditional shifting agriculture, hunting and foraging. The culture is deeply rooted in animism, with a strong belief in spirits, and the lifestyle typically follows traditional ancestral customs.

Health Challenges: Maternal and child mortality rates are higher here than in other Cambodian provinces. A report on the 'Health Unlimited Project 2006: Indigenous Women Working Towards Improved Maternal Health' highlights factors contributing to high maternal and child mortality rates over the past 15 to 20 years including high levels of malnutrition and anemia; malaria; young age at first birth; short birth intervals; high fertility rates; sexually transmitted diseases; and HIV/AIDS. Barriers to accessing healthcare further exacerbate these issues. These include financial constraints; transportation difficulties; inconsistent availability of care; discrimination; lack of social support; traditional beliefs; and language barriers.

Details of the project: Since 2019, IMPACT Cambodia (IC) has expanded its program to Ratanakiri Province, thanks to a new Eagle-funded project vehicle (FF 0511-32) that allowed access to this isolated region. IC has been collaborating with 14 health posts and hospitals, including Borkeo Hospital, which gained 'referral' status in 2011 but has received limited government funding despite this new designation.

Maternity Equipment: The IC team visited Borkeo Hospital in 2022 and were particularly concerned about the lack of recent investment in the Maternity Unit, which serves as the specialist referral center for 11 smaller health centers. They noted that staff were poorly equipped to handle complex cases and had not received recent training in managing obstetric emergencies, particularly post-partum hemorrhage (PPH) – the leading cause of maternal mortality worldwide.

Thanks to the generous funding from Fondation Eagle, the Maternity Unit at Borkeo Hospital has been fully equipped. In September 2023, IC organised the delivery of essential equipment to enhance safe medical practices

during childbirth; reduce the spread of infection; and improve postpartum recovery. Items included a baby warmer, patient beds, an autoclave and delivery materials, including forceps to stem excessive bleeding; and dopplers to measure foetal heart rate, all helping healthcare workers to make life-saving decisions during childbirth.

Photos of the new equipment in use:



The installation of the equipment has made a huge difference not only to patients but also to the staff in the Maternity Unit, who have expressed their gratitude for these essential items.

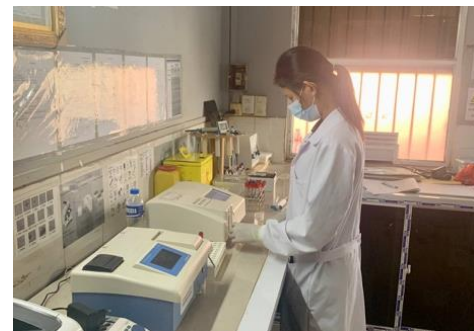
Midwife Von Chanthol, who has worked at Borkeo Referral Hospital for nearly a decade, expressed that this is the first time they have had proper equipment for their daily tasks.

'Since I started working here, we never had equipment like this. We faced many challenges in our work. The delivery of the beds donated means that we meet the required standards, that we have space and we can make women comfortable whilst going through labour, and also during their recovery which is an important time.' – Midwife Von Chanthol (pictured above)



Pathology Equipment: Borkeo hospital urgently required two essential pieces of pathology equipment. Pathology services are critical throughout a patient's hospital experience, from initial diagnosis to treatment and prevention of further diseases. With support from Fondation Eagle, the hospital now offers prompt and precise on-site lab results using their new Hemogram Machine, which assesses red blood cell count, white blood cell count, and platelet count, along with the Biochemistry Machine, used to measure disease indicators in biological samples like blood or urine.

Loek Orkide, a pathologist at the pathology lab in Borkeo Referral Hospital for over five years, emphasised how the new machines significantly ease their workload. *'With these additional diagnostic machines, we can deliver faster results for patients, enabling doctors to provide timely and accurate treatment.'* Loek Orkide (pictured right).



The individual IMPACT



17-year-old young Ronam, gave birth to her baby at Borkeo Referral Hospital in April 2024. She travelled approximately 10km to reach the clinic, with her husband and mother-in-law. She told the team that she was very concerned about the delivery as it was her first time.

