Debriefing in Simulation

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Learning Objectives

- To provide the background educational theories that support debriefing
- To discuss common structures for debriefing
- To introduce current models for debriefing particularly ‘Debriefing with Good Judgement’
- To be aware of assessment tools for debriefing

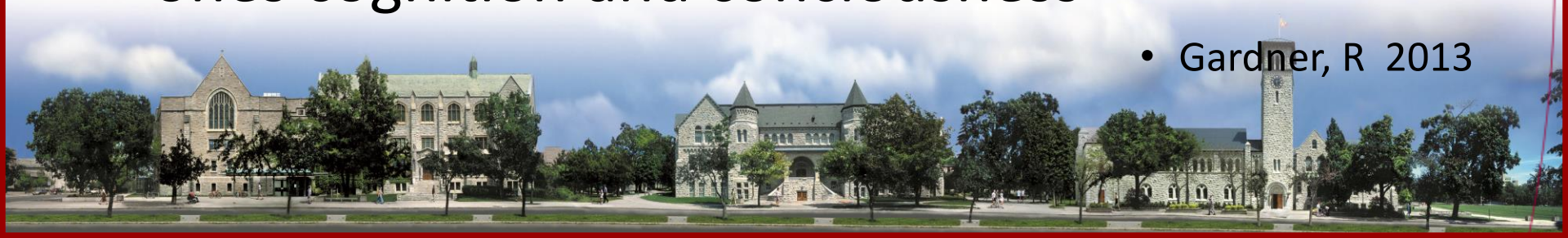
Definition

de·brief

To question someone, typically a soldier or spy
Details about a completed mission or undertaking
Synonyms: cross-examine, interview, interrogate, question, probe, examine, grill or pump

Definition: Simulation Debrief

- Discussion after a simulated event to improve understanding & enhance future performance
- Facilitated or guided reflection in the cycle of experiential learning
  - Fanning 2007
- Discussion and analysis of an experience, evaluating and integrating lessons learned into ones cognition and conciousness
  - Gardner, R 2013



Educational Theories

- Adult Learning theory (Knowles)
- Experiential Learning (Kolb)
- Transformative Learning (Mezirow)
- Reflection/Reflective Practice (Schon & Boud)

Adult Learning Theory (Knowles)

- Adults in practice learn in different ways
  - Self directed
  - Have accumulated experience
  - Internal motivation to learn
  - Need to know why something should be learned
  - Learning tied to application and problem solving
- Learn through experience (processing and assimilating information into pre-existing structure)

Experiential Learning (Kolb)

- Kolb learning cycle
- a continuous process grounded in the experience with knowledge being continuously derived and tested out by the learner

