**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 trialFavors 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 scriptNon-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 scenariosScenario A: 6 vs. 6, p = 0.13Scenario B: 5 vs 6, p = 0.04Scenario 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 scriptFavors 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 = 0.48The 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 scriptsFavors 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 scriptNon-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
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