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## Use of the Delphi Technique in Instrument Development to Assess Debriefing Facilitation

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## Background Information

- An essential part of the simulation experience is the debriefing, where most of the learning occurs (Arafah, Hansen & Nichols, 2010). A skilled debriefer guides learners in transferring their experience into clinical practice. There are tools to evaluate faculty effectiveness in classroom teaching however these concepts have not been applied to debriefing.
- To meet this need the authors developed an instrument to assess the effectiveness of a debriefing following a patient clinical simulation. The PADI was based on current scientific literature in effective debriefing and peer review methodology. (Paulsen, 2002).
- A two phase process was used to develop the PADI:
  - Phase 1- instrument development and content validity was established using the Delphi technique.
  - Phase 2-inter rater reliability was established.

## Phase 1: Delphi Technique

- **Goal:** To establish consensus for content validity and utility of the PADI
- Delphi technique was selected because
  - it is acceptable in healthcare research and education (when there is a lack of empirical evidence (Powell, 2003; Vernon, 2009)
  - it is cost effective method to generate ideas and facilitate consensus among individuals who may be geographically distant (Polit & Beck, 2008).

## Participants

- A group of experts in debriefing and education were invited to participate in the panel. Experts reviewed and provided feedback on the debriefing assessment tool using a survey on Qualtrics, LLC<sup>®</sup>
- Initially 20 experts invited: 11 consented and 7 (64%) completed Round I; An additional 5 experts in academia were invited and 4 agreed. Of these 15 consented participants, 11 (73%) completed Round II and 9 (60%) completed Round III.

Participant #	Round I	Round II	Round III
1	X		
2	X		
3	X		
4	X	X	X
5	X	X	X
6	X	X	X
7	X	X	
8		X	X
9		X	X
10		X	X
11		X	X
12		X	X
13		X	
14		X	
15			X

## PADI: Peer Assessment Debriefing Instrument

- **Peer Assessment Debriefing Instrument (PADI)** is a peer review tool with two main parts.
  - **Pre-Assessment of the Simulation Experience:** self-assessment of debriefer's own debriefing skills, completed by the debriefer and given to the peer-evaluator prior to the observation
    - provides general information about the simulation
    - allows the debriefer to identify areas in which he or she wishes to receive specific feedback
  - **Post-Debriefing Evaluation (Self and Peer Assessment):** assessment of the various aspects of conducting a debriefing; completed by both the peer evaluator during the simulation and the debriefer after the debriefing.
- Under each of 8 areas, PADI has four to eight elements for scoring the debriefer. Using a 4-point scale, the debriefing experience is evaluated (1-4) based on the percentage completed by the debriefer for each area.
- PADI serves as basis for discussion between peer-evaluator and debriefer

### Structure and Organization of the Debriefing

<ul style="list-style-type: none"> <li>▪ Sets up the debriefing environment before the simulation</li> <li>▪ Adheres to the schedule for debriefing or adjusts the schedule as appropriate</li> <li>▪ Allows time for dealing with the emotional aspects of the simulation</li> <li>▪ Allows time for recap of simulation scenario</li> <li>▪ Allows time for analysis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Allows time for learners to connect knowledge to practice</li> <li>▪ Allows time for learners to reflect in their actions and make independent interpretations of their performance</li> <li>▪ Allows time for summary and conclusion</li> <li>▪ Finishes any evaluative paperwork and forwards to appropriate parties</li> </ul>
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### Debriefing completed above elements at:

<25% level	25-49% level	50-74% level	>75% level	N/A
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### Comments

## Delphi Process

PROCESS	TASK
<b>Preliminary Activities</b>	<ul style="list-style-type: none"> <li>• Elements for inclusion in instrument of faculty effectiveness in facilitating debriefing sessions were identified</li> <li>• Review and synthesis of the literature</li> <li>• Identification of performance attributes</li> </ul>
<b>Round 1</b>	<ul style="list-style-type: none"> <li>• Elements to be assessed, behavioral criteria across levels of performance were reviewed</li> <li>• Inclusion / exclusion of elements and behavioral criteria were affirmed; Additional elements identified were included</li> </ul>
<b>Round 2</b>	<ul style="list-style-type: none"> <li>• Summary of Round 1 was reviewed</li> <li>• Items to be included / omitted based on Round 1 feedback for elements and behavioral criteria were identified</li> </ul>
<b>Round 3</b>	<ul style="list-style-type: none"> <li>• Summary of Round 2 was reviewed</li> <li>• Remaining issues were discussed and consensus was established</li> </ul>

## Phase 2: Inter-rater Reliability

- Upon completion of the Delphi Rounds, the PADI's inter-rater reliability was evaluated using Interclass correlation coefficients (ICC).
- To evaluate inter-rater reliability, three debriefing video vignettes were developed to illustrate different performance levels of a debriefer's debriefing proficiency. Using the PADI, the researchers viewed the videos and reached a consensus on rating the debriefer.
- Five experts were identified by simulation and debriefing experience > 5 years and identified within their respective settings as expert debriefing practitioners. Clinical expertise: emergency nursing, nursing education, radiation oncology, neonatology, and medical education.
- The five experts received a half-day education session to learn how to use the PADI. Experts reviewed the debriefing session videos and completed the PADI. independently. To simulate a live debriefing session, the experts reviewed each video without discussion between videos. After all three videos were completed; the researchers reviewed each video and provided the 'real score' and its rationale. Finally, the experts provided initial feedback on the tool.
- The inter-rater reliability for the average measures was **ICC = .973**, and for the single measure **ICC = .818**.

## Results

- Initial version of the PADI has excellent inter-rater reliability.
- PADI may be useful
  - to guide novice, experienced and expert debriefers in the debriefing process
  - to provide a peer-review of the debriefing process across healthcare disciplines.
- Faculty can use the PADI to
  - self assess areas of debriefing on which they would explicitly like to receive feedback
  - participate in self and peer assessment that includes observation by a peer evaluator.; observation is followed by a conversation which allows the peer evaluator to serve as a consultant to the benefit of the debriefer's professional development
  - triangulate their intended performance and outcomes
  - demonstrate ongoing quality improvement (regardless of experience level)

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