

psychological, or factors regarding an individual's membership of a species or community and their potential to develop relationships within that group. Although children with profound intellectual disability do not have the necessary cognitive ability to meet the psychological criteria for personhood, I argue that as members of the same species all human have moral status and deserve protection.

By considering children and adults with profound intellectual disability as holders of full moral status, an obligation to protect their rights is conferred. Society has an obligation to ensure that their best interests are met. The law has repeatedly stated that competent adults have a right to refuse treatment; the right to die is inherent in law. In this respect if children with exceptional health care needs have full moral status they do not only have the right to medical treatment but also the right to be protected from unnecessary, futile and potentially painful procedures in the absence of any hope of cure. Thus when considering the best interests of children with exceptional healthcare needs, attempts must be made to ensure that their rights as persons are respected.

International Child Health/British Association of General Paediatrics

G115 REHABILITATION OF CHILDREN WITH NEURODISABILITY FOLLOWING BRAIN INJURY IN MALAWI: PERSPECTIVES OF FAMILIES AND HEALTH-WORKERS

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Aims Rehabilitation services in Malawi are limited despite the burden of paediatric neurodisability secondary to conditions such as cerebral malaria, meningitis, encephalitis and traumatic brain injury. This hospital-based study aims to explore the perceptions and experiences of parent/carers and health-workers caring for children with neurodisability following brain injury, in order to inform the development of a capacity-building programme to improve rehabilitation services.

Methods The study was conducted in the Paediatrics department of an urban tertiary hospital in Malawi and utilised qualitative methodology. Sampling was purposive with recruitment via Paediatrics staff. Fourteen interviews were completed with parents/carers of children affected by recent brain injuries, and ten interviews and four focus-groups with health-workers. Analysis involved a thematic framework approach.

Results

Health-workers With limited resources, management of acute conditions is prioritised over rehabilitation. Lack of confidence, knowledge, and a sense of 'there's nothing we can do' hampers health-workers' rehabilitation efforts, despite many suggesting that simple things make a difference. Bias exists towards managing physical disability rather than impairments of cognition, speech or behaviour. Concerns were raised about the wider impact of neurodisability on the family, including the risk of child abuse and neglect. Counselling, including information giving, was identified as a priority. Health-workers recognised that effective rehabilitation could not be achieved unless parents/carers first understood and accepted their child's condition.

Parents/Carers Reports of poor communication between health-workers and parents/carers were common. Parents often had not

understood or been adequately informed about investigations, diagnosis or management of their child's condition. This contributed to unrealistic expectations about prognosis, misunderstanding about underlying causes, and lack of continued rehabilitation in the community. The burden of caring for a child with neurodisability, and the financial and opportunity costs this entails was strongly evident. Main issues were lack of mobility in their child, feeding, continence and speech difficulties. Religion was a key source of support.

Conclusion Limited resources, lack of health-worker training, bias towards physical disability, and poor communication, are key factors inhibiting rehabilitation of children with brain injury in a hospital-setting in Malawi. A programme to improve rehabilitation services should address these issues as priority.

G116 PROFILE OF DENGUE VIRAL INFECTION AMONG CHILDREN TREATED IN A COMMUNITY HOSPITAL OVER ONE YEAR AND COMPARISON OF EFFICACY OF NS1 ANTIGEN ASSAY WITH MAC-ELISA FOR DIAGNOSIS OF DENGUE

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Aims Early diagnosis of Dengue is important to improve patient outcomes and promote timely public health interventions. This study aimed at

1. studying the profile of paediatric Dengue viral infection,
2. comparing efficacy of NS1 antigen assay with MAC-ELISA for diagnosis of dengue, during both acute and convalescent phases and
3. assessing time frame for positivity of these tests.

Methods This was a prospective cohort study in the Paediatric department of a community hospital in a tropical developing country, during the period July 2011 to July 2012. The Institutional Review Board approved the study. Written informed consent was obtained from all parents. Clinical features of 178 children who presented with Dengue infection were studied. Dengue NS1 antigen, IgM and IgG ELISA were done on the day of admission irrespective of duration of fever. Other laboratory tests were done as per current protocol. Chi-square test and proportion test were used for analysis.

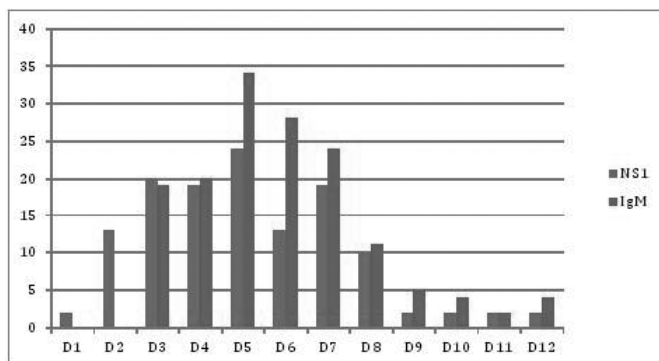
Results Majority of children (37.7%) was in the age group 11 to 15 years. 59.4% were males. The proportion of males was higher in extremes of age groups. Common clinical manifestations were fever (91.6%), rash (35.8%), hepatomegaly (33%), ascites (11.3%), bleeding manifestations (17%) and pleural effusion (3.7%). 21.7% had Dengue Haemorrhagic Fever and 7.5% had Dengue Shock Syndrome. Laboratory findings were thrombocytopenia (77%), leucopenia (24.5%) and raised SGPT (63.2%).

