Executive summary

**Situation**
At the request of local leads, Kalyani Patil and Jui Lagoo, the Vital Anaesthesia Simulation Training (VAST) Course was organised by the Department of Anaesthesia in association with the Department of Simulation at Bharati Vidyapeeth (Deemed to be University) Medical College, Pune, India with the objective of empowering Perioperative team at our institute.

**Background**
The VAST Course was designed to train perioperative teams comprising of anaesthesia providers, surgeons, nurses, OT technicians and trainees in safe patient care practices. The training program has a strong focus on non-technical skills. VAST was first piloted in 2018. Since then, VAST’s courses have been offered in multiple countries worldwide.

**Assessment**
The course was well received and appreciated with enthusiasm and active participation by the participants. Conduct of the course was a great learning experience for facilitators and coordinators.

**Recommendations**
We highly recommend that the participants should complete VC and then enroll for a dedicated VAST FC to ensure the quality of course delivery.
We strongly recommend incorporating high fidelity simulation as required by the scenario to enhance realism and immersion by participants depending on the availability. (We perfectly appreciate the design of VC for resource limited settings)
Use of locally available resources such as Tablets with Simpl app should be considered as it was highly appreciated by all.

**Acknowledgements**
Thank you to the VAST foundation for the partial financial support covering fees of external facilitators!
A genuine gratitude towards management of BVDUMC, Pune for the wholehearted support for conducting the course!
Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Professional role</th>
<th>Course role</th>
<th>Workplace</th>
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<tbody>
<tr>
<td>Vaibhavi Upadhye</td>
<td>Anaesthesiologist</td>
<td>Instructor</td>
<td>Pune</td>
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<tr>
<td>Jui Lagoo</td>
<td>Anaesthesiologist</td>
<td>Local lead &amp; facilitator</td>
<td>Pune</td>
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<td>Kalyani Patil</td>
<td>Anaesthesiologist</td>
<td>Local lead &amp; facilitator</td>
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<td>Rijuta Pradhan</td>
<td>Anaesthesiologist</td>
<td>Facilitator</td>
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<td>Sheetal Dixit</td>
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<td>Facilitator</td>
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<td>Preeti Pandey</td>
<td>Sim Lab staff</td>
<td>Simulation coordinator</td>
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<td>Jyoti Pawar</td>
<td>Sim Lab staff</td>
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<td>Shubhada Aphale</td>
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<td>Varshali Keniya</td>
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<td>Pradnya Bhalerao</td>
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<td>Abhay Sancheti</td>
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<td>Neha Modani</td>
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<td>Geetha Aacharya</td>
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<td>Sujit Kshirsagar</td>
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<td>Parvati Kamble</td>
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<td>Mayura Devange</td>
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<td>Pradeep Shinde</td>
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<td>Pravin Borkar</td>
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<td>Rachana Gaidole</td>
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<td>Manju Talathi</td>
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<td>Shrish Raut</td>
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<tr>
<td>Abhilasha Handu</td>
<td>Paediatric surgeon</td>
<td>Participant</td>
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<tr>
<td>Amlan Mohanty</td>
<td>Anaesthesia Trainee</td>
<td>Volunteer</td>
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<td>Nithu Dina Joseph</td>
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<td>Juhi Kilaru</td>
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<td>Manikonda Indu</td>
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<td>Soubhagya</td>
<td>Anaesthesia Trainee</td>
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Venue and equipment

Venue
The course was conducted at the Simulation Lab, Bharati Vidyapeeth (Deemed to be University) Medical College, Pune, India. Four rooms in the Simulation lab were utilized for the course. The Main Hall housed the common session delivery with audiovisuals. Two rooms had scenario set up and debriefing set up was created in the main hall and the third room. The housekeeping details of restrooms, changing rooms, dining place,
drinking water and fire exits were explained to the participants and faculty. The floor plan is as depicted in the diagram. The entry permission and parking facility were arranged for participants and faculty to allow free access to the venue.

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**Equipment**
All the equipment, consumables and mannequins were arranged by Sim lab.

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**VAST Course**

**Preparation**
The preparation for the 3 day program (VAST VC) started in May 2023. With the intent of conducting VAST courses at BVDUMC, we completed the VAST FC at Hyderabad. It helped us understand the essence of the course and the logistic requirements. The operation manual was a useful guide for immaculate preparations. We received help from VAST family via Slack for brochure, certificate designing, etc. This support is highly appreciated. Vaibhavi Upadhye as a mentor helped us at every step.

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**Simulation coordinator training**
We identified Preeti Pandey and Jyoti Pawar as Sim coordinators from the in-house Sim lab staff. Their training was started two weeks prior to the course. This included
familiarizing with the content of the course, preparation as per the scenario requirement, practicing technological aspects using Simpl app.

**Conduct**

The VAST Course was offered to 14 multidisciplinary participants inclusive of anaesthetists, surgeons, nurses and OT technicians. Majority of these healthcare practitioners work together regularly and were able to discuss common challenges and solutions. Each day program included interactive power point-based discussions, skill stations and scenarios.

The skills sessions (difficult airway management, neonatal resuscitation, and primary trauma survey) were all conducted as PowerPoint presentations with concurrent demonstration of skills using mannikins (difficult airway management, neonatal resuscitation) or simulated patients (primary trauma survey). The simplicity of conduct of skill stations was highly appreciated.

