



# Psychosocial Care for Injured Children: Worldwide Survey among Hospital Emergency Department Staff

Eva Alisic, PhD<sup>1,2</sup>, Claire Hoysted, BSc(Hons)<sup>3</sup>, Nancy Kassam-Adams, PhD<sup>4,5</sup>, Markus A. Landolt, PhD<sup>6,7</sup>, Sarah Curtis, MD, MSc<sup>8</sup>, Anupam B. Kharbanda, MD, MSc<sup>9</sup>, Mark D. Lyttle, MBChB<sup>10,11</sup>, Niccolò Parri, MD<sup>12</sup>, Rachel Stanley, MD, MHSA<sup>13</sup>, and Franz E. Babl, MD, MPH<sup>14</sup>, on behalf of Pediatric Emergency Research Canada (PERC), the Pediatric Emergency Medicine Collaborative Research Committee of the American Academy of Pediatrics (PEMCRC), Pediatric Emergency Research in the United Kingdom and Ireland (PERUKI), the Research in European Pediatric Emergency Medicine (REPEM), the Pediatric Emergency Care Applied Research Network (PECARN), the Pediatric Research in Emergency Departments International Collaborative (PREDICT), and the Pediatric Emergency Research Networks (PERN)\*

**Objective** To examine emergency department (ED) staff's knowledge of traumatic stress in children, attitudes toward providing psychosocial care, and confidence in doing so, and also to examine differences in these outcomes according to demographic, professional, and organizational characteristics, and training preferences.

**Study design** We conducted an online survey among staff in ED and equivalent hospital departments, based on the Psychological First Aid and Distress-Emotional Support-Family protocols. Main analyses involved descriptive statistics and multiple regressions. Respondents were 2648 ED staff from 87 countries (62.2% physicians and 37.8% nurses; mean years of experience in emergency care was 9.5 years with an SD of 7.5 years; 25.2% worked in a low- or middle-income country).

**Results** Of the respondents, 1.2% correctly answered all 7 knowledge questions, with 24.7% providing at least 4 correct answers. Almost all respondents (90.1%) saw all 18 identified aspects of psychosocial care as part of their job. Knowledge and confidence scores were associated with respondent characteristics (eg, years of experience, low/middle vs high-income country), although these explained no more than 11%-18% of the variance. Almost all respondents (93.1%) wished to receive training, predominantly through an interactive website or one-off group training. A small minority (11.1%) had previously received training.

**Conclusions** More education of ED staff regarding child traumatic stress and psychosocial care appears needed and would be welcomed. Universal education packages that are readily available can be modified for use in the ED. (*J Pediatr* 2016;170:227-33).

See editorial, p 16

Every year, tens of millions of children around the world sustain injuries that require hospital care.<sup>1</sup> These injuries can cause not only physical disability but also long-term psychological consequences: approximately 1 in 6 injured children develop persistent stress symptoms that impair functioning and development.<sup>2-5</sup>

Several models have been developed to mitigate distress after injuries and other potentially traumatic events. Psychological First Aid<sup>6</sup> is the most prominent model of psychosocial care, often applied after disasters. It comprises 8 core elements (eg, "stabilization," which includes calming, "promoting connection with social supports," and "informing about coping"), tailored to the needs of the survivor. In the pediatric context, specific recommendations such as the D-E-F protocol<sup>7</sup> have also been developed. This protocol builds on the A-B-C

From the <sup>1</sup>Monash Injury Research Institute, Monash University; <sup>2</sup>Murdoch Childrens Research Institute; <sup>3</sup>School of Psychological Sciences, Monash University, Melbourne, Australia; <sup>4</sup>Children's Hospital of Philadelphia; <sup>5</sup>University of Pennsylvania, Philadelphia, PA; <sup>6</sup>Department of Psychosomatics and Psychiatry, University Children's Hospital Zurich; <sup>7</sup>Department of Child and Adolescent Health Psychology, Institute of Psychology, University of Zurich, Zurich, Switzerland; <sup>8</sup>Departments of Pediatrics and Emergency Medicine and Women and Children's Health Research Institute, University of Alberta, Edmonton, Alberta, Canada; <sup>9</sup>Department of Pediatric Emergency Medicine, Children's Hospitals and Clinics of Minnesota, Minneapolis, MN; <sup>10</sup>Emergency Department, Bristol Royal Hospital for Children; <sup>11</sup>Faculty of Health and Applied Science, University of the West of England, Bristol, United Kingdom; <sup>12</sup>Department of Emergency Medicine and Trauma Center, Meyer University Children's Hospital, Florence, Italy; <sup>13</sup>Department of Emergency Medicine, University of Michigan, Ann Arbor, MI; and <sup>14</sup>Royal Children's Hospital, Murdoch Childrens Research Institute and University of Melbourne, Melbourne, Australia

\*List of executive committee members, network sites, and site representatives for PERC, PEMCRC, PERUKI, REPEM, PECARN, PREDICT, and PERN is available at [www.jpeds.com](http://www.jpeds.com) (Appendix).

