NHS Education for Scotland

West of Scotland Simulation Collaborative
Faculty Advancement in Simulation Training (FAST)
Faculty Manual

NHS Greater Glasgow and Clyde

NHS Lanarkshire

medical EDUCATION
PATHWAYS FOR CLINICAL LEARNING

Safety, Skills & Simulation
Clinical Skills

Contents

Acknowledgements

Introduction

The Faculty Advancement in Simulation Training (FAST) programme has been developed in the West of Scotland with the principle aim of providing a robust continuing professional development (CPD) programme for faculty involved in simulation-based education (SBE) (1).

It is aligned to the Clinical Skills Managed Educational Network (CSMEN) online SBE 3 tier programme (2) as it has been designed in Scotland. Each tier represents a logical progression as experience is gained and progress is gauged against a set of descriptors for each stage. These online modules are used as additional resources (3), which can be accessed by anyone in the UK through the TURAS learning platform.

In keeping with the inter-professional ethos of the West of Scotland Simulation Collaborative, the FAST programme has been designed and developed by an inter-professional group of simulation educators. Participation in the programme is open to all medical, nursing, and allied health professionals who act as faculty in SBE and is free at the point of access.

Delivering SBE is complex and requires a specific set of skills which are drawn from:

- traditional teaching techniques
- psychological methods
- adult learning theories
- the use of equipment of different modalities (part task trainer, manikin, patient actor)
- clinical experience

It is recognised that development of these skills represents a journey for the simulation-based educator; this programme creates a structured plan of CPD from novice to expert (4).

This manual contains a series of workshop plans to help faculty guide others through the concepts of SBE. The workshop model maximises the germane learning (5) through managing the overall intrinsic load required for progression. Each workshop, centres on a specific element of SBE and is supported by pre-workshop material. This manual should be used in conjunction with faculty expertise and other resources.

FAST programme outline

The programme starts with an essential one-day introductory course which is followed by a series of eight workshops. The workshops are four hours long and delivered two per day with complimentary pairings (scenario design with non-technical skills, pre-brief with debrief). Each workshop has: clear learning outcomes, a presentation slide set, a learning plan and a list of pre-course material

FAST is a longitudinal programme where each workshop builds on the previous and incorporates increasingly advanced techniques. You will also simultaneously attend SBE courses as faculty, receive peer coaching and meta-debriefing as part of your continuing professional development (6). Most of the workshops have co-debriefing at their core which gives novice faculty the opportunity to work with more experienced faculty allowing informal formative coaching throughout (7).

Core debriefing sessions

Introduction to SBE

This full day course introduces the basic concepts of SBE including simulated scenarios and debriefing methods.

Debriefing

Outline of the underlying principles of debriefing, effective facilitation of reflective learning, and the different types of debrief strategies.

Co-debriefing within inter-professional simulation

Consider the benefits, challenges and solutions of debriefing inter-professional groups with inter-professional faculty.

Advanced debriefing

In-depth debriefing methods concentrating on NTS and how to create transferable and translational skills in the learner group.

Additional supporting workshops

Design a simulation scenario

Learn to design scenarios using the principles of constructive alignment and cognitive load theory.

Non-technical skills (NTS)

Review NTS to aid faculty understanding of how to explore NTS with scenario design and debriefing.

Pre-brief

An outline of the importance of the pre-brief for participants and faculty, the requirements of a pre-brief and how it can improve or detract from learning.

Making it work

The use of equipment such as manikins and audio-visual systems and the embedded professional.

Introduction to simulation-based education

One of the key principles of SBE is the educator role as facilitator rather than teacher which is highlighted in this introductory course.

Most of this course is for participants to observe simulated scenarios then debrief, with either a stop-start meta-debrief by course leads, or a debrief the debrief approach after each cycle. We use scenarios from undergraduate courses and the participants act as learners within the scenario; emphasis is placed on the learners being there as a subject for debrief practice and not solely learners.

