



VITAL ANAESTHESIA SIMULATION TRAINING

VAST Instructor Course

**Halifax, Nova Scotia, Canada
8-10 November 2019**

Dr Patty Livingston



Executive summary

Situation

The inaugural VAST Instructor Course was delivered successfully in Halifax, Canada in November 2019.

Background

The VAST Course has been run to date in Rwanda (x10), India (x2), Ethiopia (x1), Canada (x1) and Fiji (x1). VAST Facilitator Courses (FC) have also been offered. A need was identified to expand the pool of instructors – people with skills to oversee VAST Courses, train facilitators, and implement VAST in a new region.

Assessment

Course participants (14) and facilitators (7) included anesthesiologists, trainees, nurses, a respiratory therapist and a surgeon. They came from Canada (Nova Scotia, Ontario, the Yukon, British Columbia), the United Kingdom, Trinidad, the USA, Ethiopia, Rwanda and Australia (see map page 3). This range of backgrounds led to rich, productive discussions. The course was well received, with participants reporting greater confidence in facilitating and debriefing simulated scenarios. Factors that contributed to course success included the enthusiasm of participants and facilitators, superb venue, excellent food, repetition of key themes, and flexibility. Participants left with plans to teach in future courses in established areas and to implement VAST in new regions (Northern Canada, Myanmar, Trinidad). People expressed the need for advance notice of course dates to arrange leave from work for teaching. A WhatsApp group was created to promote future communication for all involved in the course. There was more demand for spots in the course than there was capacity. A waiting list has been started for the next VAST Instructor Course.

Recommendations

1. Confirm course dates for 2020 as far as possible in advance so that instructors can book time off to teach
2. Plan to repeat the Halifax VAST Instructor Course annually (an Instructor Course is scheduled for late May 2020 in Darwin, Australia)
3. Continue to promote multi-disciplinary participation in all VAST Courses (including FC and IC)
4. Identify competencies of qualified VAST instructors and facilitators
5. Establish a communication network to keep people in diverse locations informed of VAST activities

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Acknowledgements

We gratefully acknowledge the:

- Department of Anesthesia, Pain Management and Perioperative Medicine, Dalhousie University
- Canadian Anesthesiologists' Society International Education Foundation (CASIEF)
- World Federation of Societies of Anaesthesiologists
- Royal College of Physicians and Surgeons of Canada

Attendees



Location of practice of participants and facilitators

Facilitation team	
Patty Livingston	Anesthesiologist
Narendra Vakharia	Anesthesiologist
Tom Druitt	Anesthesia fellow
Michelle Murray	Nurse
Sara Whynot	Research facilitator
Stephen Middleton	Anesthesia resident
Kayla MacSween	Anesthesia resident

Participants	
Kathleen Dalinghaus	Anesthesiologist
Julian Barnbrook	Anesthesiologist
Tejal Pattni	Anesthesiologist
Terri Skelton	Anesthesiologist
Julie Doverty	Anesthesia trainee
Eugene Tuyishime	Anesthesiologist
Cyprian Ogum	Anesthesia fellow
Mahelet Tadesse Ibssa	Anesthesiologist
Ananya Abate Shiferaw	Anesthesiologist
Gavin Tansley	Surgeon
Kathy Johnston	Respiratory therapist
Jon Bailey	Anesthesiologist
Rhea Colmar	Nurse
Francesca Saddington	Anesthesia trainee

Venue and equipment

The course was held in four rooms at the Collaborative Health Education Building (CHEB) with an additional room for lunch. The venue worked very well with plenty of natural light and space. Michelle Murray has compiled a “VAST kit” of all the materials needed for this and future courses. Kathy Johnston kindly loaned pediatric mannequins for the course.

Sessions

Sessions included whole group discussions, small group work, and opportunities to run through all aspects of simulation facilitation. Participants practiced facilitation and role-play in most of the more challenging VAST scenarios.

A particularly strong discussion was around implementation planning for future courses. In the first part of this session, people broke into small groups to discuss implementation in East Africa, Trinidad, Myanmar, Northern Canada, and Halifax. The next day the groups presented their plans to the whole group for feedback.