E.A. is funded by Monash University Larkins Program, Australia, and National Health and Medical Research Council, Australia (Early Career Fellowship 1090229), F.B. is funded by Center of Research Excellence for Pediatric Emergency Medicine, National Health and Medical Research Council, Australia, Victorian Government's Infrastructure Support Program, Melbourne, Australia and Royal Children's Hospital Foundation, Melbourne, Australia. PECARN is funded by Health Resources and Services Administration, Maternal and Child Health Bureau, Emergency Medical Services for Children Network Development Demonstration Program (U03MC00008, U03MC00001, U03MC00003, U03MC00006, U03MC00007, U03MC22684, and U03MC22685). This information or contents and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by, the funding bodies or the US Government. The authors declare no conflicts of interest.

ED Emergency department  
PERN Pediatric Emergency Research Networks

0022-3476/\$ - see front matter. Copyright © 2016 Elsevier Inc. All rights reserved.

<http://dx.doi.org/10.1016/j.jpeds.2015.10.067>

model (airway, breathing, and circulation) that is familiar to acute care clinicians providing resuscitation. After providers have attended to the A-B-Cs and addressed physical health needs, the protocol points them to distress of the patient (D), emotional support for the patient (E), and support for the family (F).<sup>4</sup>

Although emergency department (ED) staff have been recognized as having a pivotal role in preventing persistent distress in injured children,<sup>8</sup> conscious awareness of post-traumatic stress and practices to promote psychological recovery appear not to be commonplace in the ED, and there are suggestions that specific training is needed.<sup>2,8,9</sup> Our goal was to examine ED staff's perspectives in an international context. In particular, we aimed to understand: (1) their knowledge of traumatic stress in children, attitudes toward providing psychosocial care, and confidence in doing so; (2) differences in these outcomes according to demographic, professional, and organizational characteristics; and (3) their training preferences.

## Methods

We assessed ED staff's perspectives with a web-based self-report questionnaire. The Human Research Ethics Committee of the Royal Children's Hospital Melbourne approved the study as primary institutional review board (HREC 33085).

We targeted ED physicians and nurses from hospitals around the world (allied health workers and mental health staff were also eligible to participate but represented small groups; their data are not reported in this paper). In settings where hospitals did not have separate EDs, we approached staff who were routinely providing initial hospital care to injured patients. Respondents were recruited by means of the association of Pediatric Emergency Research Networks (PERN) in North America, Europe, and Australasia<sup>10</sup> and national health care provider forums and associations (eg, the DXY website for Chinese health care providers and the College of Emergency Nursing Australasia), with the request to forward the survey link to ED staff in participants' networks. This snowball approach was chosen to obtain as many responses as possible from staff in countries where there was less organization in professional associations. Data collection took place between July 1, 2013, and February 1, 2014. To reduce barriers to providing a frank account of hospital performance, participation in the survey was anonymous, although we did collect basic demographic information. Respondents indicated informed consent by completing the questionnaire. They could send a separate e-mail to the research team to participate in a drawing for one of 20 \$15 gift vouchers.

Measure development involved literature review,<sup>6,7,11-13</sup> a qualitative interview study with ED staff,<sup>14</sup> drafting of questionnaire items, including new questions and items adapted from 2 existing measures for parent knowledge and provider attitudes,<sup>15,16</sup> review of draft questions by 8 experts in emergency medicine, emergency nursing, mental health,

and injury classification, and piloting with 12 ED staff, including the use of a "think-aloud" protocol.<sup>17</sup> We solicited reviews on cultural appropriateness of the questions from staff or academics from each major language area that we were targeting. The questionnaire was translated into 12 languages (2 translators per language) and accessed through SurveyMonkey.

The questionnaire consisted of 65 items in 7 main categories: personal and work characteristics (demographics, profession, and work location; 12 items); individual knowledge of traumatic stress (7 multiple choice items); individual confidence in providing psychosocial care (mapped on the 8 core elements of Psychological First Aid; 18 items with a 4-point Likert scale and an option to indicate that the provider thought it was not their job); barriers to providing psychosocial care (6 items with a 3-point Likert scale); the department's performance in providing psychosocial care (3 general questions and 8 items for each element of Psychological First Aid, all with a 4-point Likert scale and the "not our job" option); training wishes and experiences (8 items with varying answer formats); and open questions to solicit further comments, in particular regarding cultural considerations. The full survey is available from the authors.

