VITAL ANAESTHESIA SIMULATION TRAINING

VAST Course report

Hyderabad, India

15th to 17th July, 2019

Dr Gita Nath

Executive summary

Situation

The second VAST course in India was successfully delivered at Care Institute of Health Sciences (CIHS), Hyderabad from 15th to 17th July, 2019.

Background

The Vital Anaesthesia Simulation Training (VAST) course is a unique programme which focuses on anaesthesia and resuscitation for mainly obstetrics, paediatrics and trauma. It uses immersive, low-fidelity simulation and carefully designed scenarios to illustrate relevant issues in the workplace. Post-scenario debriefing and targeted discussions specifically focus on non-technical skills aiming to generate participant-driven take-home messages.

This time, a facilitator course was not included as it was felt that it is more important to consolidate the skills acquired by the trainee facilitators who attended the first course in February. Two overseas faculty and 5 local facilitators taught on this course. There were 14 participants on the first day and 2 surgeons attended on each of the subsequent days. This course was funded by the WFSA, as was the previous course.

Assessment

The participants were uniformly appreciative of the course as shown by the feedback that was given. This type of simulation-based training was quite new to most of them. The ANTS framework and its importance in day to day practice was an eye opener to the majority. As before, multidisciplinary participation greatly added to the realism of the scenarios. Addition of the anaesthesia technicians also worked out well, though there were one or two language issues!

As for the facilitators, it was great to be working together again, and the camaraderie which developed during the first course was strengthened even more.

Recommendation

Given the highly encouraging response to VAST, it was obvious that further simulation-based courses like this should continue to be held. The primary aims of VAST course include the following:

- Promote awareness of the importance of non-technical skills in critical situations
- Promote incorporation of ANTS along with core content in anaesthetic training in the region
- Promote usage of non-technical skills among practising anaesthesiologists and their colleagues in the workplace

Possible barriers to achieving these goals are:

- The large target population: intensive training of small groups is highly effective for individual participants but it is challenging to make a difference to the majority.
- Taking 3 days off from work can be difficult both for the participants and facilitators.
- Having to travel from home to attend the course can have positives as well as negatives. Travel and stay need to be arranged, but one can concentrate on the course without being disturbed by the demands of work commitments.

Contents

Course background

The VAST course was developed as a collaborative effort between Dalhousie University, Halifax and the University of Ruanda, and has been designed for the anaesthesia provider working in low-resource conditions. To make the scenarios closer to reality, participants include people from nursing and surgical backgrounds.

The first VAST course in India was conducted in February 2019, as part of the 4-year WFSA project in Telangana, India. This was held at the Care Institute of Health Sciences (CIHS), Hyderabad and led by the founder of VAST, Dr Adam Mossenson; and assisted by Dr Tom Druitt, Dr Anna West and Ms Michelle Murray. There was a 2-day ToT for local trainee-facilitators followed by the 3-day VAST course.

The second VAST course in Hyderabad was again funded by the WFSA. This time, there were two observers from the WFSA – Ms Nita Pillai and Ms Dilly Hartley; as well as Dr Monali Mohan from Care-India. Dr Tom Druitt and Dr Angela Enright were external faculty. The trainee-facilitators from the previous VAST FC all taught on this course, apart from Dr Vibhavari Naik who was not able to attend. Local arrangements, which included recruitment of participants, venue, printing and so on was done by Dr Gita Nath.

Faculty and attendees

Faculty:

- Dr Tom Druitt (Halifax), Specialist Anaesthesiologist
- Dr Angela Enright (Vancouver), Specialist Anaesthesiologist, Past President of WFSA
- Dr Gita Nath, Specialist Anaesthesiologist, VAST Country Coordinator
- Dr K Sailaja, Specialist Anaesthesiologist
- Dr Padmaja Durga, Specialist Anaesthesiologist
- Dr Ravi Nagaprasad, Specialist Anaesthesiologist
- Dr Vaibhavi Upadhye, Specialist Anaesthesiologist

Observers:

- Ms Nita Pillai, Head of Programmes, WFSA
- Ms Dilly Hartley, Project Officer, WFSA

- Dr Monali Mohan, Care-India

Technical support:

