



VITAL ANAESTHESIA SIMULATION TRAINING

VAST Course report, Hyderabad, India

5th to 7th Jan, 2024

Written by Dr Vibhavari Naik



Executive summary

Situation

In late 2023, the VAST team in India began consolidating and preparing for the registration of Indian Association for Vital Anaesthesia Simulation Training. This led to the planning of the fourth VAST course in Hyderabad, which was scheduled for 5th – 7th Jan 2024. Following the success of the VAST FC held in June 2023, the course was intentionally kept as a VC event to further train new facilitators in the art of facilitation.

Background

VAST or Vital Anaesthesia Simulation Training is a unique way of learning non-technical skills which are so important to achieve good outcomes in a crisis. It was first started in 2018 as a collaboration between the anaesthesia department of University of Dalhousie in Halifax and the University of Rwanda; and has been supported by the WFSA. Using immersive, low-fidelity simulation and carefully designed scenarios; the programme focuses on anaesthesia and resuscitation for mainly obstetrics, paediatrics and trauma. Post-scenario debriefing and targeted discussions specifically focus on non-technical skills aiming to generate participant-driven take-home messages.

Assessment

The course was well-received by participants, many of whom were senior anaesthesiologists with prior exposure to simulation. The emphasis on non-technical skills in VAST and its impact on patient safety was particularly appreciated.

Recommendation

To facilitate the training of VC participants from this and previous courses as facilitators, the VAST team plans to hold another FC/VC event in the near future. This will enhance the participants' understanding of key debriefing concepts and empower them to apply these techniques in their daily clinical practice. Additionally, this will help to expand the pool of facilitators for VAST India across various cities.

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Course background

The VAST course which was developed as a collaborative effort between Dalhousie University, Halifax and the University of Rwanda in 2018, has been conducted in 14 countries with participants from over 30 countries. 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. The participants include members from anaesthetic, surgical and nursing departments so that the scenarios are close to reality.

The first VAST course in India was in February 2019, led by the founder of VAST, Dr Adam Mossenson; and assisted by Dr Tom Druitt, Dr Anna West and Ms Michelle Murray; and consisted of a 2-day FC and 3-day VC. VAST courses were re-initiated after the COVID gap with a 2-day Facilitator course and 3-day VAST course in June 2023.

This course was planned to mark the beginning of the new year as well as the first course for the Indian Association for VAST. This course was conducted by local faculty including some who were newly trained in June 2023.

Acknowledgements

Our deepest gratitude to Dr Adam Mossenson for his help and advice.

Our sincere thanks to the World Federation of Societies of Anaesthesiologists (WFSA) for their continued support for this project.

Faculty and attendees

Faculty:

- Dr Gita Nath, Specialist Anaesthesiologist, VAST Country Coordinator
- Dr Vibhavari Naik, Specialist Anaesthesiologist
- Dr K Sailaja, Specialist Anaesthesiologist
- Dr Basanth Kumar Rayani, Specialist Anaesthesiologist
- Dr Vijayanand Basuthkar, Emergency Physician
- Dr Ravi Nagaprasad, Specialist Anaesthesiologist
- Dr Prachi Kar, Specialist Anaesthesiologist
- Dr Shibani Padhy, Specialist Anaesthesiologist
- Dr Ujwala Khorgade, Specialist Anaesthesiologist
- Dr Sushma Konduri, Specialist Anaesthesiologist

Attendees:

