Peer Debriefing Assessment Instrument (PADI)

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Background/Significance

• An essential part of the simulation experience is the debriefing, where most of the learning occurs (Arafeh, Hansen & Nichols, 2010).

• A skilled debriefer guides learners in transferring their experience into clinical practice.
Background/Significance

• Literature exists on strategies to facilitate active student participation in learning. (Fatmi et al., 2013; McLaughlin et al., 2014; Wood, 2004)

• There are tools to evaluate faculty effectiveness in supporting student learning. (Baldwin, Chandran & Gusic, 2011; Steinert et al., 2006)

• Concepts have not been integrated and applied to simulation and debriefing!
Background/Significance

• Effective debriefing requires a skill set that differs from effective teaching. (Dismukes, Gaba & Howard, 2006)

• Assessing faculty effectiveness in debriefing is a way to support faculty in
  – Developing skill set
  – Increasing competence in debriefing
Background/Significance

• Existing simulation tools
  – Debriefing Assessment for Simulation in Healthcare (DASH)
    • Assess quality of debriefing
    • Rates observed behaviors
  – Objective Structured Assessment of Debriefing (OSAD)
    • Evaluates quality of debriefings post surgery
  – Team GAINS
    • Evaluated simulated team based trainings
Purpose

• To develop and pilot test an instrument that assesses the effectiveness of a debriefing following a patient clinical simulation

• Approved by the University of Delaware and Thomas Jefferson University Institutional Review Board
Methods: 3 Phases

- **Phase 1: Delphi Technique**
  - Establishment of instrument development and content validity
    - Electronic survey - Qualtrics, LLC©

- **Phase 2: Inter-rater reliability**
  - Inter-rater reliability for the average measures was $\text{ICC} = .973$ and for the single measure $\text{ICC} = .818$ (Shrout & Fleiss, 1979).

- **Phase 3: Mixed methods**
  - Pilot testing of the PADI during debriefing
  - Focus groups of facilitators
PADI: Peer Assessment Debriefing Instrument

• 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
PADI: Peer Assessment Debriefing Instrument

• Post-Debriefing Assessment (Self and Peer)
  – Assesses the aspects of conducting a debriefing
  – 8 areas of debriefing with 4-8 elements for scoring
  – Using a 4-point scale: debriefing scored based on the percentage completed by the debriefer for each area
  – Serves as basis for discussion between peer-evaluator and debriefer
PADI- Post-Debriefing Assessment

Structure and Organization of the Debriefing

- Sets up the debriefing environment before the simulation
- Adheres to the schedule for debriefing or adjusts the schedule as appropriate
- Allows time for dealing with the emotional aspects of the simulation
- Allows time for recap of simulation scenario
- Allows time for analysis

- Allows time for learners to connect knowledge to practice
- Allows time for learners to reflect in their actions and make independent interpretations of their performance
- Allows time for summary and conclusion
- Finishes any evaluative paperwork and forwards to appropriate parties

Debriefer completed above elements at:

<table>
<thead>
<tr>
<th>Level</th>
<th>Score</th>
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<tbody>
<tr>
<td>&lt;25% level</td>
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<tr>
<td>25-49% level</td>
<td></td>
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<tr>
<td>50-74% level</td>
<td></td>
</tr>
<tr>
<td>&gt;75% level</td>
<td></td>
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<tr>
<td>N/A</td>
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</table>

Comments
Pilot Testing Debriefing Sessions

• Setting
  – 3 different institutions within the Delaware Health Science Alliance
    • RU/VH: Research University (very high research activity)
    • Spec/Med: Special Focus Institution – Medical Schools and Medical Centers as defined by the Carnegie Classification of Institutions of Higher Education
    • Large suburban Magnet hospital with a Level I trauma center
  – Study took place during regular scheduled work hours at the debriefer’s place of employment
Pilot Testing Debriefing Sessions

• Participants
  – Purposeful sample
    • Selected by clinical simulation center directors within three intuitions within a 60 miles radius of one another
  – Evaluators: 5 consented and 4 completed the study
  – Debriefers: 10 with varying simulation experience from none to 6 years
    • various aspects of the medical and nursing healthcare areas
Data collection Process

• Pre-Debriefing Study Session
  – Debriefee completed the pre-assessment portion of the PADI and returned it to the evaluator
Data Collection Process

• Debriefing Study Session
  – Evaluator viewed the debriefing session live & the simulation itself 80% of the time (Necessity ?)