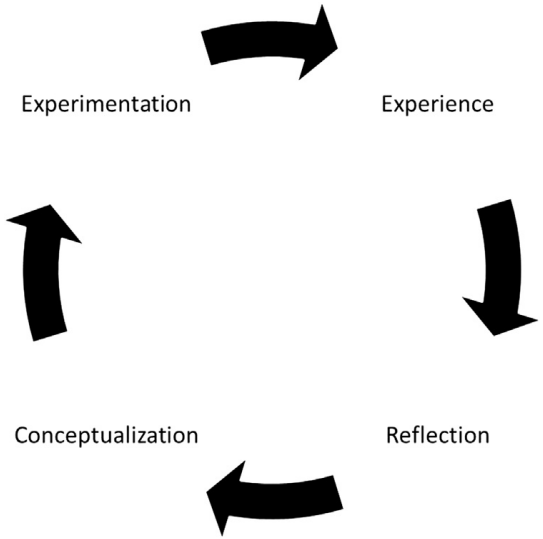
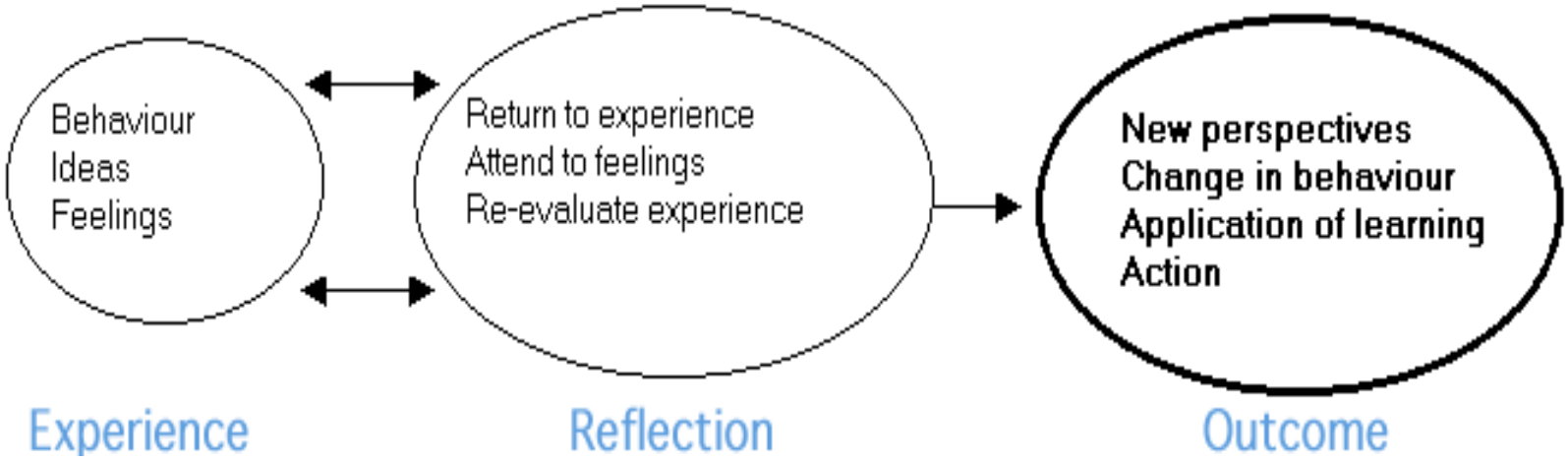


Fig. 1 – Kolb's learning cycle.[22] In Kolb's experiential-learning cycle, a learner enters through an experience, reflects on that experience, analyzes and processes its meaning, and then tries a different approach in a similar, future situation based on their new understanding. (Modified from Kolb.[22])

Reflective Practice (Boud)



- Experience is simulated rather than authentic
- Usually a surprise with a complex problem that disrupts normal practice
- Collective experience with peers
- Incorporating new knowledge into existing frameworks
- Outcomes!

Transformative Learning (Mezirow)

- Constructivist approach to learning
  - Experience or trigger
  - Self-examination
  - Development of new ways of thinking
  - Trying on the new role or assimilation
- Learning occurs when learners change their frames of reference to match this new way of thinking which occurs through reflection

Medical Teacher Roles of Simulation Instructor

(1) *Information provider*: presents information in the lecture context both pre-planned and structured as well as spontaneously (e.g. during a debriefing).

(2) *Role model*: exhibits a certain type of conduct both as health care professional and as teacher/educator.

(3) *Facilitator*: helps participants learn, for example, by asking questions aimed for stimulating deeper reflection.

(4) *Assessor*: judges the learning of the participants by comparing learning goals to their current status, but also assesses the curriculum and educational methods in their effectiveness.

(5) *Planner*: oversees the learning goals for the participants, selects the methods to be used and sequences the material to be presented both in a curriculum and during a course.

