



## EMBLEM Newsletter

*A monthly means to inform and inspire our TEAM*

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### Rainfall



“Water is Life!” I exclaimed recently as I thanked the local electrician who had just fixed our water pump. The pump’s power supply line had been damaged by a lightning strike a few days before. Our main water tank had been empty for half a day. Rainfall records have been kept in Shirati, Tanzania for over 50 years. These data confirm our personal experience from living here. We have “long rains” in March, April, and May, and “short rains” in October and November. During the dry seasons in between, mosquito populations decline, only to increase again when rain returns. During “El Nino” in the late 1990’s, the rains never really stopped and the local hospital’s pediatric ward patient population skyrocketed for a number of months due to the increase in malaria cases. The total rainfall that year, more than 1400 mm, was the highest since records have been kept. Rainfall is related to mosquito populations, which is related to malaria infections, which is related to Burkitt Lymphoma (BL). The mechanism of

how malaria is related to BL is one of the topics of the current EMBLEM research. In one preliminary paper, the author looked at the question of how rainfall may be related to time of presentation of patients with BL. The correlation was imperfect. Keeping accurate rainfall records is recognized as an important ongoing activity, with benefits for both health and agricultural planning. Keeping accurate records of malaria infections is vital for documenting a relationship between rainfall and malaria. The EMBLEM study is collecting meticulous data on malaria in both cases and controls. In future studies, direct correlation between rainfall, seasonal malaria, and Burkitt lymphoma will be possible.

*Dr. Esther Kawira, Editor*

### EMBLEM TANZANIA

EMBLEM Tanzania has enrolled a total of 17 cases (8 females and 9 males).

EMBLEM provided another batch of Tru-cut biopsy needles to support diagnostic pathology of Burkitt Lymphoma. Tru-cut needles enable tissue samples to be obtained from deep-seated abdominal tumors.

A group of 50 health care workers from Rorya District health facilities, who were attending a routine meeting on Child Health Assessment, were taught about BL diagnosis and treatment by EMBLEM study staff. Posters about BL and EMBLEM were also distributed to participants. Rorya district has historically had the highest incidence of BL cases in the EMBLEM study region (22 cases per 100,000 in children aged 0-15 years!).

## EMBLEM KENYA

EMBLEM Kenya has spotted 103 cases, 26 of which were Burkitt lymphoma, 18 of those were enrolled in the study (13 Male, 5 Female). Five cases were excluded for ineligibility and 3 died before enrollment.

Targeted health education about cancer in children and the EMBLEM study was conducted at Webuye District Hospital. Lower level health centers near Webuye Hospital were visited and staff were given EMBLEM posters. Another targeted EMBLEM sensitization was conducted for elementary school head teachers from Asego division Homa Bay County. This was done in collaboration with the Ministry of Public Health and Sanitation who were training head teachers about deworming children in their schools. EMBLEM staff stressed the importance of early detection of BL, early referral to Homa Bay Hospital, and compliance with treatment.

EMBLEM staff in Kenya, as well as collaborators who attended the EMBLEM workshop in Mwanza, have given positive feedback on their experience. For several (7 of 21), it was their first time to travel out of the country. This simple experience increased their appreciation that work done locally is important both regionally and internationally, and made them feel a kinship with EMBLEM staff at other sites!

## EMBLEM UGANDA

Case enrollment at the Lacor Hospital study site continues with current enrollment figures at 91 (31 females and 60 males). The Kuluva Hospital study site has enrolled a total of 19 (5 females and 14 males).

With the study fully introduced, the strategy has changed to strengthening BL Case Spotting. Nurses and nursing aides from Lacor Hospital were given a refresher training on spotting BL patients and the case work flow. Because many of the nurses come from the region, their influence is felt at the hospital and in their villages. Posters in the local dialect were also distributed.



Dr Tobias presenting at Lacor nurses training BL Spotters

Capacity building efforts also continue. Lacor Hospital hosted district-level laboratory focal persons training on multi-drug resistant TB organized by East African Public Health Laboratory Network on 3<sup>rd</sup> November. Emblem staff gave an overview of the study and gave posters to participants from the region.

## EMBLEM Project Goals

EMBLEM is a case control study. For every child with BL (the “case”), two other children matched for age, gender, and place of residence are also enrolled (the “controls”). The overall goal of EMBLEM is to enroll 1500 cases and 3000 controls during the life of the study.

Control enrollment started more than a year ago in Uganda. Currently, nearly 600 controls have been enrolled. This is 20% of the overall goal for control enrollment, but for Uganda alone, with a target of 500 cases, this is 60% of their goal to enroll 1000 controls. The experience gained in Uganda will be invaluable when Tanzania and Kenya also begin control enrollment, later in this budget year.

**EMBLEM Newsletter** is a monthly on-line publication based on contributions of the EMBLEM Study staff.

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