A twist was added following the session on “skills and pitfalls of facilitation” whereby two residents (plants), who were not part of the course, arrived to role-play as challenging participants. One played a participant with poor “buy-in” and the other played a frozen participant who struggled to act. The fact that these residents were not known to the participants added to authenticity.

Please see Appendix for full course timetable.

Summary of participant evaluations

Participants appreciated the food, venue, learning style, interactivity, mix of people involved, international nature of the course, supportive learning environment, opportunities to practice skills, the “plants”, lively discussions, planning sessions for future implementation, and overall course organization.

Suggestions for improvement were to consider more videos, more time to prepare, fewer participants, rebranding the course to be less anesthesia specific, and a map to show where people are from (done, see “Attendees”).

Key take home messages were scenario preparation, setting the tone, debriefing strategies, non-technical skills, confidence, “it’s okay not to be perfect”, “talk less, listen more”, cultural and language sensitivity, and flexibility.

Challenges and lessons learnt

The greatest challenge was the amount of material to cover in a short time. While the participant mix was ideal from the viewpoint of engaging discussions, fewer participants would have allowed each person more time to practice. There is no question the diverse perspectives enhanced the course. Future courses should strongly encourage a rich mix of peri-operative health care providers and trainees.

Future directions

The most essential follow-up task is to confirm dates for future courses. Most participants have expressed interest in teaching VAST and they need opportunities as soon as possible. They are not able to commit to courses without generous advance notice. A WhatsApp group has been created to aid communication.

There is a need to clearly identify competencies of qualified VAST facilitators and instructors.

Summary and gratitude

The inaugural VAST Instructor Course was well received and inspiring. There is a strong cohort of VAST Instructors whose enthusiasm should be harnessed.

I am enormously grateful to everyone who attended, facilitated or helped organize this course.

Appendix I – Timetable

Time	Day I – VAST Essentials
08:00-08:15	Registration
08:15-09:00	Welcome and overview of VAST Course (Patty)
09:00-10:15	Orientation to workspace and demonstration scenario (Tom + facilitation team, Stephen as lead participant in demo)
10:15-10:30	Morning tea
10:30-11:00	Nuts and bolts (Tom)
11:00-12:30	Facilitating scenarios (Group A: Narendra, Tom, Kayla, Sara; Group B: Patty, Stephen, Michelle)
12:30-1:15	Lunch
1:15-2:00	Debriefing (Patty and Narendra)
2:00-3:15	Facilitating and debriefing scenarios (scenario practice) (Group A: Narendra, Tom, Kayla, Sara; Group B: Patty, Stephen, Michelle)
3:15-3:30	Afternoon tea
3:30-4:15	Non-technical skills (Stephen and Narendra)
4:15-4:30	End of day synthesis (Patty)
4:30-5:00	Faculty debriefing

Time	Day 2 – VAST Practice
08:15-08:30	Reflection on Day 1 (Michelle)
08:30-10:15	Scenario practice (Group A: Narendra, Tom, Kayla, Sara; Group B: Patty, Stephen, Michelle)
10:15-10:30	Morning tea (videographer arrives)
10:30-11:00	Skills and pitfalls of facilitation (Narendra and Tom)
11:00-12:30	Scenario practice (Group A: Narendra, Tom, Sara; Group B: Patty, Stephen, Kayla, Michelle)
12:30-1:15	Lunch
1:15-2:00	Implementation planning – I (Kayla and Patty)
2:00-3:00	Scenario practice (Group A: Narendra, Stephen, Sara; Group B: Tom, Kayla, Michelle)
3:15-3:30	Afternoon tea
3:30-4:15	Scenario practice (Group A: Narendra, Stephen, Sara; Group B: Tom, Kayla, Michelle)
4:15-4:30	End of day synthesis (Narendra)
4:30-5:00	Faculty debriefing
6:30 – 9:00	Course dinner (Patty)

Time	Day 3 – VAST Implementation
08:15-08:30	Reflection on Day 2 (Sara)
08:30-10:15	Implementation planning – II (Stephen and Patty)
10:15-10:30	Morning tea
10:30-12:00	Scenario practice (Group A: Narendra, Patty, Michelle; Group B: Tom, Stephen, Kayla, Sara)
12:00-12:30	Troubleshooting on the fly (Patty)
12:30-1:15	Lunch and open discussion
1:15-3:00	Scenario practice (Group A: Narendra, Patty, Michelle; Group B: Tom, Stephen, Kayla, Sara)
3:15-3:30	Afternoon tea
3:30-4:15	Future opportunities for teaching VAST (Patty and Tom)
4:15-4:30	Final reflection and course evaluation (Patty)
4:30-5:00	Faculty debriefing