(6) *Resource* developer: creates learning material that can serve as a resource for the learner and also provides information on how to best use this material in study guides

P. Dieckmann et al.2009

Value of Debriefing

- Debriefing is fundamental to simulation
- Research questions for Best Practice
  - Video vs non
  - Self vs Facilitator vs Peers
  - Group vs Individual
  - Timing & Duration

Debriefing for technology-enhanced simulation: a systematic review and meta-analysis

Adam Cheng,[1] Walter Eppich,[2] Vincent Grant,[1] Jonathan Sherbino,[3] Benjamin Zendejas[4] & David A Cook[5]

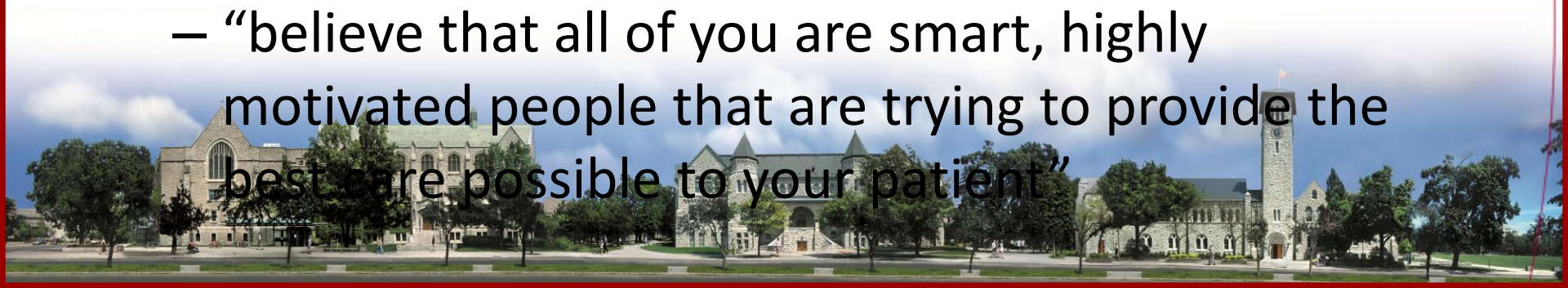
Structure of Debriefing

Pre-brief the Debrief!

- Must establish a psychological ‘Zone of Safety’
  - Learners must feel comfortable expressing themselves, trust the facilitator and group members
  - Attempt to defuse stress level
  - Must be clear that the debriefing is confidential
  - Separate ASSESSMENT sessions from FORMATIVE sessions

Establishing a Safe Learning Environment

- Welcome, Orientation & Goals
- Confidentiality agreement
- Fiction contract – 'buy in'
- Value learners participation
- Set up as 'Facilitator' not 'Sage on Stage'
- Assumption:
  - "believe that all of you are smart, highly motivated people that are trying to provide the best care possible to your patient"



Structure of Debriefing

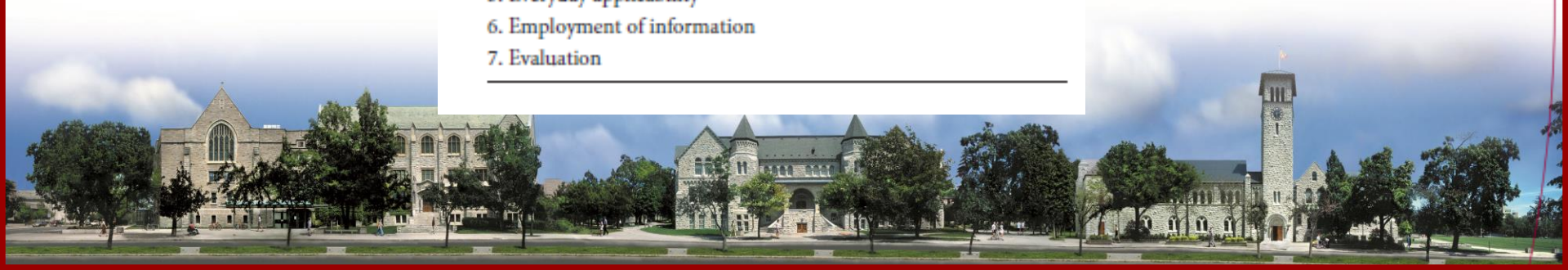
Table 1 – Key Structural Elements in Debriefing[2]	
1.	Debriefer
2.	Participants to be debriefed
3.	An experience (simulated case)
4.	The impact of the experience (simulated case)
5.	Recollection
6.	Report
7.	Time