Lesson plan: Introduction to SBE		
Learning outcomes • to introduce the concept of simulation as a learning technique • to explore basic educational theory relating to SBE • to develop skills to deliver debriefing using a Plus-Delta Model Prior learning and experience required • CSMEN Tier 1 TURAS modules • CSMEN Tier 2 TURAS modules 3,6,7 and 8 Pre-course material • the art of the Plus-Delta Model (8) • co-debriefing for simulation-based educators (9) • a conceptual framework for the development of debriefing skills (10) • a tiered approach (11) Trainers • CSMEN Tier 3 TURAS modules • simulation educators or those with appropriate simulation experience Success criteria for learners • completion of intended learning outcomes (ILOs)		
Timing	**Activity**	
10 minutes	Ice breaker - Introductions: faculty and participants Establish drivers for attendance at session.	
30 minutes	Understand the underpinning educational theory related to SBE Interactive presentation.	
30 minutes	Understand how to apply the plus-delta model and how to structure a debrief	

	Interactive presentation.
20 minutes	Break
15 minutes	How to observe simulated scenario Run a simulated scenario with 2 participants observing in the role of debriefers.

20 minutes	Demonstration of debrief and co-debrief Participant debriefers run a standard debrief, with the rest of the participants playing the part of the learner group. Experienced faculty coach during this, helping assimilate what they are observing with the scenario ILOs.
20 minutes	Critical analysis of debrief Meta-debrief led by faculty generally using a Plus-Delta Model.
Repeat the last 3 sections of the lesson plan until all participants have co-led a debrief. In subsequent debriefs, introduce additional factors to mirror common challenges, for example, participants who are quiet, overly talkative, inappropriately negative or positive.	
10 minutes	Review the session and ILOs Describe what has been achieved and set future goals.

Workshop 1: Design a simulation scenario

The purpose of this workshop is to write a simulation scenario considering the following:

- the origins of the ILOs - are they pre-defined by a curriculum or defined by response to an adverse event?
- what is the frame of reference?
- who are the learner group?
- what is the purpose of the simulation - process driven care using in-situ simulation, NTS development or mastery learning of a practical skill?
- the cognitive load and how this will vary with the learner group and within a learner group dependent on prior clinical or simulation experience.

Lesson plan: Design a simulation scenario
Learning outcomes • identify appropriate aims for an SBE event • take account of stage within curricula – undergraduate (UG) or postgraduate (PG), uni-professional or inter-professional • use the principles of constructive alignment • consider the impact of cognitive load theory (12) **Prior learning and experience required** • CSMEN Tier 1 TURAS modules • CSMEN Tier 2 TURAS modules 1, 2, 3 and 5 **Pre-course material** • blank scenario template • completed scenario templates from UG, PG, uni and inter-professional courses **Trainers** • CSMEN Tier 3 TURAS modules • simulation educators or those with appropriate simulation experience **Success criteria for learners** • completion of ILOs

Time	Activity
10 minutes	Ice breaker - Introductions: faculty and participants Establish drivers for attendance at session.
10 minutes	Understand purpose of intended SBE event Why do you think simulation should be used in your particular area? Discuss the purpose of simulation and create an idea of limitations and specific learning that can be created within SBE.

10 minutes	Design simulation scenario: Part 1
	Faculty description of creation of scenarios.
	Use reporting mechanisms as an example of SBE being driven by adverse events.
20 minutes	Aspects of an SBE event
	Describe the different aspects of an SBE event and explore the purpose and differences between in-situ simulation and lab-based simulation.
	Consider mastery-based learning for skill development.
10 minutes	How to define ILOs for the SBE event
	Describe where ILOs originate, consider curriculum versus adverse event drivers, uni-professional versus inter-professional.
10 minutes	Consider cognitive load theory when designing SBE
	Explore the concept of cognitive load theory highlighting:
	- problems around extrinsic load - distractions to ILOs - the need to manage intrinsic load during a scenario to maximise germane learning
10 minutes	Design simulation scenario: Part 2
	Discuss participant ideas regarding simulation scenario options.
	Discuss what can be achieved referencing constructive alignment.
20 minutes	Design simulation scenario: Part 3
	Introduction or revision of scenario storyboards and how to complete.
20 minutes	Break
90 minutes	Design simulation scenario: Part 4
	In groups define ILOs and write a storyboard including relevant paperwork such as GP letter or drug list.
45 minutes	Review scenarios
	Each group to report their scenario for comment.
10 minutes	Review the session and ILOs
	Describe what has been achieved and set future goals.

Workshop 2: Non-technical skills

This workshop explores each of the main subcategories of NTS and their recognition during a scenario; debriefing requires experience in understanding and interpreting NTS. They form the basis of the transferable skills achieved in simulation.

