ETAT Malawi Project:

Report and Evaluation

The Royal College of Paediatrics and Child Health

The Scottish Government
Riaghaltas na h-Alba

Background

Background

Malawi is one of the least developed countries in the world. Child mortality is high. The health care system faces shortages of trained health personnel, essential drugs, medical supplies and equipment. Financial, geographical and systemic delays to the provision of effective paediatric emergency treatment contribute to a high early in-hospital child mortality rate. Many of these deaths are preventable.

ETAT (emergency triage, assessment and treatment) is both a training course and an approach toward improving emergency paediatric care developed by the World Health Organisation. The training course is designed to provide knowledge and skills in emergency management of sick children appropriate to developing countries. In addition a collaborative workshop approach is used to encourage participants to consider the implementation of triage and improvement of emergency services in their own setting.

ETAT was developed with expertise from the University of Malawi, College of Medicine and training has been running in the Southern Region since 2004. However, progress has been limited by lack of funding and shortages of experienced paediatricians.

The ETAT Malawi project arose from collaboration between the College of Medicine and the Royal College of Paediatrics and Child Health, with funding from the Scottish Executive International Development Fund Small Grant Application. It aims to support and extend the ETAT programme in Malawi using UK expertise in collaboration with the College of Medicine and Ministry of Health to develop local capacity.

Project Evaluation

This evaluation of the project to date will be performed using OECD/DAC criteria for evaluating development assistance –relevance, effectiveness, impact, efficiency and sustainability[1].

Relevance

The relevance of the ETAT Malawi project can be assessed in the context of local and global developmental priorities and the aims and policies of the partners involved in the project. This is summarised in Table 1.

Table 1

Organisation	Priority /Policy	Relevance of ETAT project
Global Developmental Priorities		
United Nations Global Partnership	Millenium Development Goal 4: to reduce under-5 mortality by 2/3 by 2015[3]	Triage and improved emergency care proven to reduce in-hospital child mortality
World Health Organisation	ETAT developed by WHO as integral part of Integrated Management of Childhood Illness, aiming to reduce child morbidity/mortality[2]	Introduction of ETAT training to new hospitals and regions in Malawi
Local Developmental Priorities		
Ministry of Health, Malawi	Range and quality of health services for children under the age of 5 years to be expanded and better quality health care provided in all facilities[3].	Aims to build local capacity and extend training to district and rural hospitals
The University of Malawi, College of Medicine	Centre of excellence. Responsive to the health needs of Malawi Training of professionals, Provision of clinical services[4]	Uses local expertise from COM to train health professionals and improve clinical services
International Partner Priorities		
Scottish Government (Scotland Malawi Co-operation Agreement)	To collaborate with the College of Medicine to facilitate mechanisms for the exchange of medical and health management expertise[5].	Uses UK medical expertise in collaboration with College of Medicine to provide essential training.
Royal College of Paediatrics and Child Health	Aim to improve the health of children in disadvantaged areas of the world by improving standards of paediatric education.[6]	Uses expertise of RCPCH members in collaboration with local partners to provide paediatric training in a resource limited setting

It is clear from this assessment that the ETAT Malawi project is highly relevant in terms of local and global developmental priorities, and in the aims and policies of its partners.

Effectiveness

This evaluation will address each of the outputs/activities and outcomes from the project proposal and assess how effectively the objectives were achieved.

A:ETAT Training Courses

Outcome A: *60 Malawian healthcare staff will complete the ETAT training course, providing them with skills to improve triage, assessment and emergency treatment of sick children.*

Output/activity A: *3 ETAT courses will run in two 1 week blocks from May-July 2007. Courses will be run by 2 teams of 4 Scottish facilitators assisted by 1 locally based organiser. 60 health worker participants will be invited from hospitals selected by the Ministry of Health.*

To avoid NHS training changes in 2007 and the Malawian rainy season the courses were postponed until April 2008.

The proposal focussed on extending ETAT to North/Central Malawi. However, following reassessment of local needs further training in the Southern Region was included.

Facilitators were able dedicate more time than anticipated, allowing the addition of an extra course, improving cost-effectiveness.

A centrally located 'training of trainers' format was agreed with 4 ETAT courses- 2 in Blantyre covering the Southern region, and 2 in Lilongwe, covering Central and Northern regions. The budget plan was revised accordingly.

District Health Officers identified senior staff working directly with children, who would benefit from the training and potentially become future ETAT facilitators.

4 ETAT courses were successfully run between April 21st and May 15th 2008. 79 Malawian healthcare workers, including 47 senior nurses/nurse midwives, 27 clinical officers, 3 medical assistants and 2 doctors were trained. **(Table 2, Fig 1,2)** These healthcare workers represented staff from 25 hospitals, including 3 Central and 7 CHAM hospitals, from 18 healthcare districts, serving a population of over 2.7 million children[6].

In respect of number of courses successfully delivered and number of healthcare workers trained the project has exceeded its initial aims, widening the potential impact.

Table 2: Participating hospitals by region

Region	Participating hospitals (no. of staff trained)	
Southern	Chikwawa District (5) Chiradzulu District (3) Machinga District (3) Malamulo Mission (3) Mangochi District (3) Mlambe Mission (3) Mulanje District (3)	Mulanje Mission (3) Muona Trinity Mission (2) Mwanza District (3) Nguludi Mission (3) Nsanje District (3) Thyolo District (3) Zomba Central (5)
Central	Balaka District (1) Dedza District Hospital (2) Dowa District Hospital (2) Kamuzu Central Hospital, Lilongwe (8) Likuni Mission (4)	Mchinji District Hospital (4) Nkhoma Mission (2) Ntcheu District Hospital (2) Salima District Hospital (2)
Northern	Mzuzu Central Hospital (3) Mzimba District Hospital (2)	

