**EIT 6413 Data tables:** Scripted Debriefing for Resuscitation Training: A scoping review

Table.1 Characteristics of included studies

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| **Study Author;**  **Year Published**  **Country** | **Aim of Study;**  **Study Type** | **Study Population** | **Study Context and Intervention**  **(# patients) /**  **Study Comparator**  **(# patients)** | **1° Endpoint Results**  **(Absolute Event Rates, P value; OR or RR; & 95% CI)** | **Relevant 2° Endpoint**  **Study Limitations and Strengths** |
| **Cheng et al 20131**  **Canada** | **Study Aim**  To determine whether use of a scripted debriefing and simulator physical realism affects knowledge and performance in simulated cardiac arrest.  **Study Type:**  2 x 2 factorial RCT | **Learners** 453 practicing healthcare professionals (104 teams)  **Debriefers**  90 novice instructors | **Context**  Simulated pediatric cardiac arrest scenarios  **Intervention:**  Learners debriefed with scripts by the instructor. Scripts incorporated framework, topics, phrases, but no data  (44 / 90 teams)  **Comparison:**  Learners debriefed without scripts by the instructor  (46/90 teams) | **Knowledge**  Scripted debriefing superior to non-scripted debriefing group in improvement in MCQ tests after debriefing (3.6 vs. 5.3, p = 0.04)  **Behavioural Assessment Tool**  Scripted debriefing superior to non-scripted debriefing group in behavioural assessment score (8 vs 16, p = 0.03)  **Clinical Performance Tool**  Non-significant difference in Clinical Performance Scale changes between the groups (6.6 vs 7.9, p = 0.18) | **Study Limitations**  -Single cardiac arrest scenario  -no facilitator training for use of debriefing script  **Strengths**  -examine learning outcomes  -multicentre randomized trial  Favors scripted debriefing on knowledge and team leader behavioural assessment; non-significant on clinical performance tool |
| **Freytag et al. 20212**  **Germany** | **Study Aim**  To examine the use of a cognitive aid to help structure the content of debriefing and compare it with regular debriefing on satisfaction and teamwork of the learners  **Study design**  RCT | **Learners**  32 medical students  **Debriefers**  Advanced medical and nursing students who received training on use of debriefing tool (novice) | **Context**  Six simulated resuscitation scenarios  **Intervention**  Participants receiving debriefing with the TeamTAG script (framework, topic [CRM]) (19/32)  **Comparator**  Participants receiving a GAS model debriefing with no script (13/32) | **Satisfaction with debriefing**  Non-significant difference between the groups in learner’s satisfaction with debriefing  **Teamwork performance**  No significant effect of debriefing on teamwork performance at the conclusion of the course | **Limitations**  -Small sample size  -evaluating non-technical skills only  - no training on use of debriefing script  Non-significant on learner’s satisfaction, teamwork performance |
| **Meguerdichian et al 20223**  **USA** | **Study Aim**  To evaluate the impact the tool on facilitators’ cognitive load, workload and debriefing quality  **Study design**  RCT | **Learners**  Actors portraying participants in debriefing  **Debriefers**  14 fellows (novice) | **Context**  Prerecorded videos of simulated resuscitation events  **Intervention**  Debrief 3 resuscitation scenarios with the PEARLS debriefing tool (framework, phrases, topics; no data). (7/14 instructors)  **Comparisons**  Debrief 3 resuscitation scenarios without PEARLS debriefing tool. (7/14 instructors) | **Debriefing quality (DASH scores)**  Debriefing with tool: 23.6 (19.8, 27.5)  Debriefing without tool: 26.0 (21.7, 30.2)  Difference: -2.4 (-9.1, 3.4), p = 0.436  *Non-significant*  **Workload (NASA-TLX)**  Debriefing with tool: 44.0 (35.5, 52.5)  Debriefing without tool: 48.5 (40.0, 57.0)  Difference: -4.5 (-16.5, 7.0), p = 0.456  *Non-significant*  **Cognitive load (PASS)**  Cognitive load in group with the tool ***significantly*** lower in 2/3 scenarios  Scenario A: 6 vs. 6, p = 0.13  Scenario B: 5 vs 6, p = 0.04  Scenario C: 5 vs 7, p = 0.03 | **Limitations**  -Small sample size  -Fail to demonstrate learning outcomes  -Actors portrayed participants in debriefings  **Strengths**  -Multiple scenarios  - structured training to use debriefing script  Favors scripted debriefing on PAAS (cognitive load). Non-significant on DASH score (quality of debriefing) and NASA TLX (workload) |