Seven key structural elements of debriefing identified by Lederman in 1992. (Modified from Lederman.[2])

Models of the Debriefing Process

Table 2. Models of the Debriefing Process

Model
Thatcher and Robinson[27]
1. Identifying the impact of the experience
2. Identifying and considering the processes which developed
3. Clarifying the facts, concepts, and principles
4. Identifying the ways in which emotion was involved
5. Identifying the different views which each of the participants formed
Lederman[28]
1. The introduction to the systematic reflection and analysis
2. The intensification and personalization of the analysis of the experience
3. The generalization and application of the experience
Petranek[29]
1. Events
2. Emotions
3. Empathy
4. Explanations and analysis
5. Everyday applicability
6. Employment of information
7. Evaluation



Process of Debriefing

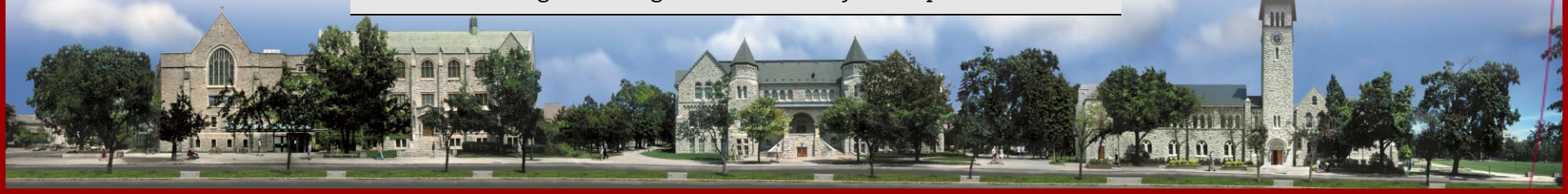
Table 2 – The Three Stages of Debriefing[52]

I. Reactions
   a. Clear the air
   b. Review the facts
   c. Set the stage for addressing learning objectives

II. Understanding
   a. Explore what happened
   b. Unpack frames through advocacy–inquiry
   c. Apply good judgment and teach, moving participants to new understanding or skills
   d. Generalize lessons learned to real situations

III. Summarize
   a. Review lessons learned
   b. Discuss take-aways, lessons learned that will be applied in future events

The three stages of debriefing with key steps taken by the debriefer during each stage as described by Rudolph et al.[52]



Current Strategies for Debriefing

- Rudolph “Debriefing with Good Judgment”
- AHA GAS Model
- 4E Model
- Minus / Delta Model

Debriefing with Good Judgment

Jenny W. Rudolph et al. 2006

Analyze performances within a context of both participant and instructor "frameworks."

…"people make sense of external stimuli through internal cognitive "frames," internal images of external stimuli."

These frames then shape Actions people take

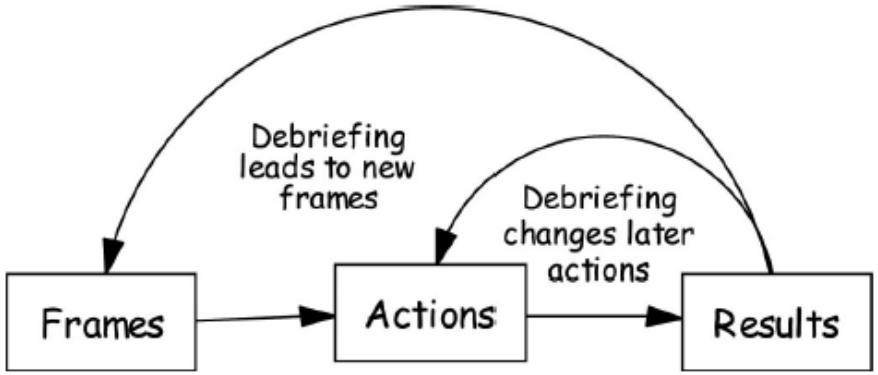


FIGURE 1. Frames are invisible, but inferable; they are in the mind of trainees and of instructors. Actions (including speech) are observable. Most results (e.g., vital signs, order/chaos) are also observable.