Appendix 2 – Participant evaluations

Friday November 8, 2019

List three things you liked about the course:

- *The venue, the content and the diverse group of participants and faculty*
- *"Multidisciplinary, Teamwork, Learner centered"*
- *"Opportunity to meet international team with different experiences to bring to the group. The flexibility in scenario design to allow for variable skill sets. The debrief style is an adaptable model that can fit participant beginners to expertises."*
- *"Interactive, Enjoyable, The videos"*
- *"Engaging faculty, Feeling of belonging, Relevant to role"*
- *"Very interactive, Live discussions, Participants with different background and professions"*
- *"1. The organization 2. The style: I was really anxious coming to the course but the facilitators made me feel so at ease and it was so much fun 3. The frequent breaks 4. The videos at the end were really interesting including the discussions around them"*
- *Good atmosphere, good pace, comfortable premises*
- *"Learning how to debrief with a structure, A course scale up or scale down depending on the participants skill set, Simulator room set up"*
- *"Adequate time for discussion but reasonable hours, Interprofessional, collaborative, international, Repetitive to assist learning"*
- *"- opportunity to practice facilitation and debriefing, - instructors acknowledged difficult skills , they sometimes struggle and they also need to look at the notes, - opportunity to play different roles"*

What suggestions do you have for improvement?

- *Great work*
- *I think it would be helpful to direct us to some specific reading within the course materials before, particularly on scenario delivery.*
- *More time to prepare for instructing scenarios*
- *None at this time*
- *To definitely have less number of participants for next time (especially, if there are people who are being introduced to VAST for the first time)*
- *I actually don't mind more videos and discussions around them. Especially if they're related to actual hospital scenarios like the "can't intubate can't oxygenate" scenario*
- *Maybe a couple of video examples of scenarios and debriefs?*
- *Consider rebranding the course. While it is true that these are anesthesia related scenarios, they are more accurately *resuscitation* scenarios. I believe you would have a lot more interest from surgeons, nurses and other non-anesthesia health care professionals if the name and branding focused on*

resuscitation and/or team functioning. The strength is that these scenarios are widely applicable across specialities but you are selling yourself short by focusing on anesthesia training.

- the scenario sequence page has a dense amount of information that is not easy to follow, some pertinent findings under parameters are bolded, some are not -> suggest that pertinent parameters are bolded to help notice them

What are the three most important messages you will take away from the course:

- Approach to debriefing, NTS and approaching cultural differences
- "Briefing, Scenario direction, Debriefing"
- "Show respect at all times to each participant and faculty member. As the facilitator of the debrief I need to reflect on my judgements or assumptions and remember to approach everything with an open mind. To build realism I need to have an understanding of the healthcare system in which I deliver the course."
- "Non technical skills and their importance in crisis management, How useful simulation is in medical practice, ""Buying in"" is crucial for the successful implementation of simulation"
- "You can do this! Everyone experiences a learning curve in debriefing, Technique not technology"
- "Simulation can be used effectively in medical education, Non technical skills should be given emphasis in clinical work, You have to be systematic with clear objectives in sight when running a simulation"
- Not just learning to communicate but improved manner/style of communication to be non-judgemental
- Preparation for initiating course, buy-in for scenarios.
- "To ensure familiarity with how to debrief effectively before delivering it, Allocating lead participant roles on a daily basis prior to running the scenarios
- Setting ground rules, and being mindful of participants having previous traumatic cases and giving support" "Settle the tone and pre-briefly is very important Stay out of the debrief as much as possible. Gentle nudges only. Limit or avoid teaching of technical knowledge."
- "- remember to use language to help with buy in
 - in analysis phase, try to lump concepts together and keep track if meeting objectives
 - talk less, listen more, silence is OK"

Any other comments?