- Mr Gireesh Kumar NS, Intensive Care Nurse

Participants

Name	Clinical role
Dr Sunidhara P	Staff Anaesthetist
Dr Praveen Kumar B	Resident Anaesthetist
Dr Sibani Padhy	Staff Anaesthetist
Dr Madhavi	Staff Anaesthetist
Dr Ujwala Khorgade	Staff Anaesthetist
Dr Y Lakshmi Sindhura	Staff Anaesthetist
Dr Prachi Kar	Staff Anaesthetist
Dr Anant Atkar	Anaesthetist, Fellow
Dr S Virinchi	Resident Anaesthetist
Dr Akshay Bhargava	Emergency Physician
Dr Mukta Waghmare (Day 2)	Paediatric surgeon
Dr Abirami Krithiga (Day 2)	Paediatric surgeon
Dr Annie Pranutha (Day 2)	Obstetrician
Dr Shanthisree (Day 2)	Obstetrician
A Annapurna (Day 1)	Theatre nurse
Naresh (Day 2)	Theatre nurse
GP Pratyusha (Day 2)	Midwife
Mamata S (Day 1)	Theatre nurse
Aarti Sivankutty (Day 2)	Theatre nurse
V Deepika (Day 3)	Ward nurse
M Madhumohan	Anaesthesia technician
Ramakrishna SV (Day 1)	Anaesthesia technician
Mir Mouzam Ali (Day 2)	Anaesthesia technician
Abdul Jabbar Khan (Day 3)	Anaesthesia technician

The participants included two final year residents and 7 qualified anaesthetists. Two anaesthetists were invited from Warangal and Karimnagar respectively, but both of them backed out fairly late in the day. There was also one emergency physician, who provided an additional dimension to the scenarios and discussions.

The two obstetricians attended on Day 2 and two paediatric surgeons joined us on Day 3. Both groups included a nurse and an anaesthesia technician each on all 3 days of the course.

Venue and equipment

Since the Care Institute of Health Sciences (CIHS) was found to be very convenient in all aspects during the previous course, the same venue was chosen this time. The course was conducted on the ground floor which had a large class room with audio-visual facilities and white marker pads. There were two simulation rooms where scenarios were run, and two separate debriefing rooms with whiteboards. Lunch and refreshments were served on the third floor.

Equipment for the scenarios consisted of the VAST teaching materials which were left with Dr Nath along with an inventoried list (Appendix 1). Simulation mannequins, airway equipment, trolleys, IV stands and so on were supplied from CIHS (Appendix 2). Gireesh, a CIHS staff with ICU nursing background, arranged the props before each scenario. Gireesh had been trained by Michelle during the previous course, and proved to be a tower of strength during the present course. Since two parallel scenarios were to be run, one of the facilitators was allocated the task of setting up each room. This person was to observe the scenario while it was being run and was in charge of debriefing. A different person was to do the job of running the scenario. I agree with Dr Mossenson that Gireesh will be a great asset for the future delivery of VAST if there is an ongoing association with CIHS.

Printing of participant and facilitator handbooks, certificates, feedback forms and time-tables was all done locally. VAST ID clips with Crisis Management cards were left over from the previous course.

Conduct of course

The course was run almost true to the manual, with changes included from the supplement. We included scenario 1.7. There were some new participants every day so we ran a 10min demo scenario early on day 2 and day 3; on Day 2 the facilitators acted as participants, on Day 3 participants who were doing the entire course performed a scenario from the previous day for new participants.

The facility again was of a very high standard - rooms, catering, IT support etc. Gireesh performed very well in the setup roll. Effort should be given to retaining him for future courses, even if they are performed outside CIHS.

A clear takeaway from participant evaluation was confusion on day 1 about who was who in the scenario role-play. Lead participants, briefed outside the room, reported that it was difficult to determine/ remember the roles of other participants. We made changes on day 2 to introduce name badges with roles (Nurse, Family, Anaesthesia student etc) and clearly brief the lead about their co-participants as soon as they entered the room. This was well received.

Summary of evaluations

VAST Course:

The feedback was overwhelmingly positive, and all participants were enthusiastic and engaged throughout the course. They all appreciated the organization of the course as well as the arrangements.