## Data Analyses

All analyses were conducted in IBM SPSS 22 (SPSS Inc, Chicago, Illinois). We derived a knowledge score as a count of correctly answered knowledge questions (0-7). A total attitude score comprised the count of psychosocial care elements (0-18) seen as part of the respondent's job. An individual confidence score was computed by averaging the confidence scores (1-4) of all aspects of psychosocial care that a respondent saw as their job. We computed descriptive statistics, and then used multiple regression analyses to examine which respondent characteristics were related to higher knowledge and confidence scores (we report the initial models as well as the final models with significant factors only).<sup>18</sup> Because age, experience in patient care, and experience in the ED were strongly correlated ( $r = .79$  to  $r = .90$ ;  $P < .001$ ), we included only experience in patient care in the regression models. Because visual inspection showed that confidence scores were negatively skewed, these were reversed, log transformed, and reversed again before analysis.

## Results

The sample consisted of 2648 ED staff (59.3% female, mean age 39.5 years, [range 18-65; SD = 9.7; median = 38.0]) residing in 87 countries. The 5 countries with the most respondents were China (17.3%), US (16.2%), United Kingdom (12.5%), Australia (9.5%), and Canada (9.0%). One-quarter of respondents (25.2%) operated in a low- or middle-income country. The majority of respondents (78.5%) worked in an urban setting, and 14.7% worked in suburban and 6.7% in rural settings.

About one-half of the respondents (48.2%) worked in a pediatric ED, and 33.5% worked in a combined adult and pediatric ED, 16.1% worked in an ED predominantly serving adults, and 2.2% worked in a setting that did not fit these criteria (eg, emergency care in a low- or middle-income country). Three-quarters (72.7%) were employed at an academic hospital as opposed to a nonacademic hospital (27.3%). For 52.5% of the respondents, mental health professionals (eg, psychologists, psychiatrists, social workers) were available in the ED at least a few hours per day. For 26.0%, these professionals were on call only. For 18.2%, mental health staff were not available at all, and for the final 3.3%, none of these categories applied (eg, when there was varying availability).

The majority (62.2%) of the respondents were physicians; 37.8% were nurses. Mean years of experience in any patient care was 15.0 years (SD = 9.8 years; median = 13.0), and mean years of ED experience was 9.5 years (SD = 7.5 years; median = 8.0). Many respondents (88.9%) had no specific training in psychosocial care for injured children. Among those who had, for 15.7% this training took place within the past year, for 46.8% 1-5 years ago, for 20.8% 5-10 years ago, and for 16.7% over 10 years ago. Further details are provided in **Table I** (available at [www.jpeds.com](http://www.jpeds.com)).

**Knowledge about Pediatric Traumatic Stress**

On average, respondents answered 3.2 out of the 7 knowledge questions correctly (SD = 1.7). More specifically, 1.2%

answered all 7 correctly, and 7.1% had 6, 16.5% had 5, 20.2% had 4, 20.5% had 3, 17.2% had 2, 12.6% had 1, and 4.8% had 0 correct answers. **Table II** shows the percentages of respondents checking the various answer options for each question and the percentages of correct answers per question. Most participants (69.3%) were aware that not only the injured children themselves but also their parents and siblings could develop posttraumatic stress. There was a fair amount of awareness that development of posttraumatic stress is related to children’s own appraisal of threat to their life (59.0% correct) and not to injury severity (64.4% correct). However, relatively few respondents were aware of the risk of posttraumatic stress among very young children (only 48.5% recognized that toddlers can develop posttraumatic stress), among children who present to the ED either as calm/compliant/loud (only 33.2% recognized that children with any presentation could develop posttraumatic stress), and among children who rate their pain as severe (46.1% correct). Almost all respondents (91.6%) underestimated the percentage of children who would report acute stress symptoms.

Respondents with higher knowledge scores were more often female, from a high-income country, working in a pediatric ED, and a physician. These characteristics explained 18.1% of the variance in knowledge scores (**Table III**). Years of experience in patient care and working in an academic hospital (vs a nonacademic hospital) were not significantly associated with knowledge.