- Great food, great course
- Excellent course
- Brilliant first day with a great faculty who made us feel really comfortable, interested and motivated.
- It is excellent program!
- Great first day! Set a great tone for the course
- I look forward to what the next two days bring
- I think more discussions have to be done around the issue of hierarchy and skills to communicate effectively in situations (and cultures) where this may pose a challenge to effective communication/ teamwork

- *"Good pacing of the instruction and breaking. The group of participants has already made this an amazing experience!"*

Saturday November 9, 2019

List three things you liked about the course:

- *"Participatory, Delicious lunch, Dedicated instructors"*
- *Appropriate content, interactive sessions and supportive faculty*
- *"practical, repetition is working to feel more comfortable in facilitation and debriefing"*
- *"1. More facilitation practice to become more comfortable with the format, 2. Mixing up the groups and facilitators. Great to learn with a new group., 3. Breaking into groups to discuss implementation."*
- *"Discussions about simulation facilitation and debriefing among a broad and experienced group of participants and instructors. Repeated practice to put the concepts into practical use immediately Planted ""problem"" participant in the scenario was a very effective teaching tool Very nice to group people by region to work through implementation of the future VAST courses"*
- *"Course implementation - discussing problems and solutions. Getting to experience problem participants (with plants), and discussing how to manage this. Gaining further understanding of the VAST model, with respect to running a course"*

What suggestions do you have for improvement?

- *None*
- *"1. Mix up seating in main room. Everyone sit beside a new person. 2. How to impart the ANTS information to participants without this knowledge."*
- *Branding to hook non-anesthesiologist medical professionals*

What are the three most important messages you will take away from the course:

- *"Team work, Being compassionate to everyone, How to handle a difficult participant"*
- *Teamwork, communication and opportunities for planning future courses.*
- *"remember culture and context are important. Reflect on your assumptions and biases. language proficiency can be a barrier"*
- *"1. Participants will not always act in expected ways and we have to be prepared to be flexible and adaptable. 2. Use of REALLY good visual aids - sound and pictures make a big difference. Very impactful. 3. The need for a timer to keep everything moving."*
- *"Stay removed from the debrief as much as possible. Correct problematic behaviour in sim quickly at the start. Setting the tone for the day (safe/positive, buy-in) is worth the extra effort at the start"*
- *"Solutions to managing problematic participants during the running of a simulation, and how to approach the issue following the completion of the scenario. Learning to talk less in debriefs, and obtaining tips of how to try to successfully execute the analysis section of the debrief. Understanding that not all aspects of the scenario need to be played out to make it a successful and productive simulation. There will always be lots to discuss in the debrief"*

Any other comments?

- *Another very fulfilling day*
- *Liked the variety of activities today. Kept everyone's attention and prevented getting too weighted down by any one activity.*

Sunday November 10, 2019

List three things you liked about the course:

- *Very good mixture of participants, good discussions, well structured.*
- *"Good faculty/ participant ratio. Great variety of voices. Well organized"*
- *"1. Discussion and sharing reflections. 2. Ample time for debriefing larger case. 3. Sense of camaraderie that developed over the three days"*
- *"Repeated practice of facilitation and debriefing. Discussion about troubleshooting logistical problems around VAST. Booking people early into VAST courses to keep the momentum and solidify knowledge and skills from the instructor course"*
- *"Active lively discussions. Well structured and advanced. Focus on future development plans and inspirational"*
- *"feel more empowered to deliver a VAST course. meeting an amazing group of dedicated educators and participants. feel better about principles of debriefing, recognize this will take time and practice."*
- *"The complexity of the scenarios on day 3, that enables different NTS to be showcased especially teamwork, leadership. the use of audio clips to add another level of realism to the scenario. the continued use of adjuncts e.g. algorithms. To help reinforce to participants there level of usefulness in an emergency"*

What suggestions do you have for improvement?

- *None*
- *Review methods of providing cues if tapping isn't an option or not working. Creating strategies to communicate with others on the facilitation team, especially if the scenario goes sideways.*
- *Would be better to practice the whole facilitation a few times (but restricted by time).*
- *a map to show where participants come from and where the next courses are.*
- *Scenario 3.7 trauma - tension pneumothorax. Add more clinical signs for the lead facilitator e.g if the participant percusses the chest - have it written in the manual that the chest is hyper resonant.*

What are the three most important messages you will take away from the course:

- *" Opportunities for future collaboration, improved debriefing skills,*
- *"Learning points aren't necessarily where you expect them. It's ok not to be perfect*
- *Cultural sensitivity"*
- *"1. Importance of having one person manage the equipment and set up. 2. All facilitators must be on the same page to run the best scenario. 3. How to modify for increased realism or increased intensity."*
- *"Set the tone for the course early. Use co-facilitators to take participants aside in the case of strong emotional reactions to scenarios or problematic participants. Involve decision makers/government*

officials early in the course and ask for future support afterward. Look for local champions and use contacts with various specialties to get buy-in and recruit participants."