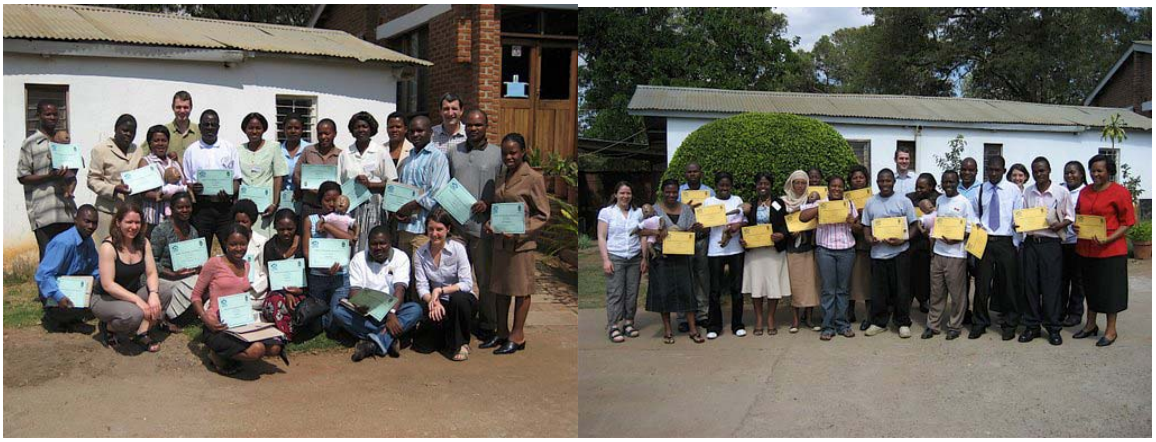

Figure 1: ETAT Groups 3 and 4 (Lilongwe)

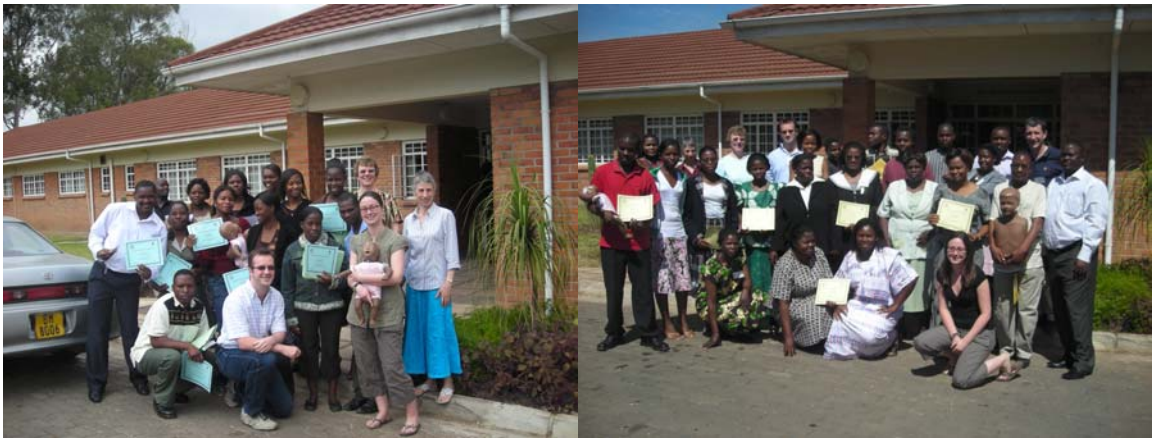

Figure 2: ETAT Groups 1 and 2 (Blantyre)

B: ETAT Action Plans

Outcome B: *Local healthcare staff, in collaboration with the ETAT team, will identify ways to improve local hospital resources, facilities and management systems to enable the implementation of the ETAT approach and so improve emergency paediatric care.*

Output/Activity B*: Day 4 of the ETAT course uses a collaborative workshop approach to identify locally specific needs and solutions to enable implementation of ETAT. District Health Officers and other senior managers will be invited to ensure continuing local support for improving paediatric emergency care services.*

Participants were keen to put ETAT into practice. A collaborative workshop approach was used to consider implementation of ETAT, including potential barriers **(Fig.3).**

Action plans developed were individual to each hospital **(examples in Appendix 2)** but identified common goals:

- Advocating to hospital management the implementation of ETAT
- Organising local ETAT training
- Review of current admissions procedures to change from 'first come, first served' to a triage system
- Review of current facilities and adapt layout to facilitate emergency treatment.
- Review of current resources to identify need for new drugs or equipment. Application would be made to hospital management to procure this essential equipment.

Anticipated barriers to the implementation of ETAT included:

- Lack of funding to pay for training courses
- High turnover of staff resulting in a need for ongoing training
- Current lack of resources in terms of essential equipment and drugs and lack of funding to procure these
- Initial need to change attitudes of parents of children familiar with the previous 'first come, first served' system to the triage system
- Possible lack of support from hospital management
- Lack of specialist paediatric input

Strategies proposed to overcome these barriers included:

- Application for funding to local stakeholders, including hospital management and locally active non-governmental organizations
- Advocating to hospital management change the staff rotational system reducing staff turnover
- Incorporating the concept of triage into parent health education programmes
- Support from paediatric staff at the College of Medicine in implementing ETAT

The collaborative workshop was very successful and the enthusiasm of participants was inspiring.

Figure 3: Collaborative workshop and action plans

C: ETAT co-ordinators

Outcome C: *An individual will be identified in each hospital who will take on the role of ETAT co-ordinator, taking responsibility for implementation of ETAT and further training of local staff, thus enhancing the sustainability of the project.*

Output/Activity C: *At the workshop an individual from each hospital will be identified to become ETAT co-ordinator. This should be an experienced healthcare worker based in paediatrics who will supervise the implementation of ETAT. A training pack will be provided to support the co-ordinator to arrange local training.*

Each hospital identified an ETAT co-ordinator who would assume primary responsibility for ETAT implementation. Training packs were provided which included:

- An ETAT- CD rom which included PDF copies of the ETAT participants and facilitators manuals, a copy of all slides used in the ETAT training course and some additional training slides
- Paper copies of both manuals
- 'Triage' stamps and ink pads (currently used in QECH as part of the triage process)
- A copy of the 'integrated care pathway' – to allow efficient documentation of child's medical history and treatment

ETAT co-ordinators agreed to report back to Dr Dube, the ETAT organiser on their progress.

