



Development, Validation, and Pilot of a Guideline to Improve Clinical Event Debriefing at a Level I Adult and Level II Pediatric Trauma Center

Steven Tyler, DNP, RN, NE-BC, TCRN; Jane K. Dixon, Ph.D.; Janet Parkosewich, DNSc, RN, FAHA; Paul Mullan, MD, MPH; Amish Aghera, MD

INTRODUCTION

- Medical errors – 3rd leading cause of death in U.S. hospitals
- 37% to 70% of patient harm due to errors are preventable.
- >50% of errors attributed to communication occur in trauma resuscitations.
- High reliability organizations (HROs) have a safety culture with a relentless pursuit of zero-harm goals.
- Clinical event debriefing (CED), recommended by European Resuscitation Council and American Heart Association, is an HRO behavior.
- CEDs are associated with 25% improvement in team performance by:
 - Reviewing clinical events
 - Reflecting on performance
 - Identifying patient safety concerns
 - Developing performance improvement strategies
- Maimonides Medical Center (MMC) Emergency Department (ED) trained 89 clinician facilitators, yet CEDs inconsistent, not part of the safety culture.
- Lack of debriefing guidelines and tools was a barrier to consistent CEDs, as <70 CEDs were conducted in MMC ED in a 2-year period.

PURPOSE

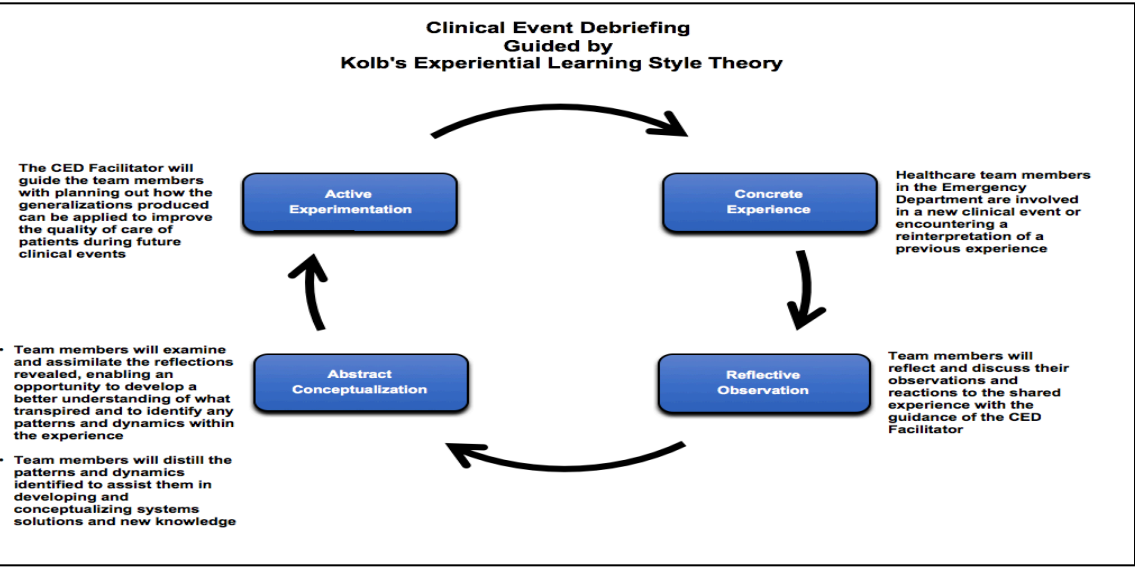
To promote ED interdisciplinary teams HRO behaviors by standardizing tools based on best evidence to overcome barriers to consistent debriefing

OBJECTIVES

- Create and validate a CED Guideline and CED Instrument (CEDI) for use in the ED, including after care for all patients with Level I traumatic injuries
- Pilot new CED tools
- Survey CED facilitators about their experience using the new tools