• Post-Debriefing Study Session
  – Completion of the Post-Assessment form
    • Evaluator began during the debriefing
    • Debriefee began after the debriefing
  – Peer assessment evaluation
    • Immediately following debriefing or within 24 hours
    • In person or via telephone using the PADI to guide conversation
Focus Group

- Identify applicability and additional modifications to the PADI
- Participants: 3 (75%) evaluators, 3 co-investigators, and a research assistant to document non-verbal cues
- 1-hr long and held at a central location
- Open ended questions were developed and used as a guide for the group discussion
- Responses were digitally recorded and research assistant transcribed later
Focus Group Sample Questions

• “Did you find the PADI useful as a peer-evaluation instrument for simulation education?”
• “How would you use the PADI in your facility?”
• “How useful was the PADI to construct and/or facilitate a productive peer-evaluation after the debriefing and help close the loop?”
Analysis

• Quantitative Data: Descriptive and inferential statistics (SPSS version 22)
  – Chi-square tests for categorical outcomes and ANOVA for continuous outcomes
  – percent agreement between the debriefers and evaluators to determine the utility of the instrument as both a self-assessment and a peer-assessment

• Qualitative Data: Thematic analysis of the focus group including a member check to establish credibility (Lincoln and Guba, 1985)
Quantitative Results

• 11 simulations completed with 10 debriefers
• Debriefer age =37.3(7.3) & evaluator =50.5(11.0)
• All 6 debriefers were female, but only 25% of the evaluators were female
• Varied amount of simulation training reported, but ONLY 2/3 debriefers and 1 evaluator reported structured simulation training (4 hrs)
• 50% of the evaluators received an average of 25(21.1) hours of informal simulation training
## Results - Pre-Assessment

<table>
<thead>
<tr>
<th>Pre-Form Question</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td><em>Structure and organization of the debriefing</em></td>
<td>70%</td>
</tr>
<tr>
<td>Verbal and non-verbal communication</td>
<td>60%</td>
</tr>
<tr>
<td>Setting the stage and ground rules for the debriefing session</td>
<td>20%</td>
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<tr>
<td>Talking about defusing (dealing with the emotional aspects of the simulation)</td>
<td>40%</td>
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<tr>
<td>Recapping the simulation experience</td>
<td>50%</td>
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<td>Reflecting on action (facilitating learner’s self-reflection)</td>
<td>20%</td>
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<tr>
<td><em>Facilitating learner’s connection of simulation experience to clinical practice</em></td>
<td>60%</td>
</tr>
<tr>
<td>Summarizing: providing key take away points for the learner</td>
<td>70%</td>
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Results- Post-Assessment

- No significant differences were found between the evaluator (peer) and debriefer’s (self) response on each of the eight items on the PADI post-assessment
Qualitative Results

• Four Common themes
  – Use of the PADI
  – Preparation for observation and evaluation of the debriefing
  – Value of the collaborative process
  – Flexibility in how the PADI could be used:
    • Ensuring faculty competence
    • Demonstrating faculty expertise
    • Assess quality of the simulation experience
    • Triangulating peer review data with student feedback
Qualitative Results

• Use of the PADI
  – Evaluators reported that the form was complete in providing instructions and capturing observed debriefing activities.
  
  – “I needed a place to put notes.” (AC) and “I think that adding a comment section would probably fix it (grading scale) because then you have the capability of clarifying a little more...” (JD).
Qualitative Results

• Preparation for observation and evaluation of the debriefing
  – Observation of the simulation is optimal, but knowledge or experience of the simulation activity was not necessary to effectively evaluate the debriefing
  – “...it might have helped a little bit but I think if you read this (the pre-briefing form) you know what they’re talking about and what you’re evaluating...” (MM)
Qualitative Results

• Value of the collaborative process
  – “I had the pleasure of having ... newbies so I think that they were... really hungry for feedback...” (JD) or experienced “I had two actually experienced debriefers and I felt that they were the same way. ...” (AC)
  – Use of the tool objectified, rather than personalized, feedback from the evaluators:
  – The evaluators found this to be a learning experience as well: “...you as an evaluator take things away from these experiences that help you to be better as debriefers as well.” (AC)
Qualitative Results

• Flexibility in how the PADI could be used
  – Ensuring faculty competence: “...it could be a yearly competency check to say where are they on this and I could see great value in that...” (AC)
  – Demonstrating faculty expertise: ... I think that it gives me a tool to be able to set a standard... I want you to be at a 75% level ...”(JD)
  – Assess quality of the simulation experience: “I think it’s a good way to evaluate the improvement.....What’s our action plan...” (MM)
Qualitative Results

• Flexibility in how the PADI could be used
  – Match debriefer assignments to ability level: “You’re not going to select the people that are the 25-49% to be your debriefers for that new simulation, you’re going to select the more advanced simulation specialists. You may have these 25-49 observing to get ready for that but if they are still in the growing process as far as their debriefing techniques...” (AC)
  – Triangulating peer review data with student feedback
Limitations/Future Research

- PADI only tested in 3 facilities
- Evaluator was present & visible @ debriefing
- Conduct PADI testing outside the DHSA community
- Use PADI in other Allied Health Simulations and Interprofessional simulations with more than one debriefer
Conclusion

• Initial PADI version has excellent inter-rater reliability

• Innovative tool in that it uses peer review methodology to enhance and support faculty development

• PADI is useful to:
  – Guide novice, experienced and expert debriefers in the debriefing process
  – Provide a peer-review of the debriefing process across healthcare disciplines
Conclusion

• 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, 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)
  – Guide to train and educate new debriefers
References


• McLaughlin JE, Roth MT, Glatt DM, Gharkholonarehe N, Davidson CA, Griffin LM, Esserman DA,

References


• Wood EJ. Problem-based learning: exploiting knowledge of how people learn to promote effective learning. *Bioscience Education* 2004;3.

thank you!