Frames Theory

Assumptions
Feelings
Goals
Knowledge
Situation
Awareness

All drive individual behavior but sometimes are not obvious to others.

Suggested Approach: Paired Advocacy - Inquiry

Advocacy: Observation, statement
Inquiry: Question

"I noticed when the nurse asked if we needed to intubate, you responded by asking for lab results. What were you thinking?"

Rudolph et al

Good Judgement

- **<u>Assume there is a reason for everything</u>, even if it is not apparent to you**
- Be genuinely curious about why someone else did what he/she did
- Assume everyone wants to do the “right” thing
    - Rudolph

Goal of Debriefing with Good Judgement

- To improve or sustain performance by sharing observations, opinions and judgements based on the debriefer's expertise while valuing the unique perspective of the learner

Examples

- Resident observed to delay airway plan until desat…..
  - Why? Didn't hear it? Interpretation of 85%?
  - Unrecognized airway obstruction
  - Too busy getting equipment ready
  - Relying on sat as sign to start
  - Belief that they can BMV anyone

Examples

- Blame the simulator..
- “ In a real patient I would have detected the pneumothorax and treated it…I couldn’t really decide if the breath sounds were absent so I didn’t do anything…..”
- What to do?

3D Model of Debriefing (Zigmont)

- (Prebriefing), ***Defusing, Discovering, Deepening,*** (Summary)

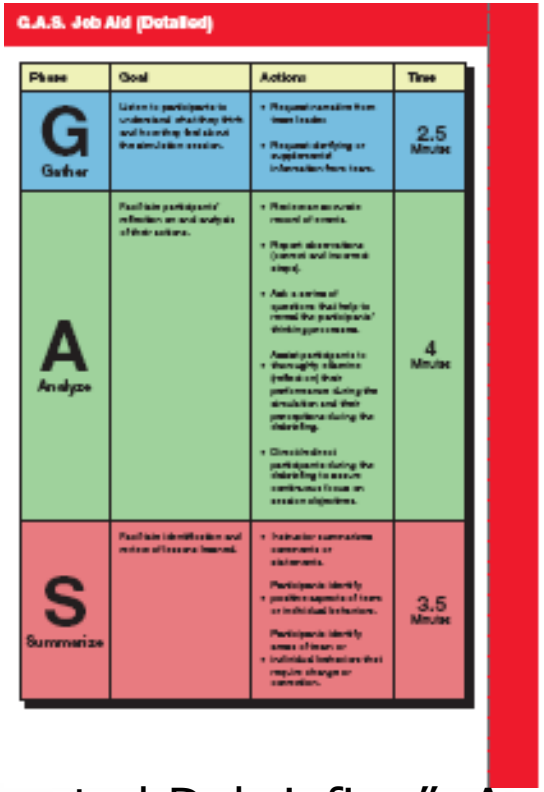
Deepening	Purpose: To apply lessons from simulation and make connections to clinical practice. Points to Include - Prompt learner to connect new learning to larger clinical environment	"If you were to encounter a similar situation in the future, how would you handle it?" "How can you use the information we just discussed in your clinical practice?" "Can you think of other situations where this information could be applied?"
Summary	Purpose: To review what was learned throughout the session Points to Include - Highlight the key objectives and lessons learned	"Today we learned the following: . . . . ." "Let's end with this . . . What is one thing that you can take away from this session to use in your practice?"

GAS Method

Ten minute approach designed to **gather** information about how learners think and feel about the session, **analyze** their actions and **summarize** lessons learned.

