



VITAL ANAESTHESIA SIMULATION TRAINING

VAST Course report - Suva, Fiji

October 6-11, 2019

Dr Adam Mossenson



Executive summary

Situation

The VAST Course and its associated Facilitator Course (VAST FC) were successfully delivered for the first time in Suva, Fiji in early October 2019.

Background

The VAST Course centres on core aspects of safe anaesthesia delivery using immersive, low-cost simulation; there is a specific focus on non-technical skills. VAST was first piloted in Rwanda in January 2018 and is endorsed by the World Federation of Societies of Anaesthesiologists (WFSA). These courses in Fiji represent the first time VAST has partnered with the Australian Society of Anaesthetists (ASA) Overseas Development Education Committee.

Assessment

The course was fit for purpose in this context. Both the VAST Course and its associated VAST FC were exceptionally well received. Use of simulation and the dedicated discussions on non-technical skills were valued greatly by the 13 VAST Course participants from Fiji National University (FNU). The VAST FC was delivered to a group of 7, comprising 5 key anaesthesia educators from FNU and 2 ASA Pacific Fellows. The trainee-facilitators developed greatly in their capacity for delivery and debriefing scenarios over the week. As expected, ongoing mentorship and skill development is required before they reach independence in simulation facilitation. The venue selected was excellent, with great potential for conversion into a dedicated simulation centre.

Recommendations

1. Harness the enthusiasm generated from VAST's pilot in Fiji to secure a commitment from FNU and the ASA to conduct VAST on an ongoing recurring fashion
2. Engage multidisciplinary learners to simulate realistic team dynamics; all future courses should strive for participants of mixed clinical backgrounds (i.e. anaesthesia, nursing, midwifery and surgery)
3. Enable development of trainee-facilitators through engagement in future courses
4. Conduct ongoing VAST FCs for select individuals in order to build the local facilitator network
5. Explore options for conversion of the course venue into a dedicated simulation training centre.

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Acknowledgements

We gratefully acknowledge:

- The ASA ODEC for course funding
- Generous donations of equipment from:
 - o iSimulate (www.isumulate.com)
 - o ANZCA Fellows who donated iPads
- The warm welcome of the Pacific Society of Anaesthetists (PSA) and FNU
- The WFSA's ongoing endorsement
- The enthusiasm and support of our international volunteer network.

Course background

The Vital Anaesthesia Simulation Training (VAST) Course was developed to teach and reinforce essential clinical practices and non-technical skills for both anaesthesia providers and perioperative teams. First piloted in Rwanda in January 2018, VAST equips anaesthesia providers, as well as surgical, nursing, and medical colleagues, with critical non-technical skills required during common clinical cases. The course utilises immersive, low-cost simulation focusing on safe anaesthesia and resuscitation for obstetrics, paediatrics, trauma, general surgery, and pre- and post-operative care. In addition to role-play in 15 simulated scenarios, there are targeted case-based discussions and skills stations covering non-technical skills, trauma primary survey, difficult airway management, neonatal resuscitation, pain management, and complex decision making. The course is designed to be portable, locally adaptable and affordable.

Since inception, VAST has been a project endorsed by the WFSA. The pilot of VAST in Fiji stemmed from an expressed interest to bring simulation and non-technical skills training to the Pacific. Sufficient lead time allowed extensive implementation planning between Dr Mossenson, Dr Bowden from ASA ODEC and Dr Biribo from FNU. Dr Biribo, nominated as VAST Country Director, took on the responsibility and excelled at conducting all on the ground logistics and preparations. The ASA provided financial and strategic support. The courses were delivered with the endorsement of the PSA and FNU; participants were awarded CPD credits for their attendance. Additionally, course delivery was aided by the wonderful contribution of VAST's international volunteer network.

Faculty and attendees

Faculty and observers		
Name	Clinical background	Course role
Dr Adam Mossenson	Specialist anaesthetist	Course instructor
Dr Genevieve McKinnon	SCGH simulation fellow	Facilitator
Dr Kate O'Hare	SCGH simulation fellow	Facilitator
Michelle Murray	Nurse simulation specialist	Course co-ordinator
Dr Chris Bowden	Adj Professor of anaesthesia FNU ASA ODEC Chair	Observer
Dr Luke Nasedra	HOD Anaesthesia, CWMH	Observer
Dr Sereima Bale	Senior Lecturer in Anaesthesia, FNU	Observer