D: Monitoring and follow up

Outcome D: *Systems will be put in place to monitor and evaluate the implementation and impact of ETAT. Output indicators will include monthly disease specific morbidity and mortality, all cause mortality, mortality within 24 hours admission and triage statistics*

Output/Activity D: *On day 4 local staff will be trained to improve data collection to allow monthly monitoring of disease specific morbidity and mortality, all cause mortality, mortality within 24 hours of admission and triage statistics using the WHO Integrated Care Pathway and locally designed register systems.*

Recording of triage and early mortality statistics, in addition to existing data monitoring, was discussed. Several hospitals highlighted difficulties in collecting data due to lack of resources and staff.

The concept of the Integrated Care Pathway (ICP) was introduced, a single page documenting medical history, prescriptions and clinical observations. ICP is promoted by the WHO and in use in some Malawian hospitals[13]. The participants expressed mixed opinions of the ICP. It was agreed that the concept was useful but the format could be improved. The participants were given a copy of the ICP and agreed to consider its use.

It was planned that ETAT co-ordinators would meet 3 monthly to report progress, however this proved logistically difficult therefore 6 month follow-up was arranged.

In October 2008 meetings were held in each region and attended by representatives from 17 of the 25 hospitals trained. A further 3 hospitals were unable to send representatives but were visited and progress reports submitted. 5 hospitals did not attend, some due to lost ETAT contact due to staff turnover. Hospital representatives presented progress made toward their individual action plans and local mortality and admissions statistics.

Also in October 2008 facilitators Dr Pollock and Dr Jefferis made on-site visits to 17 hospitals to observe changes made in practice and to meet with ETAT participants. Progress made by individuals and hospitals and barriers encountered are discussed later.

By this time Dr Queen Dube, ETAT organizer, had been in discussion with the Ministry of Health regarding combining ETAT with existing training programmes, planned to commence in early 2009. It was agreed that the ETAT Malawi project and its follow up be integrated with this government initiative.

E: ETAT Facilitators

Outcome E: *8 Scottish paediatric health care workers will gain insight into the challenges of working in Malawi. Links between paediatric staff in Scotland and Malawi will be strengthened leading to further exchange of expertise and greater understanding of the two countries differing healthcare challenges.*

Output/Activity E: *8 facilitators (paediatric doctors or nurses with APLS training) will be recruited by the RCPCH (International Board/Scottish Committee) to form the 2 ETAT teams. On return to the UK they will present their experiences at local paediatric meetings.*

8 facilitators were recruited with a mix of skills and experience. These included three paediatric consultants and five specialist registrars. Six had previously worked in Malawi, four had previously been actively involved in ETAT training.

The facilitators worked well together and overall experiences of the project were positive. **(See appendix 3, fig 4).**

Presentations of the ETAT project have been made at local and national paediatric meetings, a report of the project has featured in the RCPCH newsletter and as a result interest has been generated in future projects.

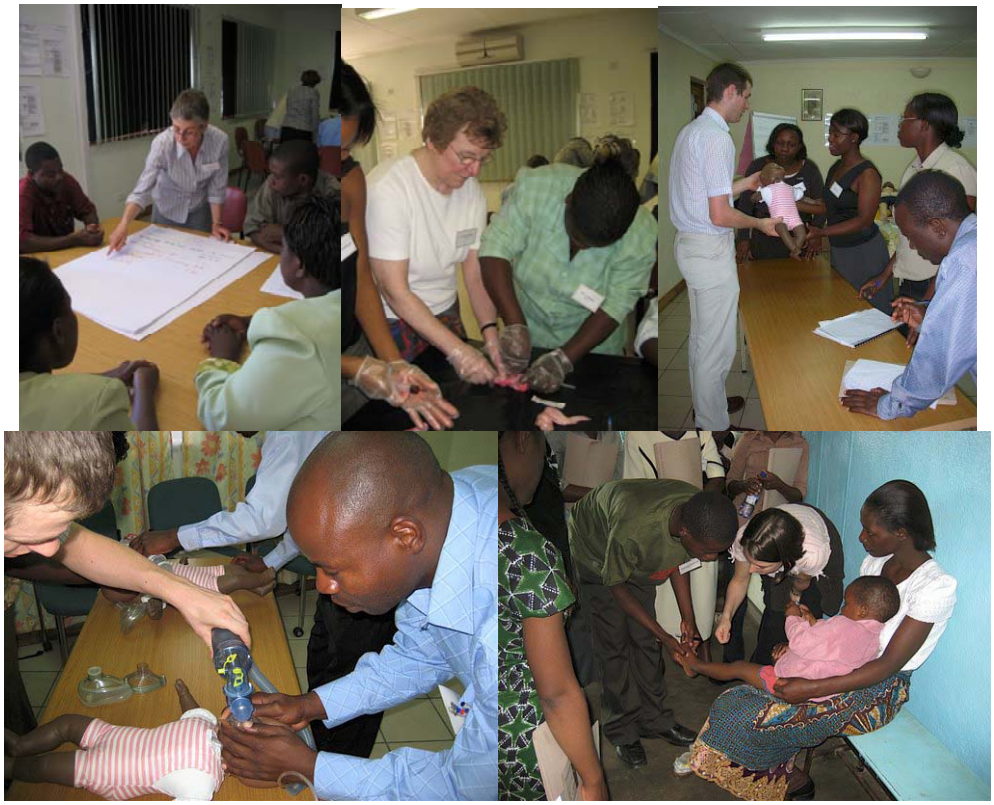

Figure 4: Facilitators share skills and experience

Impact

The impact of ETAT for participants and for patients in their care can be assessed in terms of knowledge gained, improvements in clinical practice, improvements in clinical outcomes and improvements in clinical services.