VAST COURSE			
Name	Professional role	Role in course	Workplace
Dr Vidhu Bhatnagar	Specialist Anaesthesiologist	Participant	Mumbai
Dr Nivedhyaa	Specialist Anaesthesiologist	Participant	Chennai
Dr Smita Mahajan	Specialist Anaesthesiologist	Participant	Pune
Dr Josemine Davis	Specialist Anaesthesiologist	Participant	Pune
Dr Neelam Nalge	Specialist Anaesthesiologist	Participant	Mumbai
Dr Nitya Reddy	Specialist Anaesthesiologist	Participant	Hyderabad
Dr Sravya Adda	Specialist Anaesthesiologist	Participant	Hyderabad
Dr Shruthi Raja	Specialist Anaesthesiologist	Participant	Hyderabad
Dr Pooja Sahu	Obstetrician	Participant	Hyderabad
Dr Sumayya Maryam	Obstetrician	Participant	Hyderabad
Dr P Rajesh	Plastic Surgeon	Participant	Hyderabad
Dr J Rajesh	Onco Surgeon	Participant	Hyderabad
Ms Samantha	Nurse	Participant	Hyderabad
Ms B Swarupa	Nurse	Participant	Hyderabad
Ms Ankita	Nurse	Participant	Hyderabad
Ms Ashwin	Nurse	Participant	Hyderabad
Ms M Sudha	Nurse	Participant	Hyderabad

Ms Sirisha	Nurse	Participant	Hyderabad
Mr Rajkumar	Technician	Participant	Hyderabad
Mr Bapu Joguru	Technician	Participant	Hyderabad
Mr Ajay	Technician	Participant	Hyderabad
Mr Rizvan	Technician	Participant	Hyderabad
Mr Ramesh	Technician	Participant	Hyderabad
Ms Aakansha	Technician	Participant	Hyderabad

Two obstetricians took part on day 2 and two surgeons on day 3. Both the obstetricians were trainees, while rest of the participants were practicing professionals. One anesthesiologist from Hyderabad expressed his inability to attend 2 days prior to the course and hence was replaced by another anesthesiologist. Two nurses and two technicians were included on each of the 3 days.

Venue and equipment

The courses were conducted in the library area of Basavatarakam Indo-American Cancer Hospital and Research Institute, Hyderabad. As the hospital does not have a simulation center, library and the surrounding area was selected for the course. The library U-table seating was used as main hall which was equipped with audiovisual support. Make-shift screens were used to divide the designated two areas into sim rooms and debriefing rooms. The area for one team was inside the library and outside for the other. A designated area for facilitators was marked to keep the extra manuals, printouts, equipment, etc. The registration desk was set up near the library entrance. The food area was in a spacious arena on the other side of library. A water dispenser was provided, and participants brought their bottles as advised. The washrooms were neat and clean. We had local support for staffing registration desk, audio-visuals, photography, etc.

The organization and conduct of the course displayed excellent teamwork true to the core principles of VAST. Dr Vijay and Dr Gita took care of the participant registrations and early communication with them. Dr Vijay and Dr Sailaja made a WhatsApp group for the participants 3 weeks ahead of the course for improved communication. The course details, reading material, map location and venue details, etc. were shared with participants. A similar group was made to facilitate communication amongst the facilitators. A Zoom meeting was organized 4 days ahead of the course that served the purpose of faculty huddle. The roles and responsibilities for each and a quick recap of the conduct of the course was discussed. The printing of required material was meticulously done by Dr Gita. We used the same banner and standee outside the library that was used last time. However, we decided to print one more banner to be put near the building entrance. Colour coded name tags without VAST ID clips were used for the course. The crisis management cognitive aid was printed on A3 size paper and taped on the walls of both sim rooms. The facilitator cognitive aid was taped near the facilitator designated area. The allocated 'role' name tags were used similar to the previous course and were handed over to the participants along with cue cards at the beginning of each simulation. Warm local hospitality was provided by Dr Basanth and team. The inventory of VAST equipment with Dr Gita was rechecked and used for this course. Some additional equipment required was arranged locally. Dr Sushma graciously volunteered to organise the equipment at the venue. Dr Gita, Dr Vijay and Dr Sailaja came by to check and help in arrangements the day prior to the course.