FC participants		
Name	Clinical background	Course role
Dr Kenton Biribo	Assistant Professor, FNU	Course director Trainee-facilitator
Dr Elizabeth Bennett	Assistant Professor, FNU	Trainee-facilitator
Dr Nancy Kwara	Lecturer I, FNU	Trainee-facilitator
Dr Shem Bavou	Staff Specialist, CWMH	Trainee-facilitator
Dr Eunice Onisimo	Staff Specialist, Lautoka Hospital	Trainee-facilitator
Dr Andrew Downey	ASA Pacific Fellow	Trainee-facilitator
Dr Luke Nottingham	ASA Pacific Fellow	Trainee-facilitator

VAST Course participants	
Name	Clinical role
Dr Ioana Sese	MMED IV
Dr Enele Tuima	MMED III
Dr Meresiana Vugawai	MMED III
Dr Ravneel Narayan	MMED III
Dr Raymond Vuniwa	MMED III,
Dr Toko Amasone-Moulongo	MMED III
Dr Yogen Deo	MMED III
Dr Elenoa Fesaitu	MMED II
Dr Jonah Sokiveta	PGDA
Dr Patemo Vainitoba	PGDA
Dr Patrick Haisoma	PGDA
Dr Rajneel Kumar	PGDA
Dr Walter Gabriel Pau'u	PGDA

Venue and equipment

A last-minute venue change saw the Courses delivered at an FNU clinic site. The space proved to be a perfect fit for the Course, with ample space for running parallel simulation scenarios, separate debriefing rooms, communal breakout spaces and a beautiful view over the harbour. Simulation equipment was predominantly sourced locally by Dr Biribo. There were no specific paediatric mannequins, but as in previous courses, we made use of the adult mannequins for the paediatric scenarios. We are thankful for the generosity of iSimulate who donated a set of ALSi equipment. Additionally, a second set of iPads was sourced following a call for iPad donations posted in the ANZCA e-newsletter. The visiting faculty brought all the of the VAST teaching materials, print materials, VAST ID clips and aide-memoirs. All teaching materials, including iPads, were inventoried and left in the care of Dr Biribo for future VAST Courses. A small surplus of handbooks was left as a template; the potential for local production of ongoing print materials should be explored.

Evaluations summary

VAST Course:

During the introduction session of VAST, participants are encouraged to express their desired learning outcomes for the Course. From the outset, the Course seemed to be a great match for what the participants were seeking. There was great concordance between these desired outcomes and subsequent participant feedback. Daily evaluation forms asked participants to reflect on what they liked about the day, key take home messages and suggestions for change in the future.

Key themes emerged:

- Participants valued the warm, safe and interactive learning environment.
- They appreciated the focus on non-technical skills as well as the targeted and easy to follow presentations and course materials.
- The take home messages centred on core elements of non-technical skills and crisis resource management. Powerful statements reflected a motivation for direct change of practise as a result of the course.
- As seen with other courses, the session on wellbeing and burnout, debriefed as a whole group, resonated strongly with participants.
- There were very few comments relating to suggestions for improvements in the future, but further consideration of the room setup could allow for a bigger projection of the presentations and case discussions.

VAST Facilitator Course:

In the same vein, trainee-facilitators are encouraged to complete daily evaluation forms asking for reflection on what they liked about the day, key take home messages and suggestions for change in the future. The trainee-facilitator group appreciated elements of course design such as

the ability to role play, repeated practise across multiple scenarios with the ability to sense improved improvement in their skills as the course progressed. The open, interactive and supportive mentorship of the visiting faculty was valued. The trainee-facilitators began to appreciate to utility of the structured and systematic teaching materials and advocated debriefing methodology. The importance of ample preparation and need for familiarisation with the teaching materials ahead of time was well recognised. Considerations for improvement include the potential to provide all teaching materials ahead of time, however a balance needs to be struck in regards to what is a reasonable amount of pre-course preparation.

Post-course follow-up

Following the course, electronic resources were shared with participants. These resources expand upon some of the key discussions and themes discussed throughout the Course. Course participants were also encouraged during the commitment to change workshop to keep a logbook of cases whereby their learning from VAST and new appreciation of non-technical skills impacted on patient care. We will endeavor to follow up participants in the months following the course to allow ongoing reflection and application of their new skills.

Challenges and lessons learnt

Take home messages:

- The VAST Course has a demonstrated applicability and utility for anaesthesia trainees in the Pacific
- Low-cost simulation can generate meaningful discussions and learning relating to core clinical practises and non-technical skills
- Engagement of multidisciplinary learners is challenging, yet should be the goal
- The VAST FC is an important first step in engagement and promotion of local capacity for delivery of VAST and simulation-based education more broadly
- Ongoing mentorship, graded responsibility and realistic goal setting for trainee-facilitators is required following participation in the VAST FC
- There is great interest for ongoing collaboration between FNU, the ASA and VAST in order to support ongoing VAST Courses in the region.