Lesson plan: Non-technical Skills
Learning outcomes • define NTS • demonstrate understanding of each component • consider how NTS can be used in abstract learning conceptualisation **Pre-course material** • safety at the sharp end (13) **Trainers** • CSMEN Tier 3 TURAS modules • simulation educators, those with appropriate simulation experience or experience in NTS and human factors **Success criteria for learners** • completion of ILOs by interactivity within session

Time	Activity
10 minutes	**Ice breaker - Introductions: faculty and participants** Establish drivers for attendance at session.
40 minutes	**Define NTS and human factors** In groups, ask participants to describe their understanding of NTS and human factors. Facilitated discussion of the descriptions and differences between NTS and human factors.
20 minutes	**Define situational awareness (SA)** In groups, ask participants to define SA. Each group report their ideas and contribute to facilitated discussion covering: • reasons behind failure of SA (stress/inexperience) and consequences • methods of regaining SA (Stop, Look, Assess and Manage - SLAM) • personal and team SA
20 minutes	**Define communication** In groups, ask participants to define communication and describe its components. Each group report their ideas and contribute to facilitated discussion considering: • good communication vs bad communication

	• verbal vs non-verbal • relationship with shared mental modelling/thinking out loud • effects of interruptions, optimal methods, use of names
20 minutes	Break
20 minutes	Define leadership and teamwork Cohort divided into two groups, each group works on leadership or teamwork. Ask the leadership group to: • define leadership • discuss the purpose of leadership • discuss traits of effective leadership • describe what a team wants from a leader Ask the teamwork group to: • define teamwork • describe what makes an effective team • explore the differences and challenges between established and novel teams • determine strategies within a debrief to explore these challenges Each group reports their discussions.
20 minutes	Differences and challenges between established and novel teams Facilitated discussion - explore differences and challenges between established and novel teams. Determine strategies to overcome challenges within teams and between teams, how this can be accomplished within a debrief?
20 minutes	Define problem solving, clinical decision making and clinical reasoning In groups, ask participants to define each element and describe its components. Each group report their ideas and contribute to facilitated discussion. Consider components of decision making and their influences.
20 minutes	Review the session and ILOs Describe what has been achieved and set future goals.

Workshop 3: Pre-brief

The success of any simulation session depends on planning practical aspects and ensuring both faculty and participants are in the correct mindset to maximise learning. In the context of cognitive load theory, the purpose of a pre-brief is to provide enough information to minimise extraneous load and maximise germane learning during the session.

The purpose of this session is to encourage faculty to consider the different elements of a pre-brief and how to use them to maximise learning within a safe psychological space.

Lesson plan: Pre-brief
Learning outcomes • define the pre-brief and consider its components • demonstrate how to create a safe psychological space within the simulation environment for both participants and faculty • consider the effect of mood congruent processing on the participants and explore how this can be optimised **Prior learning and experience required** • CSMEN Tier 1 TURAS modules • CSMEN Tier 2 TURAS modules 6 and 7 **Pre-course material** • twelve tips for the pre-brief (14) • International Clinical Skills Foundation (15) **Trainers** • CSMEN Tier 3 modules • appropriate simulation experience **Success criteria for learners** • completion of ILOs

Time	Activity
10 minutes	**Ice breaker - Introductions: faculty and participants** Establish drivers for attendance at session.
60 minutes	**Explore understanding of the term pre-brief** In groups of 3-4 ask the participants to define a pre-brief and describe its components. Each group to present their thoughts. Discussion: When should the pre-brief start? Is it restricted to activity on the day? How is it linked to faculty derived ILOs? Explore the concept of prior notice of scenarios to facilitate enhanced NTS learning. This is linked to cognitive load and reduction of extraneous load on the day.