**Table II.** Respondents’ knowledge of pediatric traumatic stress

Question	% of respondents checking answer options*					% correct answer
1. What severity of injury puts children at risk of PTS?	Minor (eg, superficial laceration, dental injury) 38.1	Moderate (eg, closed limb fracture, facial fracture) 71.9	Serious (eg, open limb fracture, hemothorax) 83.5	Severe/critical (eg, ruptured liver, proximal limb amputation) 80.3	Not sure 9.4	64.4
2. Which age groups are at risk of PTS following an injury?	Toddlers 48.5	Young children 79.6	Older children 80.3	Adolescents 69.2	10.5	42.0
3. Who is at risk of PTS following the injury of a child?	Injured child 93.7	Parents 88.7	Siblings 73.4		2.5	69.3
4. Children at risk of PTS present in the ED as ...	Frantic and distressed 72.3	Loud 55.1	Calm and compliant 40.5	Quiet/withdrawn 71.3	12.6	33.2
5. Children who, at some point during the trauma, believe they might die are at higher risk of PTS	Agree 59.0	Only when belief was realistic 11.2	Disagree 9.9		20.0	59.0
6. Children in the ED who rate their pain as severe are at ...	Same risk of PTS as other children 29.6	Increased risk of PTS 46.1	Lower risk of PTS 2.2		22.1	46.1
7. What % of injured children and families report traumatic stress reactions within the first month after injury?	Less than 25% 29.5	25%-50% 22.0	More than 50% 8.4		40.1	8.4

PTS, posttraumatic stress.

Note: N = 2648. Percentages indicate how many of the respondents checked the answer option.

\*Answers in the light gray cells should be checked, those in dark gray cells should not be checked. The answer in the upper left white cell should be checked, but not-checking was not penalized (ie, checked/not checked both seen as correct).

**Table III.** Respondents' total knowledge score in relation to their characteristics: initial and final multiple regression

Initial model	B	SE B	$\beta$	P value	95% CI for B	Univariate total scores per group/correlations			
						Coded "0"	M (SD)/r	Coded "1"	M (SD)
Constant	1.469	.111		<.001	1.252-1.687				
Sex	.185	.070	.055	.008	.048-.322	Males	2.9 (1.70)	Females	3.4 (1.60)
Country income	1.462	.084	.383	<.001	1.296-1.627	LMIC	2.1 (1.41)	HIC	3.6 (1.56)
Academic hospital	.096	.070	.026	.170	-.041 to .232	Nonacad.	2.9 (1.69)	Academic	3.3 (1.63)
PED ED	.192	.069	.058	.006	.056-.328	Elsewhere	2.8 (1.64)	PED ED	3.6 (1.57)
Profession	.409	.073	.120	<.001	.266-.552	Nurses	3.3 (1.57)	Physicians	3.2 (1.70)
Recent training	.591	.115	.091	<.001	.365-.817	No	3.2 (1.65)	Yes	3.8 (1.64)
Experience (in y)	.006	.003	.037*	.043	.000-.012		.10		
Final model	B	SE B	$\beta$	P value	95% CI for B				
Constant	1.603	.095		<.001	1.416-1.790				
Sex	.182	.070	.054	.010	.044-.319				
Country income	1.495	.083	.392	<.001	1.333-1.658				
PED ED	.209	.067	.063	.002	.078-.340				
Profession	.404	.073	.118	<.001	.261-.546				
Recent training	.601	.115	.092	<.001	.375-.827				

B, unstandardized regression; HIC, high income country; LMIC, low/middle income country; M, mean; Nonacad., nonacademic hospital; PED ED, pediatric ED; Yes, training in psychosocial care within the past 5 years.

Note: N = 2648.

\*No longer significant when "academic hospital" was removed from the model. Adjusted  $R^2$  of the final model = .18,  $F(5,2642) = 116.95$ ,  $P < .001$ . B values represent the change in knowledge scores given a 1 unit change in the predictor variable (ie, the tipping point is at 0, not at 1 as is commonly seen with ORs). Univariate means (eg, regarding profession) do not fully match multivariate outcomes because of interrelations.

### Attitude and Confidence Regarding Psychosocial Care

The vast majority of respondents (90.1%) saw all 18 aspects of psychosocial care as part of their job. "Informing a child about an injured or deceased family member" was the aspect that was most frequently chosen as not part of the job (4.2% of respondents), followed by "liaising with staff who can provide practical assistance" such as social work (2.7%), and "educating parents or children about how to access mental health care if needed" (2.6%) (Table IV; available at [www.jpeds.com](http://www.jpeds.com)). Because 98.1% regarded at least 14 aspects of psychosocial care as part of their job, further analyses into predictors of attitude were not conducted.

ED staff reported varying levels of confidence regarding providing aspects of psychosocial care. On average, they felt moderately confident (Table V). Although 74.5% felt very confident about explaining procedures to children and parents, only 14.0% felt the same way about educating children and parents about traumatic stress reactions. Similarly, only a minority felt very confident in providing information about emotional/behavioral reactions at home that indicate a need for help (16.3%), and in educating parents or children about how to access mental health care (20.8%). Four of the 5 lowest scoring elements for confidence were also among the 5 lowest scoring elements for attitude (Table IV).