VAST Course:

The Course content and focus on non-technical skills appeared to have great relevance and generated meaningful learning. The cases and clinical content were identified as being reflective of practice and did not need amending. Future courses would benefit strongly from a multi-professional group, including nurses and surgeons. In the months preceding this course, attempts to identify a suitable person to fill the role of simulation co-ordinator were unsuccessful. This coordinator works to inventory equipment, setup and changeover the rooms and enable the faculty to focus on the delivery of the simulation and debriefing. Not fully utilising Michelle's presence and expertise represented a missed opportunity to develop a local course co-ordinator. In order to optimise course delivery and task offloading from senior clinicians, someone with an affiliation to the FNU and the VAST Fiji Director (Dr Biribo) should be identified to fulfil this role in the future.

VAST FC:

Development of the facilitator network and eventual handover of delivery to the local team is a central element in the design of VAST. Development into a skilled simulation facilitator is a long journey; achieving independence in facilitation after only one course is an unrealistic goal for the majority of trainee-facilitators. Even amongst this group of senior academics, there is a requirement for ongoing development towards proficiency. Development of a framework for competency-based appraisal of trainee-facilitators is an element that will soon be incorporated into VAST facilitator training and mentorship. Over the week, we emphasised to trainee-facilitators that there are many avenues for ongoing development of skills in debriefing. Trainee-facilitators were strongly encouraged to regularly engage in reflective teaching with the trainees and/or theatre teams using the debriefing principles advocated throughout the week. There was a strong desire to plan another VAST Course to follow midway through 2020 in order to consolidate new skills. Future courses should aim to recruit several of the exemplary recent VAST Course participants as prospective faculty, inviting them to attend the next VAST FC.

Future directions

On culmination of the week, there was expressed strong desire by Dr Biribo and Dr Bowden, representing FNU and the ASA ODEC respectively, to cement VAST as a recurring training offering in Fiji. Prospective dates were flagged for midway through 2020. The VAST team will provide ongoing mentorship and support of the emerging local facilitators to enable ongoing delivery of high quality yet low-cost simulation training. Several discussions centred on the potential to transform the clinic site into a dedicated simulation training space. If successful, this will greatly build capacity for ongoing VAST delivery and simulation training more broadly.

Appendix 1 – Evaluation summary

VAST Course

What participants liked	
Course facilitation	Welcoming and non-judgemental environment x 2 Very helpful facilitators x 2 Ability to make mistakes without fear Fun and educational
Course content	Informative and realistic scenarios x 6 Burnout and depression discussion x 3 Skills stations – Difficult intubation, neonatal resus x 4 Non-technical skills x 2 Good coverage of obstetric emergencies x 2 Pain discussion
Course design	Debriefing and reinforcement of THMs x 6 Short and clear presentations x 5 Interactive x 4 Easy to understand and remember the topics x 4 Being able to practice how to act in stressful situations x 2 Structured approach to scenarios Course materials are well designed and organised
Skill development	Simulations prepare you for real life situations Learnt the value of a summary statement Learning more effective communication Learnt new non-technical skills
Key take home messages	
Communication	Needs to be precise and closed loop Use good communication
Non-technical skills	Maintain situational awareness x 5 Be assertive (speak up and be heard) x 5 Importance of cognitive offloading x 2 Effective task allocation x 2 Role of 'My Aircraft', 'Birds', 'Mayday, Mayday, Mayday' x 2 Delegate tasks appropriately Understand each other's roles Use your team, there is always help available The role of non-technical skills cannot be overemphasised
Practice change statements	Be systematic in my approach to a crisis x 5 Prepare for every case x 4 Stay calm x 3 Declare a crisis early x 2 Call for help earlier x 2 Be a team player x 2 Maintaining oxygenation is more important than intubating Avoid 'frequency gambling' and fixation Apologise where appropriate Importance of getting consent and respect of patients It is ok to not be ok x 5 Look out for each other x 4

Wellbeing	Express appreciation for each other x 3 Respect each other Look after yourself
Clinical frameworks	RAT model for pain management x 3 Algorithms are essential in a crisis x 2 Systematic approach helps in crisis management
Role of simulation	Simulation is an effective teaching approach Simulation is good, although stressful
Suggestions for improvement	
Logistics	Bigger screen display for presentations x 2 Bigger chairs x 2
Course design	More scenarios x 2