	Pre-brief also dependent on the purpose of simulation, technical vs NTS, in-situ vs lab or process / looking for latent error. Ask participants to consider purposes of simulation.
15 minutes	**Define faculty pre-brief** • discuss importance of faculty pre-brief • discuss how to set ILOs for faculty - on the day or prior to attending? • Explore how to create structure for faculty and the effects on cognitive load • Consider requirement for formative assessment
10 minutes	Break
15 minutes	**Critically appraise a pre-recorded pre-brief** Watch a recorded pre-brief and identify elements which contribute to the creation of a safe psychological space.
45 minutes	**Define safe psychological space** In groups of 3 – 4 ask participants to define psychological safety and list what they consider to be the 3 most important aspects. Facilitated discussion: • identify the purpose of a safe space • consider the threats to creation of a safe space • explore using a safe space to pre-empt debrief challenges
20 minutes	**How to create a safe psychological space** Facilitated discussion: • discuss different ice breakers, which reduce or enhance hierarchy • discuss use of audio-visual recording and specifics around access or replay • explore what is meant by a formative learning process • what happens in sim stays in sim
5 minutes	**Explain the purpose of the faculty** Describe the faculty role as facilitator, not teacher.
20 minutes	**How to prepare participants for the session and manage expectations** Facilitated discussion: • describe the role of the participant and define what is expected of them (being yourself) and what is not expected (role play is within their usual job roles) • why describe the structure of a debrief • explore purpose of debrief-constructive discussion on scenario and creation of an exit strategy for future
20 minutes	**Define mood congruent processing** Discuss relevance of mood on cognitive flexibility. Consider potential adverse events, negative effect on emotion and how to pre-empt challenges in debrief.

20 minutes	Review the session and ILOs
	Describe what has been achieved and set future goals.

Workshop 4: Making it work

As an educator, you need to have a basic working knowledge of the functionality of the manikins and audio-visual (AV) technology. This workshop contains an introduction to using the equipment. It should be noted that using audio-visual technology to capture elements of a scenario to use during the debrief is considered an advanced skill and is covered in Tier 3 of the CSMEN programme.

The role of an embedded professional (EP) in keeping scenarios on track is also taught in this workshop. The EP component can take an hour, while the other two components take 30 minutes each, therefore a rotational process sees all three elements of the workshop taking place simultaneously.

Lesson plan: Making it work
Learning outcomes • competence with basic manikin functionality (switching on/off, trouble shooting) • demonstrate how to drive an SBE scenario utilising manikin functionality • demonstrating proficiency as an EP • demonstrate basic functionality of SMOTS AV system **Prior learning and experience required** • delivery of SBE **Trainers** • CSMEN Tier 3 TURAS modules • simulation educators or those with appropriate simulation experience **Success criteria for learners** • completion of ILOs by interactivity within session

Time	Activity
10 minutes	**Ice breaker - Introductions: faculty and participants** Establish drivers for attendance at session.
30 minutes	**Demonstrate basics of Laerdal manikin** Following initial demonstration, all participants to practice switching on and shutting down equipment. (Checklist provided) • set up and use of patient monitor and instructor PC • use of LLEAP software as end user interface with manikin • use of iSimulate - benefits and disadvantages compared to SimMan • how to connect to Wi-Fi (show difference between SimLink Wi-Fi and SimMan Wi-Fi) • troubleshooting when switching on and off • manual and automatic modes • how to alter physiological parameters

	• make alterations coherent • use of transition function • use of feedback from manikin to inform physiological alterations
55 minutes	**Role of the embedded professional** Define the role of the EP in simulation scenarios and discuss the points below: • the relationship between running smooth scenarios and learning within debriefs • altering the EP's role and performance according to the needs of the candidates (specific attention to UG and PG, uni-professional and inter-professional) • methods to ensure candidates retain psychological immersion during interactions with EP - who should be EP? • how to ensure scenario doesn't derail if technology fails • personal anecdotes from faculty and candidates to illustrate points • the dos and don'ts of being an EP • the role of the EP in SBE for learning compared to assessment (prompting versus being directed)
30 minutes	**Discuss the use of SMOTS in scenario and debrief** • ensure SMOTS is on and recording • ensure correct camera angles • bookmark and tag appropriate sections to reflect ILOs (written references with time stamp) • switch from live to playback and vice versa • isolate tagged sections and use playback
20 minutes	**Review the session and ILOs** Describe what has been achieved and set future goals.

Workshop 5: Debriefing

There are many different strategies for debriefing which are dependent on the ILOs of the session. In this workshop we consider the different debriefing strategies, revision of Kolb's learning cycle to emphasise how debriefing creates deep learning and develop strategies to manage common problems encountered during debriefs.

