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Paediatric burns in LMICs: An evaluation of the barriers and facilitators faced by staff involved in burns education training programmes in Blantyre, Malawi

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ABSTRACT

Background: A burn prevention and education programme – the Reduction of Burn and Scald Mortality and Morbidity in Children in Malawi project – was implemented from January 2010–2013 in Queen Elizabeth Central Hospital, Malawi. This study aimed to investigate the barriers and facilitators of implementing education-training programmes.

Methods: Semi-structured interviews with 14 Scottish and Malawian staff delivering and receiving teaching at training education programmes were conducted. All interviews were recorded, transcribed and analysed using thematic analysis.

Results: Overarching barriers and facilitators were similar for both sets of staff. Scottish participants recognised that limited experience working in LMICs narrowed the challenges they anticipated. Time was a significant barrier to implementation of training courses for both sets of participants. Lack of hands on practical experience was the greatest barrier to implementing the skills learnt for Malawian staff. Sustainability was a significant facilitator to successful implementation of training programmes. Encouraging involvement of Malawian staff in the co-ordination and delivery of teaching enabled those who attend courses to teach others.

Conclusions: A recognition of and response to the barriers and facilitators associated with introducing paediatric burn education training programmes can contribute to the development of sustainable programme implementation in Malawi and other LMICs.

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Abbreviations: LMICs, low and middle income countries; QECH, Queen Elizabeth Central Hospital; CoM, College of Medicine, Malawi; THET, Tropical Health and Education Trust; ReBaS, Reduction in Burn and Scald Mortality and Morbidity in Children in Malawi Project.

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1. Introduction

Globally, 90% of burns occur in low and middle income countries (LMICs) [1] and mortality from paediatric burns is believed to be highest in Sub-Saharan Africa [2].

In Malawi burns are the second most common cause of paediatric injury [3]. The mortality from burns, identified in a tertiary care centre, was 16% for children aged 0–18 years [4].

Despite many initiatives to reduce burns in high income countries (HICs) there has been little achieved to combat this issue in LMICs [5]. The inability to collect accurate data on epidemiology, aetiology and risk factors has hindered this [2]. Literature identified that prevention programmes should be targeted at risk factors and the specific setting to produce the greatest results [6]. The education of parents and medical staff has also been identified as a priority in burn prevention [4]. However, there is limited data on preventative measures that have been implemented, and the International Society of Burn Injury has noted there is often an inability to measure and evaluate the impact of such interventions [7]. Despite the substantial quantity of data on the significance of burns as a public health problem, as well as its epidemiology in LMICs, there is limited evidence on preventative programme implementation or evaluation [8].

Queen Elizabeth Central Hospital (QECH) is a large tertiary care centre in the city of Blantyre, Southern Malawi. It serves a local population of approximately seven hundred thousand people and functions as a teaching hospital for the College of Medicine (CoM) Malawi [9]. A 32 bedded Burns Unit was established in 1993 specifically for the treatment and management of burn admissions [9]. Until 2011 the Burns Unit of QECH was the only dedicated burns treatment unit within Malawi.

In January 2010 a British Council and Tropical Health and Education Trust (THET) funded prevention and education programme was introduced. The Reduction of Burn and Scald Mortality and Morbidity in Children in Malawi (ReBaS) project ran for three years, its aim was to reduce the incidence, morbidity and mortality rate of burns and scalds in children. Staff education was identified as being essential to delivery of effective burn management. During the three-year period, eleven education training courses were delivered by Scottish surgical staff in QECH and outlying districts. Education training courses were conducted incorporating a number of teaching styles, including: didactic lecturing, ward-based teaching, small group discussion and hands-on practical sessions. Details of the content of the education courses can be found in Table 1.

This current study aimed to investigate the barriers and facilitators of implementing education training programmes. By evaluating these challenges, effective and relevant burns prevention strategies can be developed and implemented in Malawi, as well as other LMICs.

2. Methods

2.1. Study design

Semi-structured interviews were used to identify barriers and facilitators in the implementation of paediatric burns education training programmes in Blantyre.

Participants were assured of the confidentiality of recordings and transcriptions and provided with a participant information sheet detailing that involvement was voluntary and that no fee would be paid. Participants were free to leave the study at any point with no consequence.

The current study involved no risk of physical or psychological harm to participants. Data was anonymised appropriately and securely stored. Informed consent was gained from each participant prior to interview commencing. Ethical approval was granted by the University research Ethics Committee of the University of Dundee, Scotland and the College of Medicine Research Ethics Committee, Malawi.

2.2. Study participants

This study was conducted among surgical staff involved in the delivery of training and Malawian health care staff who received training in QECH, Blantyre, Malawi.

Four Scottish surgical staff included 1 Consultant Plastic Surgeon, 1 Consultant Paediatric Surgeon, 1 Paediatric Surgical trainee and 1 Plastic Surgical trainee. Malawian healthcare staff included 4 doctors, 5 nurses and 1 physiotherapist.

2.3. Data collection

Fourteen semi-structured interviews were conducted with Scottish surgical staff and Malawian health care staff in January and February 2014. The selection of participants was determined using a convenience sampling method.

An interview guide was developed which employed open ended questions to encourage opinion and allow for greater

Table 1 – Modules covered by ReBaS education training courses.

1	Assessment of burn	11	Intravenous access
2	Complications of burns	12	Metabolic problems of burns
3	Criteria for referral and safe referral	13	Nutrition for burns patients
4	Critical care pathway for monitoring	14	Pain relief and analgesia
5	Dressings for burns	15	Prevention of thermal injuries
6	Electrical burns	16	Psychological aspects of burns
7	Epidemiology and incidence of thermal injuries	17	Respiratory tract burns
8	First aid for burns	18	Scarring and contractures
9	Fluid therapy and resuscitation	19	Skin grafting
10	Infection and antibiotics	20	Burns of special areas (hands, face)