'I was worried about my delivery, for I have no clue about how the delivery would be like and will it be like what my mother experienced back in the day, where only traditional midwives or traditional delivery was available. I was happy that it was so clean and everyone was friendly and welcoming. There were many women who had already given birth or were about to be discharged. My husband and family are so pleased I have been cared for so well and we would like to thank all the people who have helped us' Ronam

Advanced training for regional midwives

Despite improvements in maternal and child mortality rates, Ratanakiri continues to exhibit the highest rates in Cambodia, highlighting the critical need for specialised training for midwives and nurses. IMPACT Cambodia prioritises this need. Thanks to your funding, 25 regional midwives have successfully completed an advanced training course focusing on the management of birth complications and advancements in sexual, reproductive, and child/maternal health services. The comprehensive training included detailed instruction on identifying and treating postpartum hemorrhage and the use of non-pneumatic anti-shock garments (NASG). These cost-effective, wearable first-aid devices significantly reduce blood flow to the uterus and address hypovolemic shock, an emergency condition impairing the heart's capacity to pump sufficient blood. In low-resource settings, NASGs can be lifesaving, sustaining a woman with postpartum hemorrhage for up to 48 hours.

The trainer, Midwife Bour Marita, is a native of Ratanakiri Province. She began her career at the Provincial Referral Hospital of Ratanakiri in 2014 and later transitioned to the Ratanakiri Provincial Health Department. She currently serves as the Head of the Cambodian Midwives Council in Ratanakiri. Recognised as one of the leading trainers in the Province, Marita emphasised the significance of the two training programs, highlighting their anticipated positive outcomes:

Training on Birth Spacing: “Children by Choice, not by Chance” and the ‘1,000 Day Model’ week-long course commenced 11th December 2023

For healthcare workers: This training enhances their knowledge and professional attitude, enabling them to provide healthcare services with greater confidence and effectiveness.

- For the community: It empowers individuals to access healthcare services at local health centres, reducing the time and money spent on transportation. This reduction in unnecessary expenses is particularly important for families planning to have children.

Training on Non-Pneumatic Anti-Shock Garments (NASG) week-long course commenced 15th August 2023

- For healthcare workers: Health centre midwives and nurses are trained in the application of NASG, while referral hospital doctors and midwives learn the correct removal techniques.
- For the community: The availability of properly trained healthcare workers and the use of NASG are crucial for effective healthcare service delivery.

‘Without knowledge, healthcare workers would not know how to use the equipment effectively. I would like to take this opportunity to express my sincere gratitude for your thoughtfulness toward the people of Ratanakiri Province. Both the training and medical equipment contribute to reducing maternal and infant mortality rates, aligning with government strategies to improve maternal and reproductive health in Ratanakiri Province, as well as the overall health of the people in Cambodia’ – Midwife trainer, Bour Marita



Thank you

We extend our heartfelt gratitude to Fondation Eagle for your generous support in enhancing the capabilities of Borkeo Referral Hospital, located in one of Cambodia's most underserved and remote provinces. Your funding has enabled us to upgrade the delivery equipment in the Maternity Unit and provide critical refresher training to 25 regional midwives, thereby significantly improving maternal and child health outcomes. Additionally, the acquisition of essential diagnostic instruments has greatly expanded the hospital's diagnostic capabilities across all departments.

As well as the mothers who can now give birth in the safety of a clean, well-equipped medical facility, healthworkers are also grateful for your donation of modern and appropriate equipment and advanced training, which has made them feel more professional and competent in their roles. Thank you.

Expenditure

Equipment	Hospital department	Unit	Unit Cost £	Budget £	Expenditure £
Delivery materials: Episiotomy & Mayo dissecting scissors x2; Allis tissue forceps; Vaginal speculum (different sizes); Forceps (Long haemostatic, tissue, artery and dressing x 2); Dressing scissors x2 ;scalpel handle x 2, Kidney basin x 2; Needle holder x 2; Urinary catheters x 2; Portable aspirator x 2; Tray instruments x 2; Sterile instrument boxes x 2; Compress box; Foetal doppler	<i>Maternity Unit</i>	4	670	2,680	2,680
Baby warmer machine	<i>Maternity unit</i>	1	2,800	2,800	2,800
Oxygen production machine	<i>Maternity unit</i>	1	1,400	1,400	1,400
Gynecological examination table	<i>Maternity unit</i>	2	1,422	2,844	2,844
Autoclave	<i>Maternity unit</i>	1	750	750	750
Suction unit	<i>Maternity unit</i>	2	142	284	284
Delivery chairs	<i>Maternity unit</i>	2	106	212	212
Delivery lamp	<i>Maternity unit</i>	2	146	292	292
Hospital beds	<i>Maternity unit</i>	15	169	2,535	2,535
Hemogram machine	<i>Pathology laboratory</i>	1	4,500	4,500	4,500
Biochemistry machine	<i>Pathology laboratory</i>	1	2,800	2,800	2,800
Training for 25 nurses and midwives (including educational materials, lecturing fees, transport and accommodation for 12 days)		25	444	11,100	11,100
Sub Total				32,197	32,197
Project management @5%				1,610	1,610
Grand Total				33,807	33,807