33% of children presented in acute phase (≤ 4 days) and 67% in convalescent phase (5–7 days: 53.8%, > 7 days: 13.2%).

94.3% were positive either for NS1 Ag or IgM antibody or both and 5.7% were clinically treated as dengue fever.

NS1 and IgM ELISA positivity were 88.6% and 51.4% respectively in acute phase and 63.38% and 92.8% respectively in convalescent phase ($p < 0.001$). Time frame for positivity of these tests is shown in table 1. NS1 antigen detection was very good in acute phase of both primary and secondary infections, but low in convalescent phase of secondary infections.

Conclusions Early and accurate diagnosis of dengue infection can be made with typical clinical features and laboratory investigations. NS1 Antigen in the acute phase and IgM ELISA in the convalescent phase are good diagnostic tools.



Abstract G116 Table 1 Time frame for positivity of NS1 antigen and IgM ELISA

G117 CAN MEDICAL STUDENTS IN RWANDA RECALL WHAT THEY LEARNT IN ETAT+ (EMERGENCY TRIAGE AND TREATMENT PLUS ADMISSION OF SICK CHILDREN) COURSE?

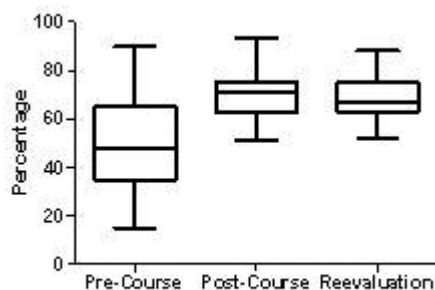
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Methods All final year medical students for last 2 years in Rwanda attended a full 5 day ETAT+ course. It is designed for hospital staff, but full course was chosen as the following year the students will be working in district hospitals, usually as the most senior doctors. They took a knowledge test (multiple choice questions) at the start of the course. After the course, the same knowledge test was taken and two clinical skills scenarios were assessed, using standardised criteria. Candidates had to retake the scenario if they did not pass all the criteria and failed if they did not pass all the criteria on retesting. At the end of the academic year, 3–9 months later, their knowledge and clinical skills were reassessed with the same knowledge and clinical skills tests.

Results Between Nov 2011–May 2012, 91 medical students attended one of 4 courses. In August 2012, 81 students were re-evaluated.

The knowledge test results (figure 1): pre-course, median score was 47% (inter-quartile range 35.65); after the course 71% (inter-quartile range 63, 75). There was a statistically significant improvement in performance (Wilcoxon matched-pairs signed rank test $p < 0.0001$). On re-evaluation, median MCQ results were 67%, (inter-quartile range 52, 75), not significantly different from post-course performance.



Abstract G117 Figure 1 Knowledge test results

Clinical skills assessments (Table 1) showed that 95% passed immediately after the course, with 72% passing both at their first attempt. On re-evaluation, 74% passed, 47% at their first attempt (Chi-squared $p < 0.01$).

Abstract G117 Table 1

Table 1	Clinical skills	
	Post-course (n = 91)	Re-evaluation (n = 81)
Passed first attempt	65 (72%)	38 (47%)
Passed second attempt	22 (24%)	22 (27%)
Failed	4 (4%)	21 (26%)

Conclusion On evaluation immediately after the full ETAT+ course, there was a marked improvement in knowledge and most passed the clinical skills. The medical students coped well with the full course. On re-evaluation 3–9 months later they retained their knowledge but clinical skills declined, showing refresher courses are required to maintain clinical skills.

G118 ESSENTIAL ETAT: FEASIBILITY OF SHORT DURATION PAEDIATRIC RESUSCITATION TRAINING IN A RESOURCE-LIMITED SETTING

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Aims ETAT and ETAT+ training courses provide comprehensive training in paediatric emergency care over 3.5–5 days and have been shown to improve outcome in resource-limited settings. However, the logistics, cost and impact on local service delivery of a five day course may limit training opportunities in some settings. In this context, we aimed to determine whether a shorter, more focused course – ‘Essential ETAT’ – would be feasible.

Methods Two resuscitation training courses were designed, of one or 2.5 days duration. Both courses were adapted from WHO ETAT and ETAT+ training materials and included practical and lecture-based sessions on triage, cardiopulmonary resuscitation and recognition and management of key paediatric emergencies. Practical sessions in airway management, bag-valve-mask ventilation and intra-osseous needle insertion were included. There were no hospital-based sessions and newborn emergencies were not included. A short manual summarising ETAT guidelines was provided. Participants were nurses and doctors working in primary or secondary care settings in Gambia. Impact on participant knowledge was assessed by pre and post-course multiple-choice test. Participants’ evaluation of the course was assessed by structured questionnaire.

Results Nineteen and 22 participants completed the 2.5 and 1 day courses respectively. Participants on both courses showed a significant improvement in post-course test scores using a paired t-test; 2.5 day course mean scores- pre 12.42, post 15.63 ($p < 0.001$); 1 day course mean scores- pre 14.32, post 16.86 ($p < 0.001$). There was no significant difference in mean post-course scores ($p = 0.08$) or in mean increase in score post-course (3.21 compared to 2.54, $p = 0.4$) between participants from the 2.5 day and 1 day courses respectively. Participant feedback from both courses was positive.

Conclusions The comprehensive training offered by ETAT/ETAT+ is of proven benefit. However, in settings where providing such courses is logistically difficult, focused training of shorter duration may offer a pragmatic and potentially cost-effective alternative.