There were some recurrent themes in the feedback – communication and teamwork featured repeatedly in what they liked as well what they would take away. They all liked the simulation-based teaching technique. The discussion on "Sully" made an impression – "shared mental model" was mentioned several times during the discussions. Clinical frameworks were appreciated by many, they liked the systematic way of management. The session on burnout struck a chord with many of the participants.

As to suggestions, some people felt that the scenarios can be made more complex, especially if the initial protocols were followed. The comment that participants in the scenario should be introduced or identified for the benefit of the lead participant was acted upon promptly, as mentioned above. It was also suggested that this sort of training should be extended to trainees and resident doctors.

Challenges and lessons learnt

Take home messages:

- The second VAST course in India was delivered successfully with a very positive response from the participants.
- Inclusion of anaesthesia technicians in addition to the nurses proved to be a good move, since this is usual working pattern here.
- The VAST Facilitator Course should be conducted with the next VAST course, so that we can build a network of facilitators so as to increase the local capacity. Trainee facilitators can be identified from those who have done the VAST course earlier.
- VAST type training can be incorporated into local teaching programmes to enhance non-technical skills.

Future directions

Suggestions for future courses:

- Increase the number of facilitators and maintain a reserve group
- Conduct shorter courses – maybe 1-day courses
- Advertise the course in local anaesthesia groups so that interested participants may register
- Self funding – charge a small sum to cover expenses
- Conduct courses in teaching centres as well as district hospitals, so that participants do not need to travel

Appendix I – Participant evaluations

What I liked:

Organization and preparation of course	Preparation was good Running on time Involving obstetricians in the workshop Enthusiasm of the trainers / facilitators X 3 Friendly atmosphere, interactive sessions X 2 Emphasis on practical training rather than lecture Topic selection - which are important in both day to day practice and in crisis Interactive lecture format X 3 Course structuring - Lecture (theory) followed by practical scenario
Content of course	Pain management discussion X 5 Practical management of obstetric emergencies X 3 Dealing with burn out, prevention, self-assessment X 5 Baby resuscitation good Algorithms, clinical frameworks, systematic approach – SBAR, AMPLE, ABCDE, PPH protocols X 5 Easier to retain algorithms by doing them rather than reading them Airway management, Trauma, burns X 7 Paediatric laryngospasm management
Simulation technique	Liked simulation as teaching technique X 3 Role play Debriefing session immediately following scenario X 2 Simulation monitors - making simulation near to reality Clinical scenarios resembling real-life situations X 8 Structured revision of everyday clinical scenario Debriefing and take home message after each simulation X 3
Non-technical skills	Closed loop communication X 7 Leading the team as a surgeon Task assignment based on capabilities X 4 Team work, team management X 8 Crisis management and team dynamics X 2 Prioritization of the situation and treat Importance of non-technical factors during crisis management X 5 Importance of preparation and anticipating difficulties, prompt decision making

General	A first of its kind to teach non-technical skills Repetition of concepts to emphasize importance Emotional components in paediatric cases to be addressed Do not panic in critical situation Speak up! How important to call for help, whenever you are not able to manage any case

Suggestions for improvement:

- More complicated scenarios may be incorporated
- Along with non-clinical skills, clinical scenarios can be dealt with more skills related to medical knowledge
- More case scenarios on stress and burnout X 2
- Before debriefing starts, let us have a quick summary of events that happened in scenario for a shared mental model
- Not much improvement required but reach out to try to include residents and doctors in training X 2
- To introduce more complicated scenarios which we rarely encounter but are challenging to manage X 2
- No improvement required X 7
- If the participants are able to follow protocols in scenario simulation, step up the scenario to make it more difficult and clinically challenging
- Interactive manikins for simulation can make it more interesting X 2
- While playing role of team leader, we should be aware of who all are in role play, when we enter the room X 3
- Debriefing can be done in the simulation lab itself as we can reduce the time wasted
- Having auditory clues can be more effective eg. Sound effect in laryngospasm
- More training sessions to cover all medical personnel
- One difficult scenario post-lunch to keep people more alert

What can you take away from the course:

Content of course	Pain (RAT) X 2 Neonatal resuscitation X 4 Difficult intubation management
Communication	Proper communication and team approach in managing a critically ill patient X 3 Closed loop communication X 8 Communication between the patients and doctors Communication between the departments Patient satisfaction and communication

