The SAFE Experience in Telangana

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Safer Anaesthesia From Education (SAFE) is a project developed by the World Federation of Societies of Anaesthesiologists (WFSA) in partnership with the Association of Anaesthetists of Great Britain & Ireland (AAGBI) with the aim of improving the quality of paediatric and obstetric anaesthetic care to a competent and safe level, even in low resource settings. Courses in paediatric and obstetric anaesthesia have been conducted in several countries in Africa, South America and South Asia, to physician as well as non-physician anaesthetists. The objective is to train as many anaesthesia providers as possible in each country, who can then train their peers and colleagues, so as to create a sustainable training model.

Each course is conducted over 3 days, and provides refresher training in the essentials of paediatric or obstetric anaesthesia which emphasises the principles of safe care for children or mothers respectively. A one-day training of the trainers (ToT) course is also conducted, usually just before each SAFE course, with the aim of developing local faculty so as to make the project self-sustaining.

In India, the WFSA initiated a 4-year program focusing on the state of Telangana; and the first SAFE Paediatrics course was conducted in Hyderabad from August 18th to 20th, 2017. Two more courses were conducted in April 2018 at Warangal and October 2018 at Hyderabad. A SAFE Obstetric course was conducted at Hyderabad in May 2018, and second one is planned for December 2018 At Mehboobnagar.

The SAFE Paediatric Anaesthesia course is aimed at practitioners who provide anaesthetic care to children as part of their work. They may be physicians or non-physicians, and their experience may range from newly qualified anaesthetists to those with several years of practice behind them. The techniques and practices are also different in different set ups, and many senior practitioners may be adhering to outdated techniques. Of course, a big issue is the variation of equipment and level of monitoring available in the different hospitals in the area.

In order to assess the baseline level of anaesthetic care, an anaesthesia capacity questionnaire was given to all participants before each course. The objective is to repeat this survey at the end of the 4-year project so as to evaluate the improvement in anaesthetic standards.

The paediatric course includes sessions on anaesthesia for common elective and emergency conditions in children, pain management, fluid resuscitation, newborn and paediatric life support and paediatric trauma management. Each course participant receives a detailed course manual and logbook to take away and continue to use as a reference.

**First SAFE Paediatrics course:**

This was conducted at the Plaza Inn Hotel in Hyderabad from August 18-20th 2017. The course coordinators were Dr Subrahmanyam Maddirala, Rainbow Children’s Hospital Hyderabad, India, and Dr Jolene Moore, Aberdeen, UK. External faculty included 2 anaesthetists from the UK, 1 from the US and 1 from Bangladesh. There were 10 Indian paediatric anesthesiologists, 6 from Hyderabad, and 1 each from Delhi, Mumbai, Vellore and Chandigarh. The course was supported by the Indian Association of Paediatric Anaesthesiologists, Smile Train and Lifebox.

A one-day Train-the-trainer course was held on 17th August 2017, prior to the SAFE Paediatrics course for all of the SAFE Paediatrics faculty who had not participated or taught on a previous SAFE course (13). Participants were all physician anesthesiologists including Professors, Assistant Professors, Consultants and a paediatric anaesthesia fellow. All but one taught on the SAFE Paediatrics course.

Participants in the course (40) were anaesthesia residents and physician anaesthesiologists from a number of facilities, who regularly care for children. They travelled from the districts around Hyderabad as well as out-side the state. Thirty-four participants attended each day and completed the course. Most delegates improved on both their knowledge and skills over the 3-day course. On average scores on the knowledge quiz improved from 36/50 (73%) to 42/50 (85%) by the end of the course. Delegate feedback received for lectures, breakout sessions, and overall course delivery was very good.

**Second SAFE Paediatrics course:**

After the first SAFE Paediatric course was conducted in Hyderabad, a second course was planned to be held outside Hyderabad; and to this end, the second course was conducted in Warangal, Telangana; from April 20th to 22nd, 2018. The course coordinator was Dr Gita Nath, Rainbow Children’s Hospital, Hyderabad and the local facilitators were Dr Praveen Kumar, Registrar, Kaloji Medical University; Dr B Srinivas Rao, HOD Anaesthesiology and Dr Ch Murali, Assistant Professor, Kakatiya Medical College, Warangal.

