Safer Anaesthesia From Education (SAFE) Paediatric Anaesthesia in East Africa

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BACKGROUND

- In low and middle-income countries (LMICs) over 40% of the population is reported to be under the age of 14.
- It is estimated that 85% of these children will require surgery by the age of 15. In this setting, acuity is high, patients present late, and access to safe and timely surgery is limited due to factors such as poor facilities and few trained anesthesia providers.
- The majority of pediatric anesthetics are administered by non-physician anesthesia providers who have limited training and work alone without physician anesthesia support and no opportunities for continued medical education.

REFERENCES


METHODS

- To improve access to safe anesthesia for children in LMICs, the World Federation of Societies of Anaesthesiologists (WFSA) in partnership with the Association of Anaesthetists of Great Britain and Ireland (AAGBI) developed the Safer Anesthesia from Education “SAFE” training course in pediatric anesthesia to help bridge this gap.
- The SAFE Paediatric course (SAFE Paeds) provides refresher training to physician and non-physician anesthesia providers working in a resource limited setting in the essentials of pediatric anesthesia. It is designed as an “off the shelf” modular 3 day course emphasizing the principles of safe care for children including: assessment, vigilance, and competence in essential skills.
- The course uses adult learning principles with few lectures and mostly small group breakout sessions consisting of case scenarios, discussions, and skill stations.
- Topics include sessions on:
  - Common elective and emergency conditions in children
  - Anaesthesia for neonates
  - Fluid resuscitation
  - Newborn and Pediatric life support
  - Pain management
  - Pediatric trauma management
- Includes a one day Train-the-Trainers (TTT) course to facilitate local faculty development and ownership of future courses.
- Knowledge and skills are assessed by pre- and post-course tests.

RESULTS

- In 2014-16 SAFE Paeds was run in 6 countries in East Africa (Ethiopia, Kenya, Madagascar, Malawi, Uganda, and Zambia) Facilitators were from the US, UK, and East Africa.
- Over 500 anesthesia providers (physician and non-physician) participated in the course.
- Reported scores thus far show mean MCQ scores increased from 37/50 to 43/50 (p<0.0001) and skills scores increased from 5/10 to 8/10 (p<0.0001).
- Longer-term knowledge and skills retention are currently being assessed.
- Feedback from course participants:
  - Mean overall satisfaction for the course was 9.6 (range 6-10, n=138).
  - Course will improve the anesthetic care given to children (mean 9.6, range 6-10), n=138.
  - Comments were very positive.
- Unexpected outcome was establishment of a WhatsApp Group, “Anaesthesiologists Africa” with continued mentoring and networking following the course and additional opportunities for learning.

DISCUSSION

- SAFE Paeds provides practical relevant training to anesthesia providers expected to care for pediatric patients in a resource-limited setting.
- Implementation of this course has helped to:
  - build national and regional networks in pediatric anesthesia in East Africa.
  - Allows for increased interaction, understanding, and cooperation between physicians and non-physician anesthesia providers.
- Improved knowledge and skills gained through this course and the positive networking among providers within countries can help to provide a model for improving the standard and quality of anesthesia services to children in low-resource settings.