| **Snelling et al 20224**  **Australia** | **Study Aim**  To determine the impact of a script on the quality of debriefs in resuscitation course.  **Study design:**  Cluster RCT | **Learners**  Not specified  **Debriefers:**  Both novice and expert instructors | **Context**  Pediatric resuscitation course, two pediatric scenarios  **Interventions**  Debrief simulated resuscitation with debriefing scripts (framework, phrases, topics, no data) (34/70 simulations in 9/19 sites)  **Comparisons**  Debrief simulated resuscitation without debriefing scripts (36/70 simulations in 10/19 sites) | **1° endpoint**  **Debriefing quality (OSAD scores)**  Scripted debriefing superior to non-scripted debriefing in debriefing quality.  Non-scripted score: 30.7 vs Scripted score: 34.1, MD 3.5 (0.7 to 6.2), p = 0.01 | **Subgroup analysis**  *Novice*  Non-scripted 27.9 vs scripted 32.0; MD 4.1 (0.5 to 7.7), p = 0.03  *Expert*  Non-scripted 34.6 vs scripted 36.0; MD 1.3 (-2.4 to 5.1), p = 0.48  The effect of scripts was significant in novice debriefers.  **Limitations**  -Missing data  - different methods of debriefing used in control vs intervention  **Strengths**  -multi-center  -Subgroup analysis  - training provided for use of scripts  Favors scripted debriefing on OSAD score (quality of debriefing)  Subgroup analysis conducted in this study. Scripted debriefing had a significant effect on novice debriefers. |
| **Hoegh-Larsen et al. 20235**  **Norway** | **Study aim**  To compare PEARLS debriefing tool to a standard unstructured debriefing on nursing student’s self-reported professional competence and clinical judgement abilities in SBE and clinical placement  **Study Design**  Quasi-experimental / non-randomized | **Learners**  Nursing students  **Debriefers**  Nine faculty members completing 3-day facilitator training | **Context**  Clinical scenario with deteriorating patient  **Intervention**  Instructors using PEARLS debriefing script tool (framework, phrases, topics, no data). (67/106)  **Comparisons**  Instructors debrief with no framework (39/106) | **Self-reported nurse professional competency (NPC)**  No significant difference in all NPC items  **The Lasater Clinical Judgement Rubric**  No significant difference between the group in LCJR | **Limitations**  -Kirkpatrick level 1 outcome only  -Single center study  -Non-randomization  **Strengths**  -structured training using debriefing script  Non-significant on nontechnical skill outcomes |
| **Cheng et al. 20236**  **Canada** | **Study aim**  To determine if data-informed debriefing with a debriefing tool, compared with traditional debriefing, improves the process of care provided by healthcare teams during a simulated pediatric cardiac arrest.  **Study Design:**  RCT | **Learners**  80 ED and ICU healthcare providers  **Debriefers**  2 research team members (i.e. not participants) | **Context**  Simulated pediatric cardiac arrest scenarios  **Intervention**  Data-informed debriefing using a cardiac arrest debriefing tool (PEARLS model) – framework, topics, phrases, data (40/80 participants)  **Comparison**  Traditional debriefing with no objective data and no debriefing tool (PEARLS model) (40/80 participants) | **Overall Excellent CPR**  Data-informed debriefing group superior to traditional debriefing group: control vs intervention: 53.8% vs 78.7%; MD 24.9%, 95%CI: 5.4 to 44.4%, p = 0.02  **Guideline compliant depth**  Data-informed debriefing group superior to traditional debriefing group: control vs. intervention: 60.4% vs 85.8%, MD 25.4%, 95%CI: 5.5 to 45.3%, p = 0.02  **CC Fraction**  Data-informed debriefing group superior to traditional debriefing group: control vs intervention: 88.6% vs 92.6, MD 4.0%, 95%CI: 0.5 to 7.4%, p = 0.03  **Perishock pause duration**  Data-informed debriefing group superior to traditional debriefing group: control vs intervention: 5.8 s vs 3.7 s, MD 2.1 s, 95%CI: 3.5 to 0.8 s, p = 0.004  **Time to critical interventions**  No significant difference between groups. | **Limitations**   * Single cardiac arrest scenario   **Strengths**   * Tightly scripted debriefing in both groups * Relevant clinical outcomes * Data integrated into debriefing tool * Facilitators trained on use of the script |