The faculty included 5 paediatric anaesthesiologists who had taken the ToT course in Hyderabad. A ToT course was held on the first day adding 5 more anaesthesiologists to the faculty, making a total of 10. There were no external faculty, but 2 anaesthetists travelled from Chandigarh and Delhi respectively. Six of the faculty travelled from Hyderabad and we also included 2 anaesthesiologists from Warangal.

A total of 41 anaesthetists registered for the course, including the local faculty. However, 25 attended on the 21st and 17 on the 22nd. All the participants were qualified anaesthetists, working in a variety of set-ups: teaching hospitals, non-teaching government hospitals, corporate hospitals, small private nursing homes and so on.

Improvement was noted in both knowledge and skills during the course. The average score on the knowledge test improved from 36 (72%) to 40 (80%) at the end of the course. The number of delegates scoring 40/50 and above increased from 3 to 10. The course was enjoyed by the participating delegates and very good feedback was received for lectures, breakout sessions and the course on the whole.

**Third SAFE Paediatrics course:**

This was held at The Plaza Begumpet, Hyderabad from 12th October to 14th October 2018. It was conducted by Indian Association of Paediatric Anaesthesia (IAPA) Telangana State Branch; coordinated by Dr Ravi Nagaprasad and supported by Dr Subramanyam Maddirala and Dr Gita Nath of Rainbow Children’s Hospital Hyderabad, India. Two external faculty, Dr Travis Lee Reece, Pediatric Anesthesiology Fellow from Stanford University, USA and Dr Sapna Bathla from Delhi, India participated in the course. Internal faculty included 10 paediatric anaesthesiologists, 4 were trained in the ToT during previous courses and 6 were trained during the ToT course on 12th October.

A total of 34 participants attended the course on 1st day of the course and 32 participants attended on the 2nd day. All participants were practising anaesthesiologists from peripheral hospitals, who also anaesthetize children in their institutions. Most delegates improved in their knowledge and skills during the 2-day course. The average scores on the knowledge quiz showed an improvement from 32 (64%) to 43 (86%)by the end of the course. Delegate feedback received from lectures and break-out sessions was positive. Overall course delivery as well as response was very good.

Combining the data from all of the 3 SAFE courses, a total of 102 anaesthetists attended the course as delegates, and 24 local faculty were trained to facilitate future SAFE courses independently. Of the 102 participants, 59 delegates took both pre- and post-tests (57.8%), 35 took only one test (34.3%), and 8 did not have any scores (7.8%). In each individual course, the post-test scores were more than pre-test; resulting in a 12.3% overall increase. The feedback from all the courses was very good; satisfaction with academic sessions had a score of 96.4% and course applicability in their own set up was scored 95.2%.

My personal perspective: I have always been involved in teaching, throughout my career – medical students, post-graduate trainees and junior colleagues. Teaching in institutions affects local students and trainees, while lecturing or training at conferences / CMEs / workshops reaches a wider audience. But the actual impact on improving day-to-day practice from conferences is doubtful.

One concern I have always had is how to improve the standard of safety and quality of care in non-institutional set ups. There is a lot of variability in the healthcare system in our country, in all aspects: the level of resources and equipment, the level of training of anaesthesia personnel, how well people update their knowledge and so on. Many outdated or wrong practices are perpetuated with the words “This is how we did it during my training!”

The SAFE program addresses all these points. It is based on the principles of adult learning – basically adults are there because they want to learn and what they learn has to be relevant and applicable. Very little of the time in a SAFE course is spent on lectures; it mostly consists of small group discussions, demonstrations and simulations. The program reaches out to anaesthetists at different levels, from trainees and teaching faculty to non-academic practising anaesthetists. It is thus much more effective in changing practice and hopefully the overall level of safety and quality of anaesthetic care will be improved!