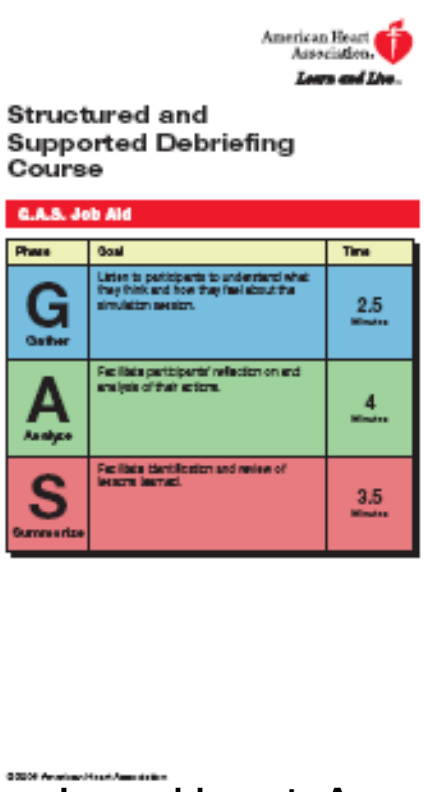
O'Donnell 2009

GAS AHA Method



G.A.S. Job Aid (Detailed)

Phase	Goal	Actions	Time
G Gather	Listen to participants to understand what they think and how they feel about the simulation session.	• Request narrative from team leader. • Request clarifying or supplemental information from team.	2.5 Minutes
A Analyze	Facilitate participants' reflection on and analysis of their actions.	• Maintain an accurate record of events. • Report observations (correct and incorrect steps). • Ask a series of questions that help to reveal the participants' thinking processes. Assist participants to: • thoroughly examine (reflect on) their performance during the simulation and their perceptions during the debriefing. • Give feedback to participants during the debriefing to ensure continuous focus on session objectives.	4 Minutes
S Summarize	Facilitate identification and review of lessons learned.	• Instructor summarizes comments or statements. Participants identify: • positive aspects of team or individual behaviors. Participants identify: areas of team or • individual behaviors that require change or correction.	3.5 Minutes



American Heart Association. Learn and Live.

Structured and Supported Debriefing Course

G.A.S. Job Aid

Phase	Goal	Time
G Gather	Listen to participants to understand what they think and how they feel about the simulation session.	2.5 Minutes
A Analyze	Facilitate participants' reflection on and analysis of their actions.	4 Minutes
S Summarize	Facilitate identification and review of lessons learned.	3.5 Minutes

"Structured and Supported Debriefing" American Heart Association
http://www.onlineaha.org/index.cfm?fuseaction=info.trainingeducation

4E's

Debriefer encourages conversation about patterns of behavior by asking learners to describe the **events** that happened, the **emotions** around these events, potential alternative viewpoints to **empathize** and **explanations** for actions and emotions.

Mayville 2011

Plus – Delta Model

- Used for rapid after action review
- More focused on actions and system related issues rather than frames

Table 3 – The Plus–Delta Debriefing Model—Example[61]

+ "Plus" *Team identifies what specifically went well*	Δ "Delta" *Team identifies what specifically to change and do better next time*
• Inga stated the situation clearly out loud for the team and asked for help early: We have a shoulder dystocia, get help • Edward closed the loop about where to apply the suprapubic pressure • Marie kept track of time and announced it out loud to the team	• Teammates need to remember to call out each other by name • Teammates need to close the loop of communication • Ob providers need to switch sooner in managing the delivery and not fixate on one maneuver

The plus–delta debriefing model, adapted from aviation for use in healthcare settings, can be performed in 5 min or less by the team immediately after any routine or critical event. Items identified can be used to facilitate organizational change. (Modified from Klair.[61])

Assessment of Debriefing

Assessment of Debriefing

Debriefing Assessment for Simulation in Healthcare (DASH) Simon R, Rudolph JW, Raemer DB. Debriefing Assessment for Simulation in Healthcare. Cambridge, MA Center for Medical Simulation, 2009.