Conduct of course

The VC was run according to version 2 of the VAST manuals. Two participants requested to opt out from the image and voice release form, and this was duly honored. The facilitators performed the demo scenario and oriented the participants to the simulation area. A few changes were made from the course manual. The first was a video demonstration of front of neck access as part of the skill station on unanticipated difficult intubation. And the second change was running scenario 2.8 from version 1 rather than a video-discussion, and we felt that both changes were well appreciated. Additionally, instead of the reflection on previous day, we conducted reflection on the day at the end of each day. We felt that participants will be able to share their thoughts better on the same day. On the last day, just before action items, we played the Elaine Bromiley video. It further reinforced the importance of non-technical skills before we wrapped up the course. As many participants were senior practicing anesthesiologists, we could run a few scenarios to the advanced level. Opportunity was taken to talk to each participant during breaks to assess how the course was going for them. This allowed us to know them and their needs better. We could establish some new friendships by the end of the third day. Dr Vijay made an impromptu video from the photos taken over 3 days and this was the icing on the cake.

Five facilitators trained from the last facilitator course participated this time. They were involved in the course based on their available days. There was good amount of advocacy inquiry and involvement of participants noted in the debriefing. Few of the facilitators have recorded their videos to watch them later for feedback. Faculty huddle was done at the end of each day to discuss what went well and what was challenging. Faculty discussed the need for a day of debriefing practice session around 2 weeks prior to the course to improve the debriefing skills further. It was also discussed that in the scenarios where the surgeons are the lead, the anesthesiologists were seen to take over. So, we could keep dual leads for these scenarios 2.5 and 3.6 – surgeon and anesthesiologist.

Summary of evaluations

All participants of the VAST course were enthusiastic and engaged throughout the course and gave positive feedback. The question on suggestions for improvement was misunderstood by a few of the non-clinician participants. This could be corrected next time. The scenarios were appreciated as being realistic and relatable to the workplace. Systematic assessment and management, clinical frameworks and the use of cognitive aids were included in their take home messages. Some liked the increasingly complex obstetric scenarios while others felt that other specialties also should be included. There was verbal as well as written feedback taken at the end of each day. Special appreciation for scenario 2.8 and double crisis scenario was received during discussion. Non-technical skills featured prominently under “What they liked” as well as “Take home messages.” Many of them were not aware of the importance of non-technical skills in management, and they shared how they could take the new learning from this course back to their workplace in their verbal feedback. The organization, food and arrangements were also appreciated, including the quality of lunch and snacks.

Challenges and lessons learnt

Take home messages:

- The fourth VAST course in Hyderabad was a good beginning for the Indian Association for VAST (IA VAST)
- Anaesthesia technicians can be included in all future VAST courses as an integral part of the interdisciplinary team. New role tags could be made for technicians who play role of circulating nurse
- We need to add clarity on how to handle the denial on image and voice request form. For example, to specify whether they can be displayed in the course report, for training, for public sharing, in group picture of the course, etc.
- We could keep dual leads for scenarios 2.5 and 3.6 – surgeon and anesthesiologist
- We could consider a day of debriefing practice session around 2 weeks prior to the course to improve the debriefing skills further
- Since the course was conducted by local faculty, obviation of travel expenses and collection of registration fees from the participants reduced the financial support needed.

Future directions

Suggestions for future courses:

- Conduct 3-4 VCs per year in Hyderabad and 1-2 FCs.
- Conduct VCs outside Hyderabad in teaching centres as well as district hospitals, so that participants do not need to travel. However, travel and accommodation for the external faculty must be covered by the local organizers.
- Increase publicity to spread awareness and attract interested participants

Appendix I – Participant evaluations

VAST COURSE

Day 1

Things they liked		
		Well organized Cordial environment Coordinators were encouraging all to speak Any answer given was appreciated Faculty are very open to the comments of audience