Lesson plan: Debriefing
Learning outcomes
• describe underlying principles of debriefing
• discuss effective facilitation of reflective learning in debriefs
• compare contrasting strategies of debriefing for different learner groups in different settings
Prior learning and experience required
• CSMEN Tier 1 TURAS modules
• CSMEN Tier 2 TURAS modules 6, 7 and 8
Pre-course material
• Kolb's learning cycle (16)
• art of Plus-Delta (8)
Trainers
• CSMEN Tier 3 TURAS modules
• simulation educators or those with appropriate simulation experience
Success criteria for learners
• completion of ILOs by interactivity within session

Time	Activity
10 minutes	**Ice breaker - Introductions: faculty and participants** Establish drivers for attendance at session.
15 minutes	**Explore underlying principles of debriefing** In groups of 3-4, ask the participants to discuss the following: • definition of debriefing • how learners learn within a debrief process (facilitated reflection/abstract conceptualisation/ active experimentation within Kolb's cycle) • mood congruent processing and how this links to learning • core idea of debriefing (facilitation over teaching, achieving active reflection and learning from peers) • the overarching principle in debriefing?
35 minutes	**Consolidate concept of debriefing** Facilitated discussion with group feedback.
10 minutes	**Compare different models of debriefing**

	Discuss different models of debriefing and potential applications in different settings or learner groups. Include Diamond (17) / PEARLS (18) / Plus-Delta
10 minutes	**Explore purpose of agenda setting** In groups ask the participants to discuss the following: • the purpose and demonstrate techniques of agenda setting • the importance of capturing reactions prior to and in agenda setting • the common pitfalls during agenda setting and strategies to overcome them
20 minutes	**Consolidate concepts of agenda setting** Facilitated discussion highlighting: • emotions/feelings and how this may affect learning • problems and how to deal with them • when to engage and when to step back • language used for challenging situations
10 minutes	**Illustrate effective strategies for transitioning between phases of the debriefing process** Highlight the role of candidate comment selection and video playback.
15 minutes	Break
20 minutes	**Identify the benefits and challenges of co-debriefing** Facilitated discussion exploring strategies to enhance co-debriefing and strategies to overcome its challenges.
25 minutes	**Explore how to facilitate effective reflective learning** In groups: • consider methods of questioning to create reflection • create a list of questions and question stems which can be used as a non-judgemental enquiry Groups report back through facilitated discussion. Introduce the concept that a multi-step process might be required to lead participants to the answers.
20 minutes	**Explore strategies to manage challenging candidates** In groups create a list of strategies to manage learners who are: • overconfident • arrogant • talkative • underconfident • quiet • lacking insight
10 minutes	**Review the session and ILOs** Describe what has been achieved and set future goals.

Workshop 6: In-situ simulation

The purpose of this workshop is to identify benefits, challenges and reasons for in-situ simulation.

In-situ simulation has the potential to deliver several different learning outcomes:

- identification of latent threats
- re-creation low frequency/high risk events within the clinical workspace
- high frequency low fidelity sessions to ensure all professionals achieve a defined standard (especially in settings where there is a high turnover of staff)
- creation of enhanced teamwork through shared learning and a positive learning culture

There are attendant risks with in-situ simulation, mainly in relation to psychological safety of participants and faculty. Success is determined by how these risks are identified and handled.

Lesson plan: In-situ simulation
Learning outcomes - define in-situ simulation and explore the potential reasons for its use - describe its benefits and the common challenges encountered - compare the components and practicalities of running in-situ simulation for educational purposes with in-lab simulation - gain an understanding of translational simulation and its potential application in the clinical workplace **Prior learning and experience required** - CSMEN Tier 1 TURAS modules - CSMEN Tier 2 TURAS modules - prior experience of in-situ simulation, either as participant or faculty **Pre-course material** - translational simulation: not 'where?' but 'why?' (19) **Trainers** - CSMEN Tier 3 TURAS modules - simulation educators or those with appropriate simulation experience **Success criteria for learners** - completion of ILOs by interactivity within session

Time	Activity
10 minutes	Ice breaker - Introductions: faculty and participants Establish drivers for attendance at session.
5 minutes	Definition of in-situ simulation Gauge attendees' definition and interpretation of in-situ simulation.
20 minutes	Benefits, common challenges, and barriers encountered with in-situ simulation