The tablets were used along with these demonstrations to show simulated vital signs. Technology was perfect reflecting real-time vital parameters.

**Course evaluations and informal feedback**

**What went well**

- Real time experience
- Involvement of all members involved in perioperative patient care
- Realistic scenarios we might face during our daily practice and how to manage crisis situations
- Training was very interactive and engaging and practically useful
- Well planned interactive sessions
- Debriefing
- Pain management
- Working as a team
- Debriefing and finding the challenges
- Got to know the idea of fixation.
- Pace, communication, debrief points
- Enthusiastic, inspiring and soft-spoken facilitators
- Experiencing difficult scenarios in OT
- Sessions were thoughtfully made and practical where we can carry back and apply in day-to-day practice
- Burnout session
- Enjoy skill station, trauma care, burns
- The attitude while debriefing is of not to be fault finder but to be a learning point
- Active participation of everyone
- Encouraging nature of all the faculties
- Felt realistic about cases management
- Very well organised, meticulous time management
Facilitators made sure all were involved
I feel this simulation course helps us to avoid brain fog and act right accordingly at the correct
time to avoid errors and complications in patient management
Facilitators were very interactive and made us give our inputs for every scenario

**Challenges/ what could have been done differently**

Nothing
Use of high fidelity Mannequin
One or two less scenarios in a day
More hands-on training
Brief discussion

**Take home messages**

Setting protocols and learning algorithms
Involvement of doctors, nurses and technicians in training programmes
Sharing mental model
Proper task management
Introduction to the patient
Avoiding fixation errors
Good communication with team members
Role of team work
Preparing checklists and conducting mock drills for residents and OT staff for crises situations
The team building concept
Team dynamics, Role allocation
Early call for help
Prepare check list for patient shifting to icu
Skill based learning
Nuances of communication
Develop confidence in juniors to communicate and able to break the hierarchy system
whenever required
Alertness in Operation room
Be confident
Nurses empowerment
Leadership quality
Helping ourselves to avoid burnout
Proper communication between surgeon and anaesthetist
Learning and repeated upgradation of skills
Making use of existing resources
Task prioritisation
Learn the emergency life-saving procedures.
I will always focus on good things done and scope for improvement in ourselves
Equipment re checking
**Action items**
- Critical Incident Debriefing
- SOP for massive blood transfusion
- Quick reference handbook for crisis situations

**What went well**

Warm introductions helped to set the correct mood for the program.
Excellent conduct of NTS game.
The power point-based discussions were interactive throughout the program.
Inputs given by surgeons helped in clear understanding of the surgical perspective and helped to make case-based discussions fruitful.
Participation by senior members helpful in carrying it forward in the department.
Participation by senior members helped in having wholesome discussions
Debriefing focused on NTS with minimal need for microteaching
Excellent time management
Technology was perfectly reflecting real-time vital parameters.
Robust learner centric debriefing with facilitator role as a navigator
Reflections of all the 3 days were reassuring
Depersonalization was carried out well during debriefing focusing on events
Communication among participants improved a lot by Day 3
Opportunity for microteaching was utilized well
Daily meta-debriefs were helpful

**Challenges and lessons learnt**

The major challenge was the budget. This being the first VAST course at our institute, it was a challenge to meet the requirements with the tight budget.
With a limited number of facilitators due to budget constraints and considering the situation of conducting VC alone, in contrast to VC+FC, where the pool of facilitators is huge, the situation was overwhelming.
As the in-house facilitators had defined institutional responsibilities during the routine hours, it involved investment of considerable amount of time beyond working hours.
Strategy to protect self critical lead participant
Performance anxiety especially for participants with experience at two extremes. Support was extended with generalization and sharing experiences.
Conflict situation threatening psychological safety during discussion among participants. The situation was handled by the facilitators by removing the lead participant from the debrief, supporting her psychologically and encouraging other participants to focus on what went well.
The active participation by the concerned participant the following day was reassuring.
Participants expressed feeling less immersed in difficult airway scenario attributed to perceived repetition following skill station with micro-scenarios.
**Recommendations**

1. Need to devise a plan to generate funding to make the course self-sustaining
2. Technical aspect taken care of by coordinators can help one person to facilitate & debrief while the other facilitator can be cofacilitator.
3. Considering that this is not FC, if the instructor contributes to facilitation & debriefing, it would not be overwhelming.
4. To update the course content as per the latest guidelines (Surviving sepsis guidelines 2021, Role of Carbetocin and tranexamic acid in PPH, discontinuation of methyl dopa in PIH)

**Course Photos**

Inauguration of VAST BVDUMC, Pune
Simulation coordinators squad!!

The Preparations!

The Preparations!
Non-technical skill game!
Scenario set up and prep
Breaking Ice
Interactive discussions!
Skill stations
Immersive Scenarios
Take Home Messages

- Reassessment is equally important as primary survey for managing trauma patient.
- Patient's complaint should be addressed in time.
- Avoid elective analgesia in trauma pt till primary survey is complete.
- Continuous monitoring and vigilance is important in a dynamically evolving trauma scenario.
VAST course completion!
THANK YOU!