Higher levels of confidence were associated with working in an academic hospital, working in a pediatric ED, being a nurse, being trained in psychosocial care in the past 5 years, and having more experience (years in patient care). These characteristics explained 11.1% of the variance in confidence scores (Table VI). Sex and working in a high- vs low/middle-income country were not significantly associated with confidence in providing psychosocial care.

Respondents rated their confidence in their own performance (mean = 3.1; SD = .49) significantly higher than their department's performance (mean = 2.5; SD = .87; paired samples  $t$  test:  $t = 37.16$ ,  $df = 2615$ ;  $P < .001$ ) (Table VII; available at [www.jpeds.com](http://www.jpeds.com)).

### Training Preferences

A large majority of the respondents (93.1%) indicated a desire for more training in psychosocial care. The two most popular training modes were an interactive website (25.0% of first preferences) and one-off group training (23.4% of first preferences) (Table VIII; available at [www.jpeds.com](http://www.jpeds.com)). Several respondents commented that training material should be locally adapted and noted cultural differences in needs of patients. Of those interested in training, 47.4% indicated they would be able to commit 1-4 hours to training in the next 6 months, 31.2% 5-8 hours, and 21.4% more than 8 hours.

## Discussion

We report a worldwide survey on knowledge and attitudes of ED staff regarding psychosocial care for injured children. Although almost all participants viewed psychosocial care as part of their job, few had received any formal education. Knowledge and confidence in the delivery of education to pediatric patients and their families about injury related stress reactions were less than optimal, and there was an desire for training. Although our study identified a number of associations between respondent characteristics and knowledge/confidence scores, the effect sizes were relatively small. This suggests that even though education endeavors may be tailored to some extent (in particular related to cultural

**Table V.** Respondents' level of confidence regarding aspects of psychosocial care

How confident are you that you can...	% Not at all (1)	% A little (2)	% Moderately (3)	% Very (4)	Mean score* (SD)
1. Respond calmly and without judgment to a child's or family's strong emotional distress	2.4	8.0	37.7	51.9	3.4 (.74)
2. Talk with children in age appropriate language	0.0	6.4	24.9	67.8	3.6 (.65)
3. Tailor your approach according to a family's cultural background	1.7	13.2	49.8	35.2	3.2 (.72)
4. Assess and manage pain in children	1.9	7.3	31.8	59.0	3.5 (.71)
5. Explain procedures to children and parents	0.7	3.7	21.1	74.5	3.7 (.57)
6. Inform a child about an injured/deceased family member	9.3	25.2	40.0	25.6	2.8 (.92)
7. Help a child/parent who is anxious to calm down by teaching relaxation (eg, breathing) techniques	6.4	23.4	42.8	27.3	2.9 (.87)
8. Assess a child's or family's distress, emotional needs, and support systems	3.2	19.6	48.2	29.0	3.0 (.78)
9. Elicit trauma details from a child or family without them being exposed to more distress	4.3	22.8	50.1	22.9	2.9 (.79)
10. Respond to a child's (or parent's) question about whether the child will die	5.0	21.5	45.5	28.1	3.0 (.84)
11. Liaise with staff who can provide practical assistance to a family (eg, Social Work)	6.9	9.0	26.7	57.3	3.3 (.91)
12. Take action to get someone close (a parent, family member or friend) available to the child in the ED	1.8	5.0	29.1	64.0	3.6 (.67)
13. Encourage parents to make use of their own social support system (family, friends, spiritual community, etc.)	2.2	11.4	41.3	45.0	3.3 (.75)
14. Educate children and families about common traumatic stress reactions	11.8	37.4	36.8	14.0	2.5 (.88)
15. Teach parents or children specific ways to cope with procedures in the ED	3.1	20.7	46.2	30.0	3.0 (.79)
16. Provide information to parents about emotional or behavioral reactions that indicate that the child may need help (when back at home)	12.3	36.6	34.9	16.3	2.6 (.91)
17. Educate parents or children about how to access mental health services if needed	8.1	30.2	40.9	20.8	2.7 (.88)
18. Manage your own emotional responses to children's pain and trauma	2.4	12.4	44.9	40.4	3.2 (.75)

Note: N = 2538-2643 respondents who perceived the aspect of psychosocial care as part of their role. SDs of the mean scores are given between brackets. The 5 aspects of psychosocial care that had the lowest mean scores have been highlighted.

\*Overall mean score: 3.1 (SD = .49).

needs), it would be appropriate to start with a universal approach.