	Use participants own experiences of running in-situ simulation or being a participant of in-situ simulation to encourage discussion.
10 minutes	Clarification of goals of in-situ simulation In groups ask participants to discuss the following questions and report to the group. • what are you trying to achieve by running in-situ simulation? • what can it be used for?
15 minutes	Consolidation of purpose of in-situ simulation Facilitated discussion of groups ideas and clarify the differences between simulation for education or for systems integration, diagnostics and therapeutics. Participants not as learners but in the diagnostic/therapeutic process.
25 minutes	Components required for delivering effective in-situ simulation for educational purposes Discuss and define: • goals • who the participants are • pre-loading with skills and drills • scenario design • pre-brief • technology • simulation technician Facilitated discussion to cover ILOs and: • the importance of co-design of simulation scenarios to benefit the whole team • the differences required in designing in-situ simulation scenarios compared to in-lab simulation scenarios • if there is a place for skills and drills prior to simulation • discuss practicalities of bleep-free time
10 minutes	Break
15 minutes	Explore psychological safety issues Discussion around challenges of what happens in sim stays in sim.
20 minutes	How to debrief in-situ simulations effectively Facilitated discussion to include: • practicalities (location and timing) • make up of faculty • skill and experience of faculty • frameworks • how to debrief in a clinical space with potentially no secondary debrief area • different models of debriefing and potential applications in an in-situ setting and with inter-professional learner groups • diamond/PEARLS / TeamGAINS (20)

25 minutes	**Processes involved in translational simulation** Define translational simulation and discuss how to bridge the gap between 'work as imagined' and 'work as done'. Discuss the notion of simulation as a 'service' rather than simply educational tool. Explore the role of improvement and science implementation strategies.
20 minutes	**How to create engagement with senior management** In groups ask the participants to outline what SWOT analysis is and undertake this for their workplace. Review each and discuss how this can be used to empower delivery of in-situ simulation.
15 minutes	**Faculty development for in-situ simulation faculty** Facilitated discussion. What skills do faculty require to conduct in-situ simulation? Is it simply the same as those that debrief in-lab simulation or is there another skill set required? (QI methodologists, science implementation experts, qualitative and quantitative researchers)
10 minutes	**Review the session and ILO** Describe what has been achieved and set future goals.

Workshop 7: Inter-professional co-debriefing

There are challenges to effectively deliver a coherent inter-professional debrief but the perceived benefits are worth it. Delivery of SBE by inter-professional faculty allows different viewpoints and more importantly allows role modelling of inter-professional teamwork, which should be mirrored in the clinical workplace. This workshop explores the potential challenges and solutions for such a debriefing practice.

Lesson plan: Inter-professional co-debriefing
Learning outcomes
• define relevant terminology - debriefing, co-debriefing, inter-professional co-debriefing, inter-speciality co-debriefing
• demonstrate an understanding of the benefits and challenges of debriefing inter-professional groups of learners
• describe and analyse the benefits and challenges of inter-professional co-debriefing
• explore the pros, cons, and practicalities of different co-debriefing strategies
• describe the ideal qualities of a co-debriefer
Prior learning and experience required
• CSMEN Tier 1 TURAS modules
• CSMEN Tier 2 TURAS modules 6, 7 and 8
• prior attendance at Workshop 5 - Debriefing
Pre-course material
• inter-professional co-debriefing (7)
• co-debriefing (9)
Trainers
• CSMEN Tier 3 TURAS modules
• simulation educators or those with appropriate simulation experience
Success criteria for learners
• completion of ILOs by creation of an appropriate SBE event or scenario

Time	Activity
10 minutes	**Ice breaker - Introductions: faculty and participants** Establish drivers for attendance at session.
15 minutes	**Define relevant terminology** Explore the participants prior experiences of co-debriefing and describe relevant appropriate language and the debriefing process.
10 minutes	**Understanding benefits and challenges of debriefing inter-professional groups** In groups ask participants to discuss: • their experiences of debriefing inter-professional groups