		<p>Good discussion x3</p> <p>Course message</p> <p>Very practical real-life scenarios x3</p> <p>Detailed, informative, interactive lectures x2</p> <p>Sessions followed by hands on</p> <p>Sessions made less stressful and could be sustained through the day</p> <p>Management of difficult airway x2</p> <p>Neonatal care x2</p> <p>How to assist in emergency situations x3</p> <p>Lucid presentations</p> <p>Good time management x2</p> <p>Integration of ANTS with existing knowledge and skill set</p> <p>Improved skills and communication x2</p> <p>Emphasis on nontechnical skills</p> <p>Simulation scenarios were well thought</p> <p>Case discussions were simple and easy to understand</p> <p>Debriefing sessions post scenario</p> <p>Realistic scenarios</p> <p>Approachable and friendly discussions</p> <p>Involvement of nurses and technicians</p> <p>Good videos</p> <p>Easy demonstration</p>
Suggestions for improvements		
(some understood this as areas of improvement for them)		<p>Thank you for a wonderful experience</p> <p>Sessions were fool proof, no suggestions</p> <p>Increasing the number of hands-on simulations</p>

		<p>Better introduction of roles to anesthesia provider</p> <p>Future courses could involve ICU and ward personnel to assist</p> <p>Can't comment, will think about it</p> <p>Too early to say</p> <p>May be communicate in Hindi to improve technician and sisters interaction</p> <p>Nil</p> <p>Learn how to assist in emergency x2</p> <p>Difficult airway x2</p> <p>Hope more information to know</p>
Take away messages		
		<p>Improve communication x8</p> <p>Team work x3</p> <p>Maintain calm in crisis x2</p> <p>Follow checklists x2</p> <p>More organized and planned in daily practice</p> <p>Encourage team members to speak up</p> <p>Crisis management made easy to learn and interesting</p> <p>Level of awareness needs to be higher to identify crisis early</p> <p>Systematic approach helps dealing with crisis well</p> <p>Learning many things about anesthesia</p> <p>Doubts on pediatric intubation got clarified</p> <p>Planning for intubation is useful</p> <p>Identify capabilities of team members and delegate work accordingly</p> <p>SBAR is a good way to give/take handover</p> <p>Close loop communication helps in crisis situations</p>

	<p>Crisis resource management checklist to reduce sensory and cognitive overload</p> <p>Importance of ANTS in patient safety and improving outcomes</p> <p>Even low fidelity simulation when applied in practice can improve patient safety and outcomes</p> <p>Preventing crisis</p> <p>Patient management</p> <p>Improvement of self</p> <p>Have clear mins and avoid fixation in crisis</p> <p>Call for help early</p> <p>Don't forget oral and nasal airway</p> <p>Prioritise tasks in stressful situations</p> <p>Appropriate delegation and role allocation</p> <p>To get reference handbook for all OTs in my hospital</p> <p>Run such drills in my department</p> <p>Do the same AMPLE/SBAR/ ABCDE/ WHO checklist for the patient I anaesthetise</p>
Other comments	
	<p>Looking forward to the next 2 days</p> <p>Have brain-storming sessions for anaesthesiologists</p> <p>Learning made more practical</p> <p>Thank you for giving a chance to improve, I have learnt intubation and pain management</p> <p>Thank you for teaching good things</p> <p>Good food</p> <p>Good ambience</p> <p>All faculty was very cordial and welcoming</p> <p>Will like to have more simulation scenarios</p> <p>Eagerly waiting for tomorrows workshop</p>

		Very good
		None

Day 2

Things they liked		
		<p>Lots of simulation x4</p> <p>Less talk, more action</p> <p>Simulation scenarios and discussion went well in an order</p> <p>Simulation scenarios handling interprofessional communication</p> <p>All played different roles, equal chances of lead roles</p> <p>Realistic, interesting scenarios x4</p> <p>Great after discussions x5</p> <p>Take home messages</p> <p>Involving obstetricians in the team x2</p> <p>How to prevent sepsis and role of nurse</p> <p>Handling patients in OT</p> <p>Major postpartum hemorrhage</p> <p>Involvement of participants from varying backgrounds</p> <p>Debriefing sessions were excellent</p> <p>Practical discussion</p> <p>Sincere faculty</p> <p>Time management</p> <p>Interactive</p> <p>New experience</p> <p>Friendly environment and great chance to learn x2</p> <p>Exposure to basic obstetric emergencies and common</p>