On average, the respondents answered 45% of the knowledge questions correctly. This diverges from the disconcert-

ingly low knowledge scores (on different measures) in previous studies on American physicians<sup>9,19</sup> and may indicate an increase in knowledge in recent years. However, the findings also indicate room for further improvement. Our

**Table VI.** Respondents' total confidence score in relation to their characteristics: initial and final multiple regression models

Initial model	B	SE B	β	P value	95% CI for B	Univariate total scores per group/correlations			
						Coded "0"	M (SD)/r	Coded "1"	M (SD)
Constant	.676	.008		<.001	.660-.691				
Sex	-.002	.005	-.009	.685	-.012 to .008	Males	3.1 (.52)	Females	3.2 (.47)
Country income	.012	.006	.044	.058	.000-.024	LMIC	3.0 (.57)	HIC	3.2 (.45)
Academic hospital	.021	.005	.079	<.001	.011-.030	Nonacad.	3.0 (.52)	Academic	3.2 (.48)
PED ED	.027	.005	.119	<.001	.017-.037	Elsewhere	3.0 (.52)	PED ED	3.2 (.45)
Profession	-.017	.005	-.072	.001	-.028 to -.007	Nurses	3.2 (.46)	Physicians	3.1 (.51)
Recent training	.065	.008	.143	<.001	.049-.081	No	3.1 (.49)	Yes	3.4 (.47)
Experience (in y)	.003	.000	.213	<.001	.002-.003		.22		
Final model	B	SE B	β	P value	95% CI for B				
Constant	.682	.003		<.001	.669-.694				
Academic hospital	.021	.005	.081	<.001	.011-.031				
PED ED	.031	.004	.135	<.001	.022-.040				
Profession	-.020	.004	-.085	<.001	-.029 to -.011				
Recent training	.065	.008	.143	<.001	.049-.081				
Experience (in y)	.003	.000	.220	<.001	.002-.003				

Note: N = 2643. Adjusted R<sup>2</sup> of the final model = .11, F (5,2637) = 66.74, P < .001.

results suggest that training of providers needs to include information on stress in very young children,<sup>20</sup> the fact that children with a range of emotional and behavioral presentations (eg, calm, or loud) can develop stress symptoms,<sup>21</sup> and pain is a predictor of long-term difficulties in recovery.<sup>11</sup> In addition, it appears important to convey that it is common for children to experience one or more symptoms of acute stress, such as nightmares or regressive behavior, in the first month after the injury.<sup>22</sup> Education packages on these topics are already available,<sup>23-25</sup> and could be adjusted for the ED setting.

We found a positive attitude toward psychosocial care being part of a health care provider's role. This aligns well with recent calls and support for "trauma-informed care" in settings as diverse as child welfare, education, juvenile justice, and health care.<sup>15,26</sup> In particular, it fits with a stepped care system in which there is universal psychosocial care in the acute phase, targeted preventive interventions for patients at increased risk of developing mental health problems, and treatment interventions for those who (continue to) experience severe distress.<sup>4</sup> In this continuum of care, ideally no patient at risk would be overlooked, while scarce treatment resources would be allocated only where needed.

The elements of psychosocial care that were most often viewed as "not part of the job" were also aspects with low confidence ratings among the respondents who did see them as part of the job. The aspects that solicited low confidence scores included more advanced psychosocial care elements, such as educating children and parents about common traumatic stress responses, as opposed to more general child-centered care elements such as using age-appropriate language. There could be various reasons for this pattern, including a relative lack of opportunity to observe or perform the more advanced elements, the fact that these elements were traditionally viewed as part of mental health care only, and professional avoidance of confronting or emotional topics.<sup>8</sup> Integrating the elements that respondents reported as more difficult in both initial general training and ongoing professional education, would be a feasible way of increasing staff's competence and confidence.

The two most popular training formats among the respondents were an interactive website and one-off in-person group training. Currently available education packages on psychosocial care in acute settings would lend themselves well to both these preferences. For example, an interactive 6-hour online Psychological First Aid training package,<sup>25</sup> currently focused on postdisaster care, could be adapted for use in the ED. Moreover, the HealthCare Toolbox website offers a set of freely available online 1-hour training courses, designed for nurses and other health professionals in hospital and ED settings.<sup>24</sup> These courses provide an introduction to traumatic stress after pediatric medical events and teach specific skills for implementing the D-E-F protocol,<sup>7</sup> for example how to assess help with distress (pain, fear, and worries) in pediatric patients. Both training packages have written materials that could form the basis for in-person training sessions.