- *Tools to tackle different challenges*
- *"a greater understanding of non-technical skills and a desire to practice that every day, even in small ways. a deeper understanding of debriefing as thinking of as a puzzle to solve the mind frames behind the behaviour. try to be a better observer, a better listener and practice as noted above"*
- *"Ensuring the SIM monitor is positioned appropriately so that the participants can see it so that it doesn't distract from the scenario. how effective the pictures of injuries/wounds etc are at evoking emotional responses from the delegates to add to the realism and stress of the scenario. Importance of time keeping especially during debriefs as well as being flexible to program changes when required"*

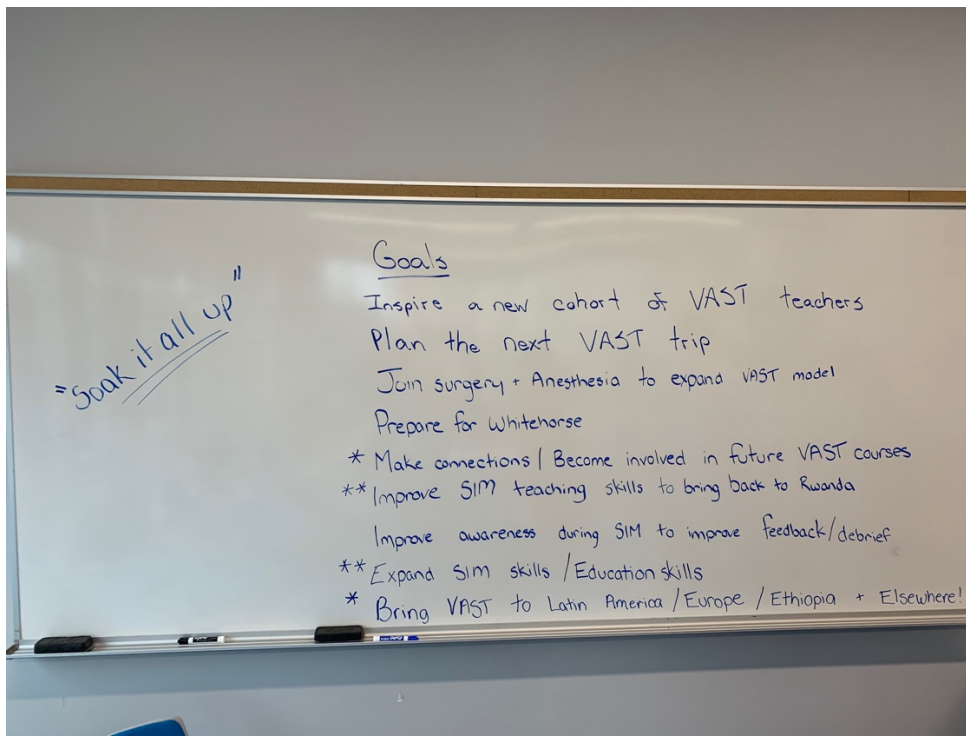
Any other comments?