	Good communication, coordination and team work X 11 Clear effective communication X 2 Do not assume things - instruction would have been done. Vocalize and close the loop. Empathy towards patient attender while explaining risks X 2
Non-technical skills	Team lead has to lead and coordinate the resuscitation group X 8 Team management / team work / X 8 Task allocation X 2 Prioritization X 2 Task management X 2 Importance of non-technical skills X 3 Dealing with crisis management Verbalizing during crisis Right thing at right point by right person Follow up of tasks given to team Utilization of manpower, resources
Clinical frameworks / protocols	Compliance towards WHO surgical safety checklist X 3 Doing all checklists before inducing patients AMPLE X 2 SBAR X 2 ABCDE X 2 DAS Algorithm
Preparation	Anticipate critical events Assess the situation Stabilize the patient then anaesthesia Resuscitation, reassessment in emergency situation
General	Multidisciplinary approach No hierarchy should be there in patient management Helping colleagues when they are in burnout situation Risk vs benefit assessment X 2 Creating a conducive work environment to avoid burnout Decision making without being anxious Improving skills “New and exciting” X 4 Planning and management of crisis situations X 3 Calm, composed in emergency situation To learn best practice techniques, protocols X 2 Volunteer to help in emergency Spread the knowledge of simulation Speak up Be attentive and accept the inputs you get from colleagues “Shared mental model”

Appendix II – Photos


Skills training


15/07/2019

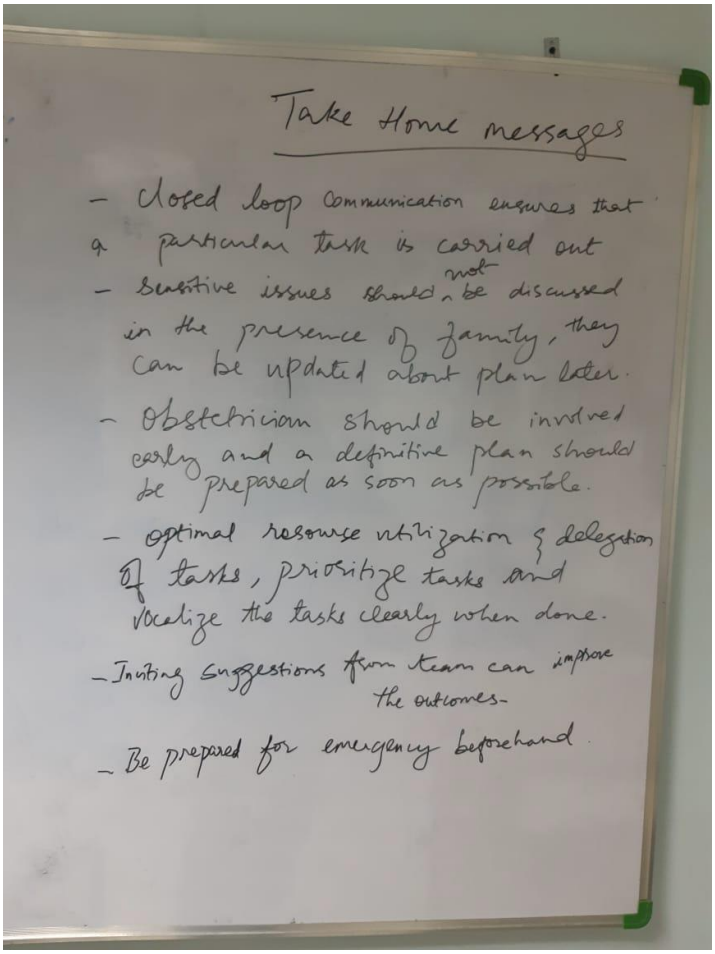

Watching from backstage!


17/07/2019


16/07/2019
What happened to Dr Tim?!!!


Tea time


REDMI NOTE 5 PRO
MI DUAL CAMERA


Take Home messages
- closed loop communication ensures that a particular task is carried out
- Sensitive issues should not be discussed in the presence of family, they can be updated about plan later.
- Obstetrician should be involved early and a definitive plan should be prepared as soon as possible.
- optimal resource utilization & delegation of tasks, prioritize tasks and vocalize the tasks clearly when done.
- Inviting suggestions from team can improve the outcomes.
- Be prepared for emergency beforehand