Knowledge gained was assessed via a true/false test with questions based on course content. Three tests of statistically determined equivalent difficulty were used. Tests were completed by all candidates prior to and at the end of the course. A number of participants were also tested at 6 month follow up to assess knowledge retention. The results of the pre and post course tests are summarised in **Table 3**. Paired t-test demonstrated that candidates significantly improved their individual test scores following the course, suggesting improved knowledge of emergency paediatric care. As a group, mean scores also significantly improved. 6 month follow up tests scores, although with

more limited numbers, showed the gain in knowledge persisted compared to pre-course scores. This suggests the course teaching was effective.

Table 3: Pre and post course test scores

Measure	Group 1	Group 2	Group 3	Group 4	All groups
Pre-course mean score/ 15 (95% confidence interval)	10.14 (9.2-11.1)	11.95 (11.4-12.5)	9.22 (8.3-10.1)	9.27 (8.5-10.0)	10.27 (n=76)
Post-course mean score/ 15	12.57 (11.9-13.2)	13.00 (12.5-13.5)	11.89 (11.1-12.6)	12.33 (11.3-13.1)	12.48 (n=76)
6 months Post-course mean score/ 15					11.81 (11.18-12.45) (n=32)
Paired t-test Pre vs post course (p=<0.05 statistically significant difference	p= 0.0001	p=0.0006	p=0.0002	P=0.00002	p=<0.00001
Paired t-test Pre vs 6m post course					p=0.001

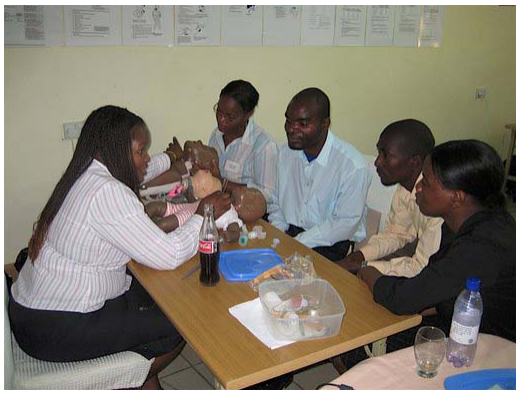

Figure 5: Dr Queen Dube (ETAT organiser) teaches airway skills

Improvement in clinical practice was assessed in skills stations and at 6 month follow-up. In skills stations candidates were observed by facilitators to have improved certain essential clinical skills including bag and mask ventilation, and insertion of intra-osseous needles during the course **(fig 5,6).** Similar resuscitation teaching techniques have been shown to improve skills and clinical practice[7]. Skills assessment of 22 participants, including demonstration with manikin, was made at 6 month follow up. Participants generally performed well with a mean score of 85% (range 60-100%). Disappointingly several participants performed poorly on key airway/breathing skills – further questioning revealed these participants had not practiced these skills since their hospital lacked the necessary equipment (bag and mask, guedel airway). Candidates who reported using

skills most often in clinical practice performed best on the test. This is in keeping with studies of resuscitation training which suggest skills must be practiced regularly to be maintained.[7]

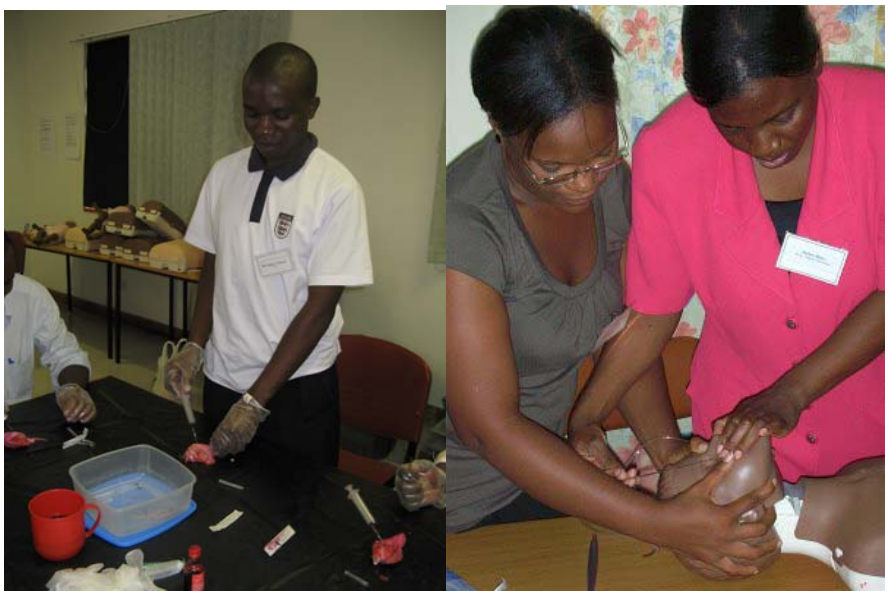

Figure 6: Clinical skills training

The impact of the courses in improving clinical outcome can be assessed in terms of mortality indicators and individual case reports.

A previous study in Malawi showed that the introduction of triage in one central hospital reduced in-patient mortality by up to 50%[8]. Since our project did not have a detailed baseline assessment of paediatric in-hospital mortality, due to inconsistency in local data collection, we could not make pre-post comparison. However, the project promoted collection of this data which should prove useful in future. In a future project with sufficient funding a more systematic baseline analysis and structured continued monitoring could provide detailed assessment of the effect on mortality.

Despite these limitations 6 month follow-up visits to participating hospitals confirmed ongoing use of skills taught and a significant improvement in clinical outcome in individual cases. 26 participants were given a structured interview to assess the impact of the ETAT course on their clinical practice. All participants reported using either skills or protocols from the course in the previous six months. 16 participants had attempted interosseous access, 11 successfully. Several participants had successfully used this technique on numerous occasions. None had used the technique prior to the ETAT course. Participants were asked from their clinical experience whether children treated would have died without this technique which provides access for emergency fluids and blood – in total case histories of 30 children whose lives had been saved were reported **(examples Appendix 4).**16 participants reported using bag mask ventilation frequently; a further 7 reported they had not used this technique only because the equipment was unavailable. Again this technique had improved outcome, particularly in neonatal resuscitation where participants had found it to be so successful specific numbers of cases could not be recalled. In addition 7 case histories of older children successfully resuscitated from respiratory arrest were reported. Finally 23 participants reported

frequently using the protocols for fluid administration and anti-convulsant treatment taught on the course. Again 4 specific case histories of children directly saved by these interventions were reported, and several other candidates expressed opinions that these protocols had been useful on numerous occasions.