	• the potential risks specific to inter-professional participants for example, psychological safety and re-enforcement of historical stereotypes such as power imbalances or hierarchies • the potential benefits for example, surfacing assumptions, role clarification, understanding of other roles, all of which can reduce potential for conflict and incivility
15 minutes	Consolidation of benefits and challenges Facilitated discussion.
40 minutes	Benefits and challenges of inter-professional co-debriefing Facilitated discussion listing potential benefits and challenges of inter-professional co-debriefing. Use video playback of case vignettes to re-enforce learning and open discussion. Discuss opportunities for faculty development during inter-professional co-debriefing - how is the meta-debrief best conducted in this scenario?
15 minutes	Break
30 minutes	Pros, cons, and practicalities of differing co-debriefing strategies • Deconstruct follow-the-leader vs divide and conquer approaches • Consider how to divide cognitive load • How to signal to co-debriefer if you lose your way • Discuss potential re-enforcement of negative stereotypes • Discuss where this has gone wrong and how to prevent this • Work through strategy checklist items for pre-brief, pre-debriefing, debriefing, post-debriefing, and post-course
20 minutes	Describe the ideal qualities of a co-debriefer In groups ask the participants to list ideal qualities and consider how these could be identified and developed. Facilitated discussion.
10 minutes	Review the session and ILOs Describe what has been achieved and set future goals.

Workshop 8: Advanced debriefing

At this stage challenges for attendees are usually around how to dovetail the course and participant ILOs, as well as being able to seamlessly incorporate NTS concepts into whichever debrief they are delivering. Participants almost always know the answers to the challenges they face but can have difficulty organising their thoughts in a coherent manner. It is the purpose of the debriefer to use a step wise approach to enable participants to prioritise and share their thoughts and create reliable processes for future clinical problems.

The purpose of this workshop is to enable debriefers to create their own frameworks and questioning strategies to lead participants through the prioritisation process. This will be done by Introducing the new "Theory of Concept Architecture" (McGowan, 2023) (21): a method of creating a scaffold to link participant ILOs to faculty or curricular ILOs, especially considering NTS.

Lesson plan: Advanced debriefing
Learning outcomes • learn techniques to enhance use of Plus-Delta Model • discuss and develop methods of how to deliver intended learning outcomes • explore and demonstrate strategies to embed participant understanding of NTS in a debrief using theory of concept architecture **Prior learning and experience required** • CSMEN Tier 1 TURAS modules • CSMEN Tier 2 TURAS modules • CSMEN Tier 3 TURAS modules • ideally have at least 1 years' experience as simulation educator **Trainers** • CSMEN Tier 3 TURAS modules • simulation educators or those with appropriate simulation experience **Success criteria for learners** • completion of ILOs by interactivity within session

Time	Activity
10 minutes	**Ice breaker - Introductions: faculty and participants** Establish drivers for attendance at session.
10 minutes	**Define debriefing and list most challenging aspects** In groups of 3-4 ask participants to define debriefing and discuss challenges and report back. What is the overarching principle in debriefing? Creation of a list of challenges which should hopefully mirror the participant derived ILOs.
5 minutes	**Description of debrief to participants**

	Facilitated discussion - how do you describe the debrief process to participants, and why we do this. Reference cognitive load.
20 minutes	**Review of types of debriefing and settings for debriefing** Discussion around hot/cold/clinical vs lab based or in-situ. Coverage of different types of tools for debriefing although all have certain similarities (reflection/description/analysis/transfer).
10 minutes	**Review agenda setting** Explore challenges identified and techniques: • to improve interaction / group participation • to ensure the whole group responds • to defuse emotion • use of humour if needed / anecdote Discussion How did it go? how did it make you feel? what did you achieve? What was challenging
10 minutes	**Transition concept and strategies** Discuss who decides on which part of the agenda is followed into analysis, and why. Challenges that exist, their agenda may differ from yours, and how to solve.
10 minutes	**Description of accurate questioning** Review of the language used during questions; highlight that it will rarely be one question which leads to the answer but several steps.
15 minutes	Break
15 minutes	**Theory of concept architecture** Description of theory, using examples.
10 minutes	**Description of events/plan for rest of session** Give each pair the same scenario summary, ILOs and agenda from a previous course. Ask them to devise a way of linking a line from the agenda to the same ILOs from the scenario with a series of questions or other methods.
15 minutes	**Demonstration of concept for first agenda outcome** Each pair present their strategy and line of questioning to achieve the ILO.
10 minutes	**Creation of concept architecture** Each pair now given a different line from the agenda to link to one of the ILOs from the scenario.
15 minutes	**Demonstration of concept for second agenda outcome** Each pair to present their strategy and line of questioning to achieve the ILO.
10 minutes	**Review the session and ILOs** Describe what has been achieved and set future goals.

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