Uptake of Bereavement Principles Among a Diverse Cohort of EMS Providers Using the COPE Curriculum: A Simulation-Based Approach.

The University of Texas at Austin Dell Medical School

Benjamin Lang, MD, MPH; Annabel Cramer, MD; Katherine Remick, MD, FAAP, FACEP, FAEMS;
The University of Texas at Austin, Dell Medical School, Pediatric Emergency Medicine

Introduction

- High-quality CPR and on-scene interventions are associated with increased survival in pediatric out-of-hospital cardiac arrest.
- During on-scene resuscitation attempts, families report opportunities for improved communication from EMS professionals.
- EMS professionals receive little training on how to communicate the death of a child to families and report a desire for bereavement training.
- The Compassionate Options for Pediatric EMS (COPE) bereavement curriculum was developed in 2017 and has yet to be evaluated for effectiveness in diverse EMS agencies.

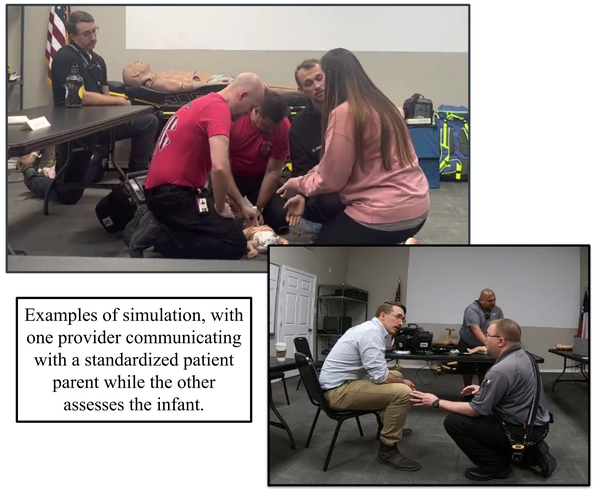
Objective

- Using hands-on simulation among varied EMS settings and provider credentialing levels, we assessed providers' comfort and knowledge of pediatric bereavement techniques before and after COPE training as well as knowledge retention at 4 month follow-up.

Methods

- Participants' demographics, comfort with pediatric declaration of death, and knowledge of bereavement principles were collected prior to COPE training.
- COPE training consisted of participation in a 1-hour didactic session followed by a simulated event where participants informed family members about the death of a child in the field.
- Simulations were followed by a debriefing, including a discussion of coping with emotional stress.
- Participants completed a post-assessment including knowledge uptake and stress level associated with the training.
- Participants also completed a 4-month follow-up assessment of knowledge and a qualitative assessment of whether COPE techniques were used in the field.

Simulation-based training on how to communicate a pediatric death to families is well-received, increases knowledge, and improves providers' comfort with these difficult cases.



Examples of simulation, with one provider communicating with a standardized patient parent while the other assesses the infant.

Demographics of participants and agencies

Age	18-29 years 30-49 years 50-70 years	30.9% (86) 57.5% (160) 11.5% (32)
Gender	Male Female	77.3% (215) 21.9% (61)
Race	White Black Other	91.3% (254) 1.8% (5) 6.8% (19)
Ethnicity	Hispanic Non-hispanic	20.8% (58) 79.1% (220)
Employment	Employed Volunteer	94.5% (258) 5.5% (15)
Urban or rural EMS system	Urban system Rural system	79.5% (101) 20.5% (26)
Level of training	EMR EMT-B or AEMT Paramedic	2.9% (8) 37.8% (103) 58.6% (160)
Volume of patients per shift (adult and pediatric)	0-5 patients 5-10 patients >10 patients per shift	45.8% (124) 50.5% (137) 3.4% (10)
Pediatric patients per shift	<1 pediatric patient per shift 1-2 pediatric patients >2 pediatric patients	76.8% (208) 21.8% (59) 1.5% (4)
Pediatric cardiac arrests in last year	No pediatric arrests 1-2 pediatric arrests >2 pediatric arrests	66% (179) 28% (76) 5.8% (16)
Total termination of resuscitations in last year (adult and pediatric)	No terminations 1-2 terminations 2-10 terminations >10 terminations	26.6% (72) 17.7% (48) 45.8% (124) 9.7% (27)
Prior bereavement training	Yes No	63.2% (74) 35% (41)
Have experienced death of a family member or friend	Yes No	85.7% (221) 12% (31)

Learners increased their comfort after participating and would recommend this course to colleagues.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Will use these skills learned in clinical practice	59.3% (137)	35.9% (83)	3% (7)	0% (0)	1.7% (4)
Will use skills learned to process hard cases	55.1% (129)	36.8% (86)	6% (14)	0.4% (1)	1.7% (4)
Would recommend training to a colleague	61.5% (144)	31.2% (73)	4.7% (11)	0.9% (2)	1.7% (4)
Training should be required for all first responders	58.6% (137)	32.5% (76)	5.6% (13)	1.7% (4)	1.7% (4)
Skills learned will also help with adult prehospital deaths	58.3% (137)	34.5% (81)	4.7% (11)	0.4% (1)	2.1% (5)
Training was stressful	22.5% (53)	25.5% (60)	26.8% (63)	17.9% (42)	7.2% (17)
Training challenged me in a positive way	39.6% (93)	46.8% (110)	10.6% (25)	1.7% (4)	1.3% (3)

Factual knowledge was increased immediately after training, but not sustained at 4 months.

278 (94%) completed baseline assessment	Score 10.6, SD 3.1 CI: 10.2-10.9	
235 (79%) completed post-assessment	Score 12.3, SD 3.1 CI: 11.9-12.6	Difference from presurvey +1.7, CI: 1.2-2.2
53 (18%) completed 4 month knowledge assessment	Score 9.1, SD 4.5 CI: 7.9-10.3	Difference from post survey -3.1, CI: -2.1-4.1

Results

- A total of 297 EMS professionals from 12 different agencies participated.
- Comfort with discussing the death of a child with families improved from 33.7% (93) before to 75.6% (177) after the curriculum.
- More than 91% (213) of participants felt that the skills were helpful to their clinical practice and should be part of required first responder training.
- Providers' knowledge of pediatric bereavement communication improved immediately after the training, but the knowledge was not sustained at 4 months.

Conclusion

- EMS professionals have infrequent exposure to pediatric resuscitations
- Utilizing the COPE curriculum can improve paramedic and EMT comfort and knowledge about communication of pediatric death.
- EMS professionals feel COPE training is important, should be taught more widely, and the techniques are applicable to both pediatric and adult resuscitations.
- Lack of sustained knowledge four months following COPE training suggests the need for more frequent repetition.
- These data support the need for standardized, recurrent bereavement training among EMS professionals.

Next Steps

- Creation of a COPE toolbox with lecture, video, and simulation-based education
- Refine curriculum to improve communication to families and lessen provider stress
- Disseminate this curriculum to local EMS and first responder agencies nationally

QR code for the current COPE toolbox.

Gamified Link QR code