In total, having interviewed only 26 of the 79 participants trained on the course, we received specific case reports of 41 children's lives saved in a 6 month period, most of these using a technique none of the participants had used prior to the course. This number is likely to significantly underestimate the true impact, since participants reported that they believed many other children had survived simply due to improved triage systems leading to more rapid treatment, and our retrospective interview meant candidates could not recall specific numbers of successfully treated children. For future projects a prospective case log-book of resuscitations would be a useful tool for both training and monitoring purposes.

If the impact of ETAT training on the clinical practice of all participants is similar to that of those interviewed many more children's lives may have been saved.

Progress reports of the hospitals trained at the 6 month follow up regional meetings and site visits to 17 hospitals allowed us to assess the impact on clinical services and training. Reports were received from 20 hospitals, most of whom had made good progress toward completing the aims of their individual action plans. Three hospitals had introduced triage systems, three had too few admissions to make formal triage practicable but reported use of triage principles in clinical care. The remaining hospitals reported improving existing triage systems. 8 hospitals had set up a new emergency area for children, 5 had obtained essential resuscitation equipment and all hospitals had submitted requests to management to procure further equipment. Most importantly participants from 11 hospitals had been involved in training colleagues, some in small scale department 'briefings' others in formal triage and ETAT courses. A further 9 hospitals had submitted proposals for funding for training courses to local management.

Funding successfully gained for training activities had been obtained from local District Health Offices and from Management Sciences for Health, a local NGO. In total in this 6 month period a further 272 Malawian health care workers had received ETAT/triage training delivered by participants trained by the ETAT Malawi project. This widens the impact of the project.

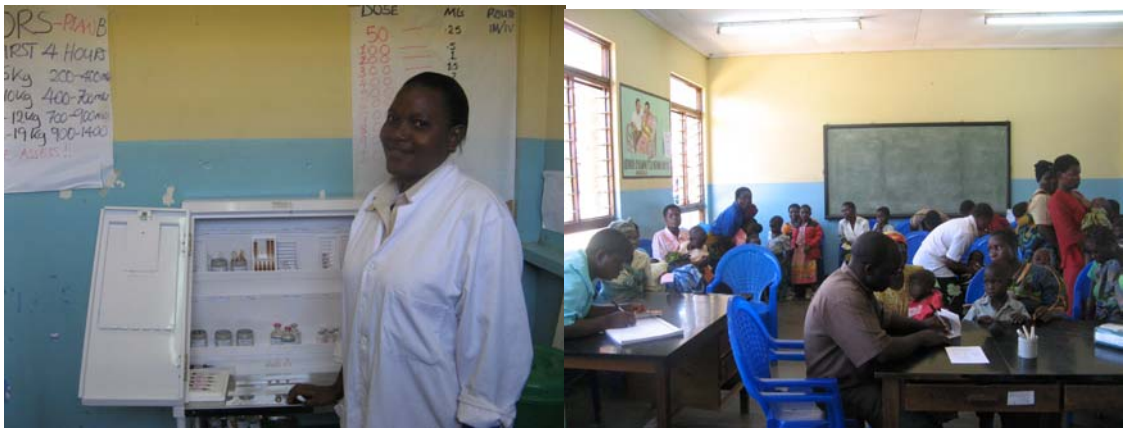

Figure 7: New emergency box and triage in action, Dedza

Efficiency

Efficiency can be defined as the extent to which desired results have been delivered with the least costly resources possible.

The project was delivered within the allocated budget of £20000 **(appendix 6).**

The overall cost per participant trained was £253. This compares well to equivalent UK training courses such as APLS, which currently costs £600 per participant.

The greatest costs of the project were facilitator flights to Malawi (25% of total budget), accommodation costs for the participants (18%), and participants 'per diem' expenses and transport costs (16%).

Flights to Malawi vary widely in price. The cheapest flights possible within the tight constraints of the course dates were obtained. Costs were further reduced as Dr Ainley-Walker chose to pay her own expenses.

Accommodation costs of the project were greatly increased by the decision to relocate the training courses to central locations in Blantyre and Lilongwe. Original estimates for accommodation costs were based on courses run close to participants' base hospitals, reducing the numbers requiring accommodation. In addition accommodation costs in Malawi rose considerably in the 18months between project proposal and delivery. Considerable efforts were undertaken locally to reduce accommodation costs to within budget.

Although it was necessary to run this pilot project centrally, now that a pool of local ETAT trainers has been established future courses could be more efficiently run in district settings.

The Malawian government produce recommendations for the 'per diem' amount government employees on training courses should receive. This amount almost tripled in the year since the project proposal and does not cover accommodation or transport costs, although does include meals. It is difficult to run training in Malawi without this expected per diem and still retain the good will of the participants, however, some organisations do not pay 'per diems', meeting only documented expenses. While it could impact on uptake of future courses such an approach would certainly minimise this cost and should be considered.

Significant savings were made by a generous donation from Laerdal Limited, who provided all the resuscitation training equipment at a 15% discount in addition to supplying free 50 adult and 50 neonatal bag valve mask resuscitators and some second hand resuscitation training dolls.

Overall attempts were made throughout to maintain most efficient use of funds which ultimately lead to a final project which exceeded its proposed number of training courses and participants trained while still within budget.

Sustainability

Sustainability can be defined as the likely ability of an intervention to continue to deliver benefits for an extended period of time after completion.

The ETAT training course has been shown to be effective and to have a positive impact on clinical practice, the project therefore has an in-built element of sustainability – since clinicians are likely to continue using methods that they find to be effective throughout their career.