THEORETICAL FRAMEWORK

Kolb's Experiential Learning Theory



METHODS

Setting: MMC Level I Adult & Level II Pediatric Trauma Center - 120,000 visits/year

Procedures: Project conducted in 3 phases

Phase I: ED CED Guideline development and CEDI revision using best evidence from literature appraisal and synthesis

Phase II: Validation of CED tools by a panel of 5 national experts with advanced education, extensive experience in ED, trauma care or healthcare debriefing, and peer reviewed publications relevant to debriefing

- Designed *Content Expert Rater Form* focusing on item clarity and relevance to rate 68 items from the CED Guideline and CEDI fields
- Expert Review Round #1: Calculated Content Validity Index using completed rater forms; Per experts' recommendation, created a *CED Facilitators' Guide* that included scripting
- Expert Review Round #2: Experts used 2nd version of the *Content Expert Rater Form* containing 39 new and revised items
- Finalized CED Guideline, CEDI, & *Facilitators' Guide* – included all validated items

Phase III: Pilot and Evaluation of 3 CED Tools (11/5/19-12/31/19)

- Developed *Facilitators' Experiences Survey* (5-point Likert Scale responses)
- Conducted pilot using tools for 8-weeks - previously trained CED Facilitators and all staff encouraged to participate in debriefing
- At completion of pilot, invited clinicians who facilitated a CED during the pilot phase to participate in the anonymous survey.
- Used descriptive statistics (frequencies and percentages) to summarize CEDI responses, completion rates for each of the CEDI fields, CED rates post-Level I trauma care, item responses from survey participants

RESULTS

Phase II: Expert Review

- Round #1: 33 items validated with 90% clarity and 95% relevance
 - Itemized expert comments reviewed and action plan developed
 - *CED Facilitators' Guide* created, as advised from expert recommendations
- Round #2: Validation achieved
 - 39 items reviewed: 38 items met validation, 1 item omitted
 - Final: 71 items validated with 93% clarity and 96% relevance

RESULTS (CONT'D)

Phase III: Evaluation

- 32 CEDs had CEDI documentation
 - ≥ 1 CEDs led by 21.3% (n=19) of 89 trained facilitators
 - Median duration 8 minutes (range, 5 to 15 minutes)
- 67% (10/15) of Level-I traumas debriefed
- 53% of CEDIs described patient safety concerns
 - 58.8% (n=10): *Incidents* (patient safety events reaching patient)
 - 41.2% (n=7): *Unsafe conditions* (increased risk of safety event)
- 47% (n=8) of CEDIs had written descriptions of patient safety concerns, without checking “Yes” for item “*Any Patient Safety Concern Identified?*”
- *Facilitators' Experiences Survey* – 94% response rate (see below)
 - 100% (n=7) resident physicians; 100% (n=5) nurse leaders, 83.3% (n=5) attending physicians

Snapshot of Responses from Facilitators' Experiences Survey (n=17)

Survey item, No. (%)	Strongly Agree	Agree	Neutral
The debriefing guideline clarified the requirements for debriefing in the ED.	10 (58.8%)	6 (35.3%)	1 (5.9%)
The facilitator guide was helpful for me to use during the debriefing.	9 (52.9%)	7 (41.2%)	1 (5.9%)
The debriefing documentation form was easy to complete.	9 (52.9%)	7 (41.2%)	1 (5.9%)

DISCUSSION / CONCLUSION

- ED teams often used validated CED tools.
- CEDs identified safety threats and ways to improve care processes.
- Future cycles of change needed to improve CEDI documentation.
- Positive facilitators' perceptions: CED Guideline clarified requirements, *CED Facilitators' Guide* helpful, and CEDI easy to complete
- Our CED tools may be used by other EDs to promote a safety culture and team learning, and aid in identifying safety concerns.

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MMC Collaborators: Josephine Imperatrice, DNP, MBA, RN; Tamar Motov, MSN, RN, CNL



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Medical Center