DASH is an assessment instrument intended to rate the quality of healthcare simulation debriefings regardless of what style or forum or learner or instructor.

DASH Tool – CMS Harvard

SCORESHEET.

Please rate <u>each of the elements</u> for the debriefings using the scale :

Rating	Descriptor
7	Extremely Effective / Outstanding
6	Consistently Effective / Very Good
5	Mostly Effective / Good
4	Somewhat Effective / Average
3	Mostly Ineffective / Poor
2	Consistently Ineffective / Very Poor
1	Extremely Ineffective / Abysmal

	Element #1 – Sets the stage for an engaging learning environment	**Element #2 – Maintains an engaging context for learning**	**Element #3 – Structures debriefing in an organized way.**	**Element #4 - Provokes interesting and engaging discussions and fosters reflective practice.**	**Element #5 – Identifies performance gaps.**	**Element #6 – Helps close performance gaps.**
Debriefing A						
Debriefing B						
Debriefing C						

Objective Structured Assessment of Debriefing Tool

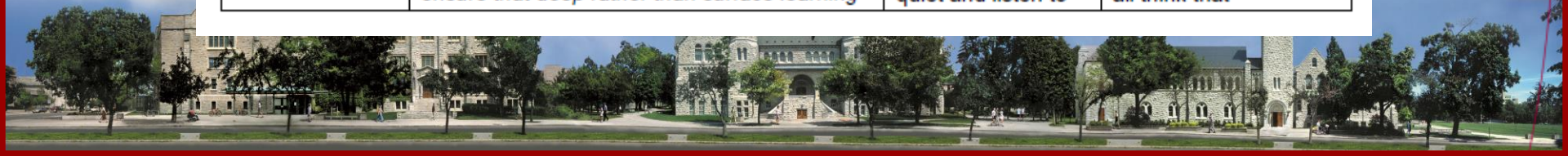
- Approach was developed by Arora et al for application in surgical & team-based simulations.
- **Designed to support the development of debriefing skills in simulation educators**

OSAD Tool

Objective Structured Assessment of De-briefing					
	1	2	3	4	5
1. Approach	Confrontational, judgmental approach		Attempts to establish rapport with the learner(s) but is either over- critical or too informal in their approach		Establishes and maintains rapport throughout; uses a non-threatening but honest approach, creating a psychologically safe environment
2. Establishes learning environment	Unclear expectations of the learner(s); no rules for learner(s) engagement		Explains purpose of the debriefing or learning session but does not clarify learner(s) expectations		Explains purpose of debrief and clarifies expectations and objectives from the learner(s) at the start
3. Engagement of Learners	Purely didactic; facilitator doing all of the talking, and not involving passive learner(s)		Learner(s) participates in the discussion but mostly through closed questions; facilitator not actively inviting contributions from more passive learner(s)		Encourages participation of learner(s) through use of open-ended questions; invites learner(s) to actively contribute to discussion
4. Reaction	No acknowledgment of learner(s)'s reactions, or emotional impact of the experience		Asks the learner(s) about their feelings but does not fully explore their reaction to the event		Fully explores learner(s)'s reaction to the event, dealing appropriately with learner(s)'s who are unhappy
5. Descriptive Reflection	No opportunity for self- reflection; learner(s) not asked to describe what actually happened in the scenario		Some description of events by facilitator, but with little self-reflection by learner(s)		Encourages learner(s) to self-reflect upon what happened using a step by step approach
6. Analysis	Reasons and consequences of actions are not explored with the learner(s)		Some exploration of reasons and consequences of actions by facilitator (but not learner(s)), but no opportunity to relate to previous experience		Helps learner(s) to explore reasons and consequences of actions, identifying specific examples and relating to previous experience
7. Diagnosis	No feedback on clinical or teamwork skills; does not identify performance gaps or provide positive reinforcement		Feedback provided only on clinical (technical) skills; focuses on errors and not purely on behaviours that can be changed.		Provides objective feedback on clinical (technical) and teamwork skills; identifies positive behaviours in addition to performance gaps, specifically targeting behaviours that can be changed
8. Application	No opportunity for learner(s) to identify strategies for future improvement or to consolidate key learning points		Some discussion of learning points and strategies for improvement but lack of application of this knowledge to future clinical practice		Reinforces key learning points identified by learner(s) and highlights how strategies for improvement could be applied to future clinical practice