However, healthcare workers are unlikely to use interventions that are unachievable given resource limitation. Lack of essential equipment will limit use of some resuscitation techniques and these skills will be forgotten. Equally resuscitation skills are of little benefit if a sick child is delayed within an inefficient admissions system. In addition a single training course can only train a small number of staff at a hospital, and due to high staff turnover trained staff may be lost to that clinical service.

These barriers to sustainability were identified by the participants themselves in the collaborative workshop, and are reflected in their action plans. All groups identified the need to extend training to their colleagues, and to apply for support from hospital management to make systemic changes necessary for the implementation of ETAT.

A major success of the project was in motivating participants to advocate for systemic changes locally in addition to changing their own practice. Many participants made significant changes to local services despite limited resources and management support.

The project aimed to build local capacity and increase the number of local 'trainers' and can claim some success in this since a further 272 health care workers were trained in the 6 months following the project by the ETAT participants. However this training was not funded by the ETAT Malawi Project, and in several hospitals proposed training was not possible due to lack of funding. This highlights the need for longer term funding and support to fully utilize local potential.

The project's single year funding did not allow for long-term support, but local advocacy for ETAT training by Dr Queen Dube has led to plans for the integration of ETAT by the Ministry of Health into other government training programmes. While external support and funding will be necessary to fully implement ETAT in Malawi in the short term, the support of the Ministry of Health is essential for long term sustainability.

ETAT Mentoring

The College of Medicine has run a successful mentoring programme for ETAT training and paediatric clinical support in the Southern Region since 2004. An end to the funding of this programme in part led to the proposal of the ETAT Malawi project. This programme provides regular training and monitoring visits to eight hospitals and is run by paediatric specialist registrars from Queen Elizabeth Central Hospital in Blantyre. This clinical and teaching support is highly valued by these district hospitals, only one of which has a resident paediatrician. Following the completion of the ETAT training courses under budget it was agreed that remaining funds should be used to support this ETAT training and mentoring programme. This has added value to the ETAT Malawi

project, since local mentoring of district hospitals is highly cost-effective compared to training provided by international volunteers.

The Future of ETAT

The ETAT pilot project has proved successful in its aims to expand and support paediatric triage and resuscitation training in Malawi. However it is clear that to ensure effective use of ETAT throughout Malawi, to build local capacity and to ensure sustainable improvements to children's emergency care further work is required.

The College of Medicine Department of Paediatrics is committed to securing the future of ETAT training in Malawi as a means to improving paediatric emergency care. However, this work is limited by diminishing funds and a continuing staffing crisis in experienced paediatric staff. Until sufficient trainers are available throughout Malawi the ETAT programme will be unable to expand – resulting in serious inequity in children's access to quality emergency care. Training sufficient staff to allow the project to become locally sustainable will require further funding, and given the current limited number of experienced paediatric staff in Malawi, support from paediatric staff from elsewhere.

Indeed, without further funding and continued support, even the dedicated work of the College of Medicine in providing ETAT training to the Southern Region is unlikely to be able to continue.

In recognition of this the organisers of the ETAT Malawi pilot project have founded Children's Medical Care Malawi (registered charity SC040448) aiming to improve children's emergency care in Malawi by continuing to support ETAT training and implementation. This charity will seek funding for local training programmes, and in association with the College of Medicine, organise future training courses utilising UK expertise to build local capacity.

In this way we hope that working together we may be able to improve the care of sick children throughout Malawi.

Put simply, we believe ETAT saves lives

Dr Louisa Pollock (September 2009)

Appendix 1: ETAT Malawi Project Partners

Malawi

College of Medicine

Queen Dube: Lecturer in Paediatrics. ETAT organiser

Elizabeth Molyneux: Head of Department of Paediatrics

Rose Kadewa: ETAT administrator

German Chaluka: ETAT Project Driver

Scotland

Scottish Government

Liz Grant

Alaynah Imlah

Lisa Bird

Royal College of Paediatrics and Child Health

Stephen Greene, International David Baum Fellow. (ETAT Project Manager)

Len Tyler, Chief Executive Officer

Pardeep Bhakar, PA to Director of Internal Services

ETAT Malawi Project Organisers

Oliver Jefferis

John Morrice

Louisa Pollock

ETAT Malawi Project Facilitators

Patricia Ainley- Walker

Emily Chesshyre

Stewart Guthrie

Oliver Jefferis

John Morrice

Louisa Pollock

Joan Robson

Jessica Street

Appendix 2: Example Action Plans

CHIKWAWA DISTRICT HOSPITAL

It started implementing ETAT in 2004. By 2004 the time ETAT started, average number of children dying was 34 each month. By December 2007 death was reduced to 13 per month. The reduction of number of death was due to training done on ETAT, and advocacy.

CHALLENGES EXPERIENCING AT PRESENT

i lack of staff to manage emergencies at under five clinic, OPD
ii Lack of Emergency room
iii Inadequate space on waiting areas.
iv Lack of equipments apparatus.eg O2 concentrators at under five OPD, Glucometer
v. Lack of trained staff.

WHAT IS NEEDED TO IMROVE AND IMPLEMENT ETAT

1. Re organize setting plan for easy TRIAGE
2. Acquire some more benches
3. Improvise a room as a resuscitation area
4. Advocate for under five , OPD nurse. Expansion of waiting area
5. Advocate for the procurement of equipments listed below for under five.
    a. O2 concentrator
    b. Glucometers and Glucostix
    c. Ambu bags
    d. Spatulas
6. Train health workers on TRIAGE like clinicians and nurses

PHALOMBE DHO

BRIEF DESCRIPTION

- No district hospital, plans underway to construction one
- Have very active health centres.
- Main ref. centres, Holy Family Hospital, there is a service agreement between Phalombe DHO and Holy family.

PLAN

a) Briefing the DHMT (MSH) - End
b) Conduct trainings of all health workers then non-clinical/med staff. @district level + HFH (May – June)
c) Writing of proposals to interested stakeholders e.g. NHS, DHO etc (May)
d) Intro + Implementation of ETAT in all H/Mgnt/HFH (June – July)
e) Conduct comm. Awareness on EAT in conjunction with IEC + IMCI Coordinators (June – July)
f) Supervision (Quarterly Basis)
g) Conducting of Quarterly Review meetings with stakeholders (Every quarter).
h) Procurement of materials for ETAT (to discuss with DHMT/IPC on way forward) Establish of a task force.