		<p>scenarios</p> <p>Relevant factors like hierarchy and cultural problems addressed</p> <p>Emphasis on burnout in colleagues</p> <p>Excellent explanation</p> <p>Participant interaction</p>
Suggestions for improvements		
(Some understood this as areas of improvement for themselves)		<p>There should be more time for simulation x2</p> <p>There may be more roles given</p> <p>Ways to improve communications skills</p> <p>Working out definitive protocols for each scenario and making the lead participant follow the protocol</p> <p>SBAR</p> <p>Communication</p> <p>Preventing anxious patient</p> <p>Indian names for patients if possible</p> <p>In pre-course assignments, delegates can be asked to write scenarios from real life that can be discussed</p> <p>Involving similar case scenarios for other clinical departments</p> <p>Input on how to overcome problems like hierarchy</p> <p>Nothing x2</p>
Take away messages		
		<p>Follow the order – AMPLE, ABCDE, RAT, WHO checklist</p> <p>Be nice to juniors to keep them open to views and ideas</p> <p>Overcoming hierarchy</p> <p>Don't get fixated with hypotension diagnosis after spinal</p> <p>Quick on use of adrenaline in treatment</p> <p>Early call for help x4</p>

		<p>Role allotment and team communication is must in emergency scenarios</p> <p>Empowering team members</p> <p>Improvise communication skills x2</p> <p>Role of appreciation</p> <p>Work on burnout protocols x2</p> <p>Prevention of burnout</p> <p>Identify burnout early</p> <p>Voice out the protocol steps in scenarios</p> <p>SBAR can be utilized by paramedical staff too</p> <p>Call for help when dual or multiple crisis</p> <p>However the situation is, never panic</p> <p>Have presence of mind, plan and be specific</p> <p>Early communication</p> <p>Our health is important as well, take care</p> <p>RAT, SBAR, AMPLE and PROBE</p> <p>Transfusion management in obstetrics</p> <p>Pain management</p> <p>Obstetric emergencies</p> <p>Measures to identify and analyze differentials related to burnout</p> <p>ABCDE x2</p> <p>Active behavior</p> <p>Counselling is important for patient and attender</p> <p>Avoid fixation during diagnosis</p>
Other comments		
		<p>Will implement many things in my day to day practice</p> <p>Thank you for a great day of simulation and discussion, stimulating grey cells</p>

		Looking forward to the last day It was an excellent interactive program Have plenty of take home messages Very good day spent Nope x2
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Day 3

Things they liked		
		<p>More efficient management of critical events</p> <p>Level of confidence was up today</p> <p>Lot more to learn</p> <p>Role play</p> <p>Good discussion during debriefing x4</p> <p>Challenges</p> <p>Well preparedness</p> <p>Closed loop communication</p> <p>No shame in asking for help early</p> <p>Primary services</p> <p>Teamwork x3</p> <p>Good leadership skills and communication x3</p> <p>Interesting, realistic scenarios x6</p> <p>Very friendly encouraging providers</p> <p>Learnt a lot</p> <p>ATLS scenarios</p> <p>Pediatric scenarios</p> <p>Working with multidisciplinary team</p> <p>Hightly interactive</p> <p>Need for taking consent</p> <p>Trauma management</p> <p>Burns management</p> <p>Including all the participants in the role play</p> <p>Reinforced the importance of debriefing is to bring out</p>