This study assessed ED staff understanding on a topic at a global scale through PERN, the international collaboration of

emergency medicine research networks. PERN provided an important platform to reach a wide spectrum of ED staff. However, several limitations of the study need to be taken into account. Because of our focus on anonymity and reaching out to low- and middle-income countries, it was not possible to assess response rates and the representativeness of the current sample. There is a risk of selection bias with this study, both by area of interest and by access to the study. With regard to the former, it is possible that the current study attracted a disproportionate number of ED staff with an elevated interest in psychosocial aspects of their work. With regard to the latter, although the survey was available in 12 major world languages and we distributed it as widely as possible, we received fewer responses from low-income countries than from high-income countries, restricting generalizations to providers in low-resource contexts. Finally, the self-report nature of the survey allowed the examination of knowledge and perceptions, but did not allow conclusions regarding the actual psychosocial care provided by the respondents.

This study shows that more education of ED staff regarding child traumatic stress and psychosocial care would be welcomed. In our view, the steps that should follow from the current findings include: (1) dissemination of the training materials on psychosocial care that are readily available to medical and nursing schools, professional bodies, and individual EDs; (2) adoption of psychosocial care modules within formal training curricula at undergraduate and postgraduate levels; (3) evaluation of the effects of implementing these materials in various settings on knowledge and skills of students and staff through questionnaires, behavioral observations and patient evaluations; and (4) further research into the cultural specificities of psychosocial care,<sup>27</sup> and how these can support local adaptations of education material. ■

*We would like to thank the many organizations and individuals who have contributed to the development and distribution of the survey, including but not limited to the College of Emergency Nursing Australasia, the College of Emergency Nurses New Zealand, Website DXY for Chinese health providers, the InterAcademy Medical Panel, and Red de Investigación y Desarrollo de la Emergencia Pediátrica de Latinoamérica, Patrick Kobina Arthur, Jonathan Bisson, Stevan Bruijns, Chia-Ying Chou, Thomas Chun, Rowena Conroy, Georgina Johnstone, Revathi Krishna, Nathan Kuppermann, Thalia Lammers, Winnie Lau, Door Lauwaert, Stanly Lee, Joanne Magyar, Alys Manguy, Els van Meijel, Sara Nairns, Vidushi Shradha Neergheen-Bhujun, Jane Nursey, Meaghan O'Donnell, Cameron Palmer, Miriam Plata Nuñez, Jimena Reyes Troncoso, Maatje Scheepers, Lisa Wolf, Siu Tsin Au Yeung, and Seonyoung Yoo.*

Submitted for publication Aug 10, 2015; last revision received Sep 21, 2015; accepted Oct 21, 2015.

Reprint requests: Eva Alisic, PhD, Monash Injury Research Institute, Monash University, 21 Alliance Lane, Melbourne, VIC 3800, Australia. E-mail: [eva.alisic@monash.edu](mailto:eva.alisic@monash.edu)