Appendix 3: Excerpts from Facilitators' Reports

What did you enjoy most?

"The growing confidence and knowledge of the participants throughout the course was very rewarding. Their enthusiasm on the final day of the course, when they were developing action plans for their own workplaces, was inspiring and also humbling." **PW**

"The course material is excellent. It has been developed in Malawi and takes into account the resource limitations (both of physical resources such as drugs and beds, and human resources such as doctors and nurses) that exist in the healthcare system there." **JM**

"[the participants] themselves were frustrated by seeing so many children die, and were keen to make a difference. They felt that what they were learning would be so useful" **EC**

What did you find most challenging?

"I found the cultural differences most challenging and also the language barrier…Having never worked in Malawi before, I did not have insider knowledge and therefore had a lot to learn**." JS**

"The practical sessions where we were putting some of the lessons learned into practice on the wards. This was difficult, particularly in the course in Lilongwe where we were on unfamiliar territory and there were several children who were receiving less than ideal management. This does however demonstrate the realities of working in a paediatric ward in Malawi". **JM**

Did you find the experience useful, personally or professionally?

"I was able to develop a greater understanding of the problems facing medical practitioners in the developing world and how to overcome various problems." **JS**

"Malawi is a beautiful place with people who are warm and friendly, it was great to have the opportunity to visit again and return to some of the places that I worked before. I enjoy teaching and being part of a project that could have such a significant impact in empowering local people to improve under-5 mortality was immensely rewarding." **JM**

Could any aspects of the programme be improved?

"It would be useful if the participants had an opportunity to read their manuals before the course. It would be good if the facilitators had more knowledge of the hospital visited and if the hospital visited was practicing ETAT" **OJ**

"We identified a few small errors in the manual that need to be corrected and as time went by we modified the course slightly to make some teaching points clearer". **JM**

General Comments

"An extremely worthwhile project." **EC**

"ETAT has the potential to impact on the lives of literally thousands of Malawian children each year, but continued support is needed to ensure that the enthusiasm and dedication of the course participants results in real and lasting change". **LP**

Appendix 4: Examples of feedback from participants

"Useful course, really designed to save the child from emergency cause of death. Generally the whole effect will be improvement in the overall child care at our hospital" **Clinical Officer**

"This has been a wonderful course to me, and I am glad that I came to attend this course. Actually, our management in the most sick patient was not up to date. But now it's my prayer that any child attended by me will get better service" **Nurse Midwife**

"This course is very useful not only to me but entire community where I will be working. It has shown practically, not only theory, of the important of apply ETAT on how can save the life of children who could die while in our hands and place of work" **Clinical Officer**

"The course is an eye opener because sometimes we overlook the children but after learning I think I can do more to prevent the deaths of under-5 children in my hospital with a spirit of having a working team who are well equipped on ABCD and we can have miracles" **Nurse Midwife**

Appendix 5: Case Histories

Case History 1

"When people need interosseous *(needle)* they come to me. There was a certain child who was having an operation, but they had a reaction to the anaesthetic. The anaesthetic clinical officer could not get a vein. They found me on the children's ward and I came and put in the IO. They gave the fluids and drugs and the child survived. Before this course I did not know how to do IO, I would have been too scared. I am now known as 'the nurse who does IO'!"

Carlo Chipeta, Registered Nurse. Mchinji District Hospital

Case History 2

"There was a child who was very dehydrated, but we couldn't get IV *(intravenous access)*. The anaesthetist tried to get a jugular vein but failed. At first the child was drinking but the next day they couldn't drink and became very flat, very floppy. I tried the IO and was able to give the fluids. The child survived. I reminded our colleagues what you said on the course – no child should die of dehydration in a hospital, it's preventable"

Denis Gwesere, Registered Nurse Midwife. Mlambe Mission Hospital

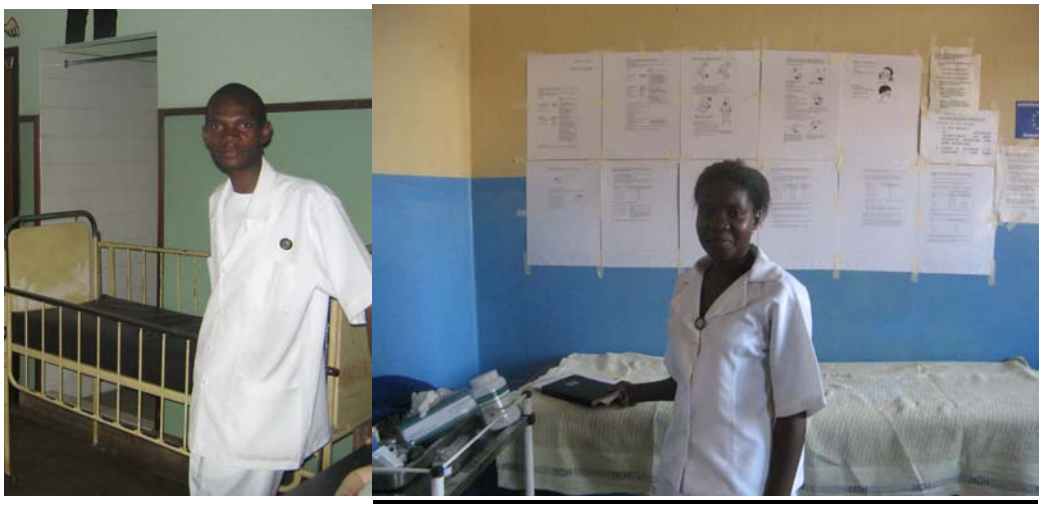

Figure 8: Denis Gwesere and Joyce Beyanu at work

Case History 3

"We were running the ETAT training course in our hospital and I went to the ward to get a giving set for demonstration. I passed a room where there was a child who was very sick, she was gasping. There was a health assistant there but he wasn't doing anything. He thought the child was going to die anyway soon. I thought, I can't go back to the course and say 'I saw this and did nothing'. There was no bag and mask so I ran to the theatres and got one from there. The anaesthetists asked 'what are you doing?' so I told them and they came to help. I was doing bag and mask and I sent one of the assistants to get the oxygen from the maternity ward. I could see the child's parents thinking 'what are you doing, my child is dead' but we kept going and after the oxygen the child got a bit better. Next day she was up and eating. Her mother was so happy. She brought the child to see me yesterday, she is fine. We worked as a team and the child survived. We have used this to teach in our hospital."