Facilitator Course

What participants liked	
Course delivery	Friendly facilitators x 3 Clear explanations Open discussions Constructive feedback
Course design	Use of role play in the scenarios x 5 Chance to practise new skills x 3 Interactive sessions x 2 Rotating through the various roles within facilitator Repetition Learning more about ANTS Use of Elaine Bromley video to develop 'good' questions
Course location	Great venue
Skill development	Feeling of improvement in ourselves
Key take home messages	
VAST system	What each role involves Importance of getting 'CARDS' back in the room
Organisation	Need to work as a team x 2 The value of being organised and prepared x 2 Prepare beforehand, know the scenarios in depth Time management is essential
Debriefing principles	The value of 'good questions' x 3 Care with phrasing to avoid negative responses x 2 Value of experiential learning x 2 Good debriefing is a hard skill to perfect Keep within the objectives of the scenario Be conscious of body language Useful structure for debriefing x 4 Have the participants generate the ideas x 2
Suggestions for improvement	
Organisation	Provision of teaching materials prior to the course x 2 More time for facilitator training x 4 Time for reading of course materials prior to FC
Time management	Introduce time management earlier, time sessions More time on ANTS

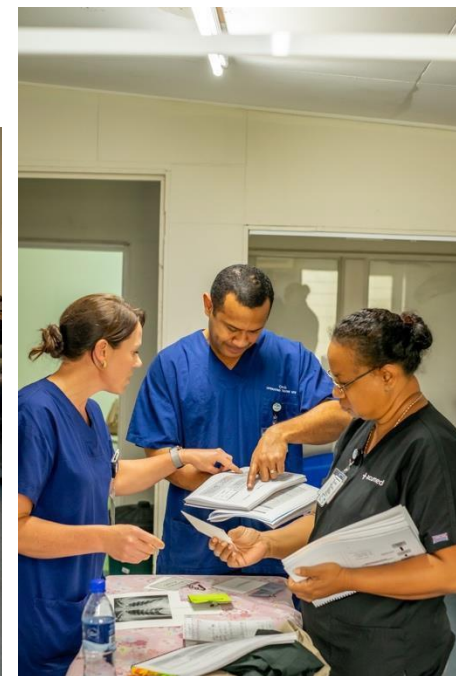
Appendix 1I – Course Photos

Setup





VAST FC - learning the ropes







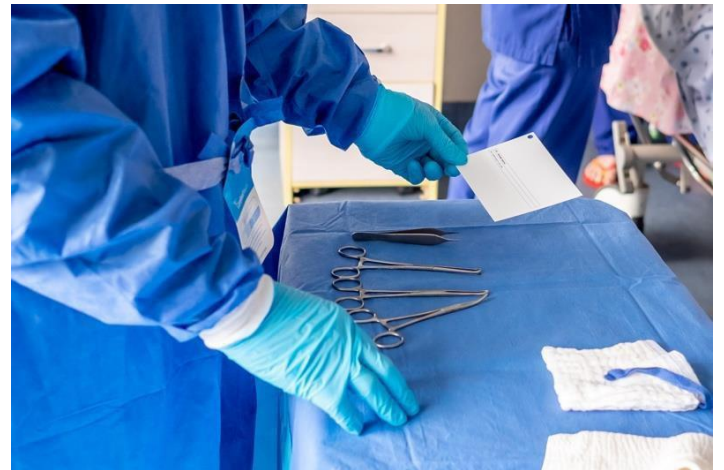
Facilitator Course certificate presentation



VAST Fiji is underway







Trainee-facilitators in action



Commitment to change workshop

COMMITMENT TO CHANGE

- proper preparation, mental plan
- routine LL tilt despite surgeons obstructing
- use frameworks - so many - get them made into checklists.
- use closed loop communication during crisis.
- improve situational awareness + speak louder for pt safety
- declare the crisis out loud for team awareness
 - speak loudly to share your mental model
- add extra concerns during surgery signing/
- closed loop communication - use it routinely ✓
- get to know your team + their capabilities
- debrief after difficult cases or crisis
- use cognitive aids in crisis
- education sessions with colleagues on NTS
- be more assertive + be alert for complications / prepare well

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COMMITMENT TO CHANGE

- importance of the team + don't assume you know their roles.
 - use summary statements + feedback
 - cognitive offloading
 - use graded assertiveness.
- colleagues may be a hindrance if not used to our new NTS
- constant revision + refer to VAST manual to review
 - keep a logbook (there is one in manual)
 - use for self reflection / M&M rounds
- our dept has incident reports - use for NTS as well as technical issues
- include the family + team when approaching the pt
- be open to criticism
- be able to listen to others
- assertiveness does not = aggressiveness
- incorporate Sim training
- VAST training annually + with interdisciplinary team
- teamwork + assertiveness especially when pressured by surgeons for pt safety.
- burnout - take care of ourselves - healthy eating + exercise. Remember our own personal health

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VAST Course – Fiji 2019