		<p>pertinent take home messages</p> <p>Excellent bon-homie and communication amongst everyone</p> <p>Good food</p> <p>Movies were nice</p> <p>Importance of primary survey and reassessment</p> <p>Discussion about informed consent</p> <p>Learnt how to use limited resource</p> <p>Learnt how to deal with crisis situation</p>
Suggestions for improvements		
(Some understood this as areas of improvement for themselves)		<p>Should have these sessions more frequently</p> <p>Need for long simulation</p> <p>Can't think</p> <p>Nothing much</p> <p>Teamwork x2</p> <p>Interpersonal relation between the team</p> <p>Good communication x3</p> <p>To audit the critical events unbiased</p> <p>Knowledge x2</p> <p>We need to keep in touch</p> <p>Add scenarios – maternal cardiac arrest, neonatal resuscitation</p> <p>More technicians and nurses to be involved</p> <p>Scenarios in ER like poisoning, ICU like pulmonary edema</p> <p>Nil x2</p>
Take away messages		
		<p>Development of nontechnical skills is very important to manage critical events</p>

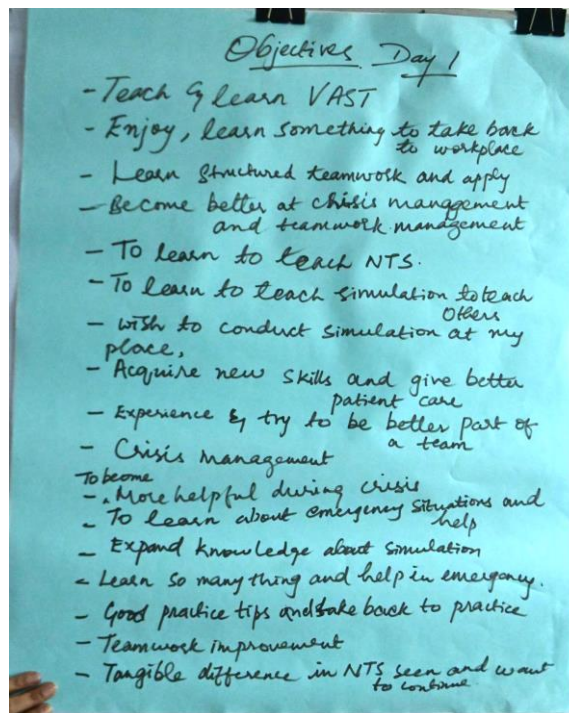
		<p>Strategic approach to manage such events</p> <p>It makes you more perfect</p> <p>How to react in emergency situation</p> <p>Loop communication between team x5</p> <p>Be a good leader</p> <p>Better team player x2</p> <p>Holistic approach to patient</p> <p>Be well prepared for challenges/ worse outcomes</p> <p>SBAR handover must at all places x2</p> <p>AMPLE x2</p> <p>Good teamwork x2</p> <p>Task allotment</p> <p>Right decision on right time</p> <p>Time management</p> <p>Action plan for my workplace</p> <p>Call for help x2</p> <p>ABCDE to be the norm</p> <p>WHO checklist should not be ignored</p> <p>Good guidance was available here</p> <p>I learnt to take care of patients in ER</p> <p>To have crisis resource management checklist/handbook</p> <p>Task allocation keeping in mind the help available</p> <p>Importance of proper consent</p> <p>Don't foget BG and pupils in poor neurological status</p> <p>Keep following AMPLE, SBAR, ABCDE, other acronyms MIST, VOMIT</p>
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		<p>Apparently I burnt out – Don't burn out</p> <p>Importance of consent, counselling</p> <p>Empower juniors</p> <p>Teach juniors whenever you can</p>
Other comments		
		<p>It's good to gain more knowledge</p> <p>Can I get more opportunities like this?</p> <p>Got to learn the anesthetists perspective as a surgeon</p> <p>Great efforts</p> <p>Thanks to VAST team</p> <p>Thank you for a wonderful experience</p> <p>Amazing effort</p> <p>More to come</p> <p>To learn the new skills</p> <p>Was a wonderful opportunity to meet the stalwarts and people from different backgrounds</p> <p>Will be very interested in VAST facilitator course</p> <p>Thank you so much</p> <p>Shall definitely recommend</p> <p>Nil</p>