Joyce Beyanu, Clinical Nursing Officer. Nsanje District Hospital

Appendix 6: Expenditure

ETAT In-country training costs

Group 1	**Cost MK**	**Cost GBP**
Participant's per diem and travel expenses	255540.00	939.49
Driver's salary	10000.00	36.76
ETAT Administrator's salary	18000.00	66.18
ETAT organiser's expenses	12000.00	44.12
Ids and folders	4165.00	15.31
Telephone expenses	3200.00	11.76
3 Suppers refund	1260.00	4.63
Stationery	29200.00	107.35
Accomodation		
Zambezi Guest house	28000.00	102.94
Grace Bandawe	44050.00	161.95
COM Guest House	77790.00	285.99
Cure Hostel	0.00	
Sub-total Group 1	**483205.00**	**1776.49**
Participant per diem and travel expenses	216260	795.07353
Driver's salary	10000.00	36.76
ETAT administrator's salary	18000.00	66.18
ETAT organiser's expenses	12000.00	44.12
6 suppers - refund	1780.00	6.54
Rubber stamps 10 @ K1,500	15000.00	55.15
Telephone expenses	2400.00	8.82
Fuel	3000.00	11.03
Transport for Mr Sanya	280.00	1.03
Chicken Thighs for IO clinical training	7600.00	27.94
Conference room for 8 days (MAC)	48000.00	176.47
Lunch/teas (Mrs White) for 8 days	363750.00	1337.32
MAC staff Allowance	3000.00	11.03
Accommodation		
Cure Hostel	151200.00	555.88
Zambezi Mission	28000.00	102.94
Sub-total Group 2	**880270.00**	**3236.29**
Group 3		
Participant per diem and travel expenses	237060	871.54412
Driver's salary	10000.00	36.764706
ETAT administrator salary	20000.00	73.529412
20 rubber stamps	16000.00	58.823529
Fuel	20000.00	73.529412
Ids	1600.00	5.8823529
Telephone expenses	3500.00	12.867647
1st day supper for 11 participants	4400.00	16.176471
Rose's transport to Blantyre(AXA)	2500.00	9.1911765
Chicken thighs for IO clinical training	2831.20	10.408824

Transport Korea - KCH	6080.00	22.352941
Drinks for 24 people at KCH	960.00	4
Accommodation and catering		
Korea Garden Lodge/Conference Room/ Lunch/teas	316115.93	1162.1909
Golden Peacock Resthouse	24000.00	88.235294
Sub-total Group 3	**665047.13**	**2445.0262**
Group 4		
Participant per diem and travel expenses	156000.00	573.52941
ETAT organiser expenses	15000.00	55.147059
Conference room	37950.00	139.52206
1st Day Supper refund for 9 participants @ K400/Person	3500.00	12.867647
Transport refund	26700.00	98.161765
Fuel (ARV Car)	19697.00	72.415441
Telephone expenses	3500.00	12.867647
Chicken thighs for IO clinical training	331.75	1.2196691
Dr Dube's transport Axa Coach/tax to Korea Lodge	3500.00	12.867647
Transport to KCH	3370.00	12.389706
Pilirani Kumwembe (Chiradzulo)	10000.00	36.764706
Accommodation		
Korea Garden Lodge	314166.16	1155.0226
Sub-total Group 4	**593714.91**	**2182.78**
Total in-country training costs	**2622237.04**	**9640.58**

ETAT UK Training Costs

Item	**Cost**	
Facilitator flights		
E. Chesshyre	438.2	*Required separate flight to heathrow
S.Guthrie*	78.4	**Paid own flight as donation to project
	842.6	
O.Jefferis	440	
J.McClelland*	133	
	842.6	
J.Morrice	617.99	
L.Pollock*	78.4	
	842.6	
J.Street	670	
P.Walker**	0	
Sub-total	**4983.79**	
Resuscitation training equipment		***Donation from Laerdal Ltd
Little Anne dolls x3***	0	
BVM resuscitators***	0	
Little junior dolls x4	384	
Baby Anne dolls x8	512	
VAT	156.8	

Sub-total	**1052.8**

Other items	
Printing costs (manuals)	724.74
DVD projector	400
Sub-total	**1124.74**

TOTAL UK training costs	**7161.33**

Six month follow up

Item	**Cost MK**	**Cost GBP**
Fuel	71234	261.89
KGL Conference room	6132	22.54
Participant per diem	50000	183.82
Participant travel	26800	98.53
Driver salary	2000	7.35
BT Conference room	11000	40.44
Administrator's salary	10000	36.76
Facilitator's expenses	40000	147.06
Total	**217166**	**798.40**

Other administrative costs

Item	
Bank transfer costs	130
Total	**130**

ETAT mentoring programme

Item	**Cost/mth MK**	**Cost/mth GBP**	**cost/year MK**	**Cost/yr GBP**
5 Mentors' monthly expenses	50000	183.82	600000	2205.88
QECH training of trainer's course			10000	36.76
Total				**2242.65**

ETAT Malawi Project Accounts Summary

	Credit	**Debit**	**Balance**
Total Scottish Executive Funding	**20000.00**		
Total in-country training costs		**9640.58**	
Total UK training costs		**7161.33**	
6 month follow up costs		**798.4**	
ETAT mentoring programme		**2242.65**	
Other administrative costs		**130**	
Total		**19972.96**	
Final balance			**27.04**

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