- *This was an excellent experience. Thank you all.*

Appendix 3 – Course Photos



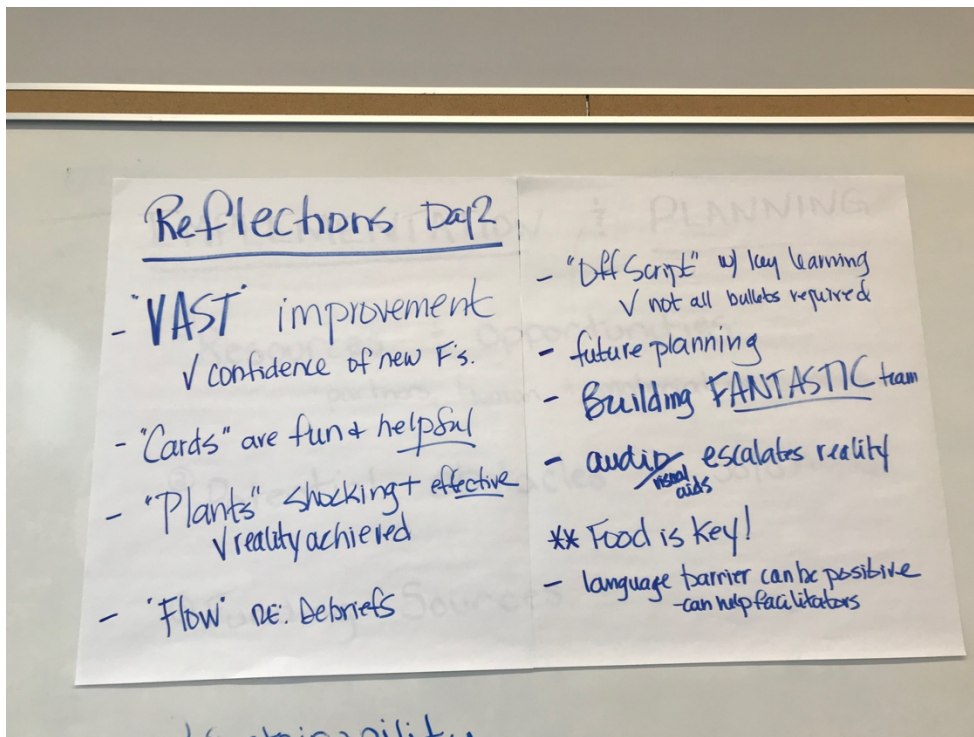
Bright spacious room for common sessions



Participant goals at the start of the course



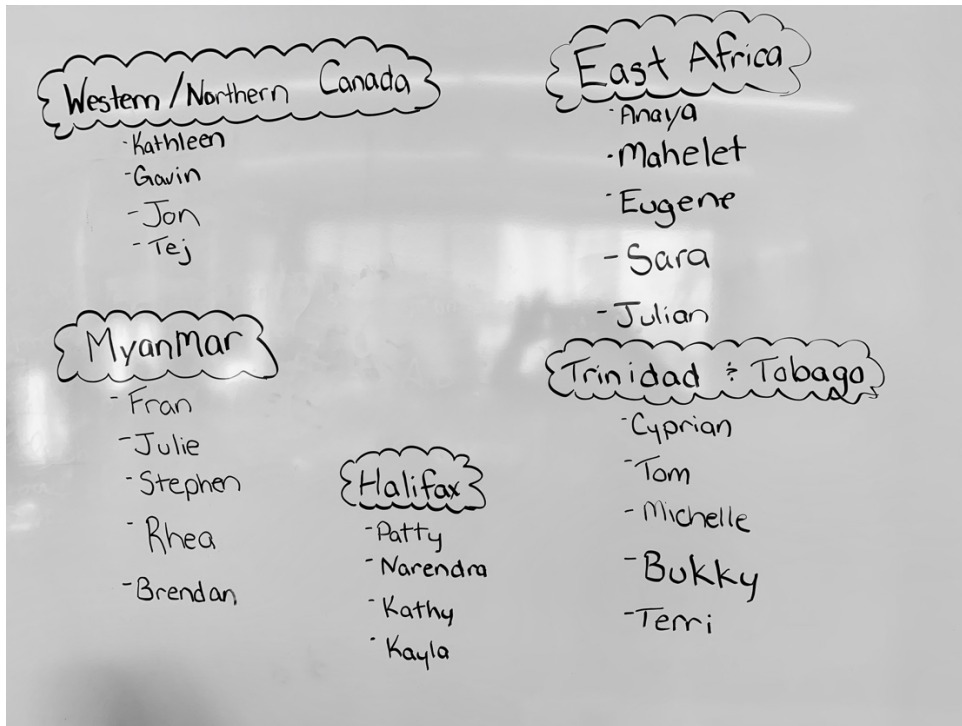
Cyprian, Rhea, Julie, and Gavin manage trauma



Reflections on Day 2



Course dinner



Implementation planning



Participants and faculty