OSAD Tool

Category	Definition	e.g. of score 1	e.g. of score 5
1. Approach	*manner in which the facilitator conducts the debriefing session, their level of enthusiasm and positivity when appropriate, showing interest in the learners by establishing and maintaining rapport and finishing the session on an upbeat note*	"you made lots of errors in that scenario, which is poor since I assume that you must have seen that scenario before"	"let's start the session with introductions, so we can understand each other's backgrounds and previous experiences"
2. Establishes learning environment	*introduction of the simulation/learning session to the learner(s) by clarifying what is expected of them during the debriefing, emphasising ground rules of confidentiality and respect for others, and encouraging the learners to identify their own learning objectives*	" I'm not interested in what you see as the purpose of this session but I know what I want to teach you about and its very important to me"	"Please start by explaining what you hope to take away from this debriefing session. The information we discuss remains confidential"
3. Engagement of the learners	*active involvement of all learners in the debriefing discussions, by asking open questions to explore their thinking and using silence to encourage their input, without the facilitator talking for most of the debriefing, to ensure that deep rather than surface learning*	"I'm now going to teach you about the correct way to do things and I'd like you all to keep quiet and listen to	"As team leader, can you describe to us what was going on at that point in the scenario? Why do you all think that



	occurs	me"	happened?"
4. Descriptive reflection	*Self- reflection of events that occurred in the simulation/learning session in a step by step factual manner, clarifying any technical clinical issues at the start, to allow ongoing reflection from all learners throughout the analysis and application phases, linking to previous experiences*	" I can tell you exactly what you did and why you were doing it in that way"	"Could you talk through what you observed, right from the start, in a step by step way, so we are all clear about the events that occurred?"
5. Reaction	*establishing how the simulation/learning session impacted emotionally on the learners*	"I can't understand why you are getting upset about the events in the scenario, its never had that impact on other people"	"That part appeared very stressful to us observing, how did you feel at the time? Do you think that it impacted upon the rest of the experience, and in what way?"
6. Analysis	*eliciting the thought processes that drove a learner's actions, using specific examples of observable behaviours, to allow the learner to make sense of the simulation/learning session events*	"There's no point asking you why you did that but you should know to do it differently next time"	"Why do you think that event happened at that particular moment? So what was distracting you then?"
7. Diagnosis	*enabling the learner to identify their performance gaps and strategies for improvement, targeting only behaviours that can be changed, and thus provide structured and objective feedback on the simulation/learning session*	"that was all fine I suppose but I don't think you did anything particularly well"	"So you identified that your team were not aware how concerned you were, can you suggest ways in which you could communicate your concerns more clearly next time?"
8. Application	*summary of the learning points and strategies for improvement that have been identified by the learner(s) during the debrief and how these could be applied to change their future clinical practice*	"So you'll do better next time? I think you know what you did wrong in the scenario. Lets finish there"	"Can you summarise the key points you learnt from this session? How do you think you might change the way you manage the situation if faced with it again in your clinical workplace?"

Critical Elements of Debriefing

- Safe
- Respectful
- Goal to understand, improve functioning, facilitate participant learning
- Remain flexible

Take Home Points

- Acknowledge the emotions first
- Then work toward a shared understanding of what actually happened
- Assume the best intentions, be curious!
- Keep it personal & professional- observations and assessment
- Summarize & elicit an action plan

For Later

- Difficult debriefing
  - Off topic
  - Silent
  - Emotional
  - Confrontational
  - Fidelity issues
- Go to Royal College Website!
  - Simulation education videos by Canadian experts