Main hall session



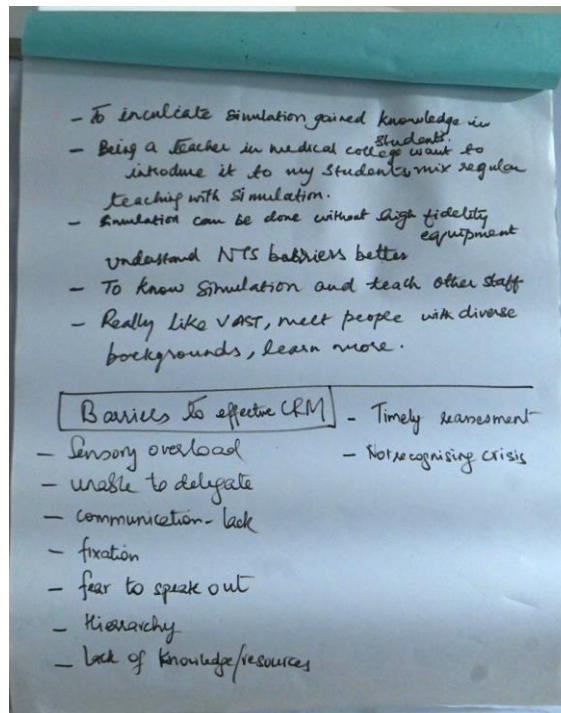
Learning objectives of the course



Hand it on



Barriers to effective crisis resource management



Skill station



Role allocation



Enjoying the roles



Timely technology prompts



Observers using ANTS frame work



Engaging scenarios



Interdisciplinary team involvement



Realistic performances



Buying-in low resource adaptations



Debriefing in action



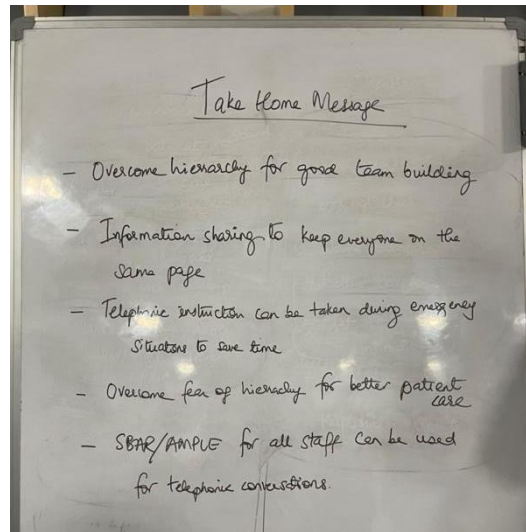
Engaging discussions



Video recording the debriefing session for feedback



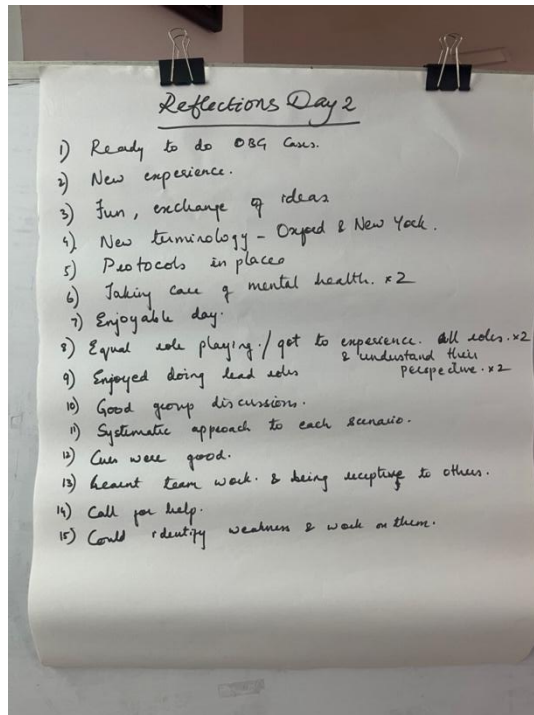
Take home message



Scenario 2.8 Burnout



Reflections



End of day evaluation forms



Handing over the certificates



V for VAST