## References

1. World Health Organization, Unicef. World report on child injury prevention. Geneva: World Health Organization; 2008.

2. Alisic E, Zalta AK, van Wesel F, Larsen SE, Hafstad GS, Hassanpour K, et al. Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: meta-analysis. *Br J Psychiatry* 2014;204:335-40.
3. Kassam-Adams N, Felipe García-España J, Marsac ML, Kohser KL, Baxt C, Nance M, et al. A pilot randomized controlled trial assessing secondary prevention of traumatic stress integrated into pediatric trauma care. *J Trauma Stress* 2011;24:252-9.
4. Kassam-Adams N, Marsac ML, Hildenbrand A, Winston F. Posttraumatic stress following pediatric injury: update on diagnosis, risk factors, and intervention. *JAMA Pediatr* 2013;167:1158-65.
5. Zatzick DF, Jurkovich G, Wang J, Rivara FP. Variability in the characteristics and quality of care for injured youth treated at trauma centers. *J Pediatr* 2011;159:1012-6.
6. Brymer M, Jacobs A, Layne C, Pynoos R, Ruzek J, Steinberg A, et al. Psychological first aid field operations guide. 2nd ed. National Child Traumatic Stress Network and National Center for PTSD; 2006.
7. Stuber ML, Schneider S, Kassam-Adams N, Kazak AE, Saxe G. The medical traumatic stress toolkit. *CNS Spectr* 2006;11:137-42.
8. Horowitz L, Kassam-Adams N, Bergstein J. Mental health aspects of emergency medical services for children: summary of a consensus conference. *J Pediatr Psychol* 2001;26:491-502.
9. Ziegler MF, Greenwald MH, DeGuzman MA, Simon HK. Posttraumatic stress responses in children: awareness and practice among a sample of pediatric emergency care providers. *Pediatrics* 2005;115:1261-7.
10. Klassen TP, Acworth J, Bialy L, Black K, Chamberlain JM, Cheng N, et al. Pediatric emergency research networks: a global initiative in pediatric emergency medicine. *Pediatr Emerg Care* 2010;26:541-3.
11. Saxe G, Stoddard F, Hall E, Chawla N, Lopez C, Sheridan R, et al. Pathways to PTSD, part I: children with burns. *Am J Psychiatry* 2005;162:1299-304.
12. Bisson JI, Tavakoly B, Witteveen AB, Ajdukovic D, Jehel L, Johansen VJ, et al. TENTS guidelines: development of post-disaster psychosocial care guidelines through a Delphi process. *Br J Psychiatry* 2010;196:69-74.
13. Alisic E, Jongmans MJ, van Wesel F, Kleber RJ. Building child trauma theory from longitudinal studies: a meta-analysis. *Clin Psychol Rev* 2011;31:736-47.
14. Alisic E, Conroy R, Magyar J, Babl FE, O'Donnell ML. Psychosocial care for seriously injured children and their families: a qualitative study among emergency department nurses and physicians. *Injury* 2014;45:1452-8.
15. Kassam-Adams N, Rzucidlo S, Campbell M, Good G, Bonifacio E, Slouf K, et al. Nurses' views and current practice of trauma-informed pediatric nursing care. *J Pediatr Nurs* 2014;30:478-84.
16. Marsac M, Kassam-Adams N, Hildenbrand A, Kohser K, Winston FK. After the injury: initial evaluation of a web-based intervention for parents of injured children. *Health Educ Res* 2011;26:1-12.
17. Willis GB. Cognitive interviewing: A "how to" guide. Paper presented at the meeting of the American Statistical Association, Baltimore, Maryland; 1999.
18. Field A. *Discovering statistics using SPSS*. London: Sage publications; 2009.
19. Banh MK, Saxe G, Mangione T, Horton NJ. Physician-reported practice of managing childhood posttraumatic stress in pediatric primary care. *Gen Hosp Psychiatry* 2008;30:536-45.
20. De Young AC, Kenardy JA, Cobham VE. Trauma in early childhood: a neglected population. *Clin Child Fam Psychol Rev* 2011;4:231-50.
21. Alisic E. *Kinderen ondersteunen na trauma*. Amsterdam: Boom; 2012.
22. Winston FK, Kassam-Adams N, Vivarelli-O'Neill C, Ford J, Newman E, Baxt C, et al. Acute stress disorder symptoms in children and their parents after pediatric traffic injury. *Pediatrics* 2002;109:e90.
23. Patient care tools. <http://www.aftertheinjury.org/patient-care-tools>. Accessed July 17, 2015.
24. Health care tool box. <https://www.healthcaretoolbox.org>. Accessed July 17, 2015.
25. Psychological First Aid online course. <http://learn.nctsn.org/course/index.php?categoryid=11>. Accessed July 17, 2015.
26. Ko SJ, Ford JD, Kassam-Adams N, Berkowitz SJ, Wilson C, Wong M, et al. Creating trauma-informed systems: child welfare, education, first responders, health care, juvenile justice. *Prof Psychol Res Pr* 2008;39:396-404.
27. Flores G, Abreu M, Schwartz I, Hill M. The importance of language and culture in pediatric care: case studies from the Latino community. *J Pediatr* 2000;137:842-8.

## Appendix

Executive Committee members of the study groups include:

PERN—Nathan Kuppermann, MD (PECARN, US); Mark Lyttle, MBChB (PERUKI, United Kingdom); Ronan O’Sullivan, MB, BCh, BAO, MBA (PERUKI, Ireland); Santiago Mintegui Raso, MD (REPEM, Spain); Patrick Van de Voorde, MD (REPEM, Belgium); Martin Osmond, MD (PERC, Canada); David Johnson, MD (PERC, Canada); Jim Chamberlain, MD (PECARN, US); Charles Macias, MD (PEMCRC, US); Anupam Kharbanda, MD (PEMCRC, US); Franz Babl, MD (PREDICT, Australia); Stuart Dalziel, MBBS (PREDICT, New Zealand).

PECARN—Rachel Stanley, MD, MHSA (Nationwide Children’s Hospital, Columbus, OH); Richard Ruddy, MD (Cincinnati Children’s Hospital Medical Center, Cincinnati, OH); Peter Dayan, MD, MSc (Columbia University, Morgan Stanley, Children’s Hospital of New York, New York, NY); Robert Hickey, MD, FAAP, FAHA (Pittsburgh, Children’s Hospital, University of Pittsburgh, Pittsburgh, PA); Nathan Kuppermann, MD, MPH (University of California, Davis, CA); James Chamberlain, MD (Children’s National Medical Center, Washington, DC); J. Michael Dean, MD, MBA (University of Utah, Salt Lake City, UT); and E. Brooke Lerner, PhD (Medical College of Wisconsin, Milwaukee, WI).

PEMCRC—Marc Auerbach, MD (Yale School of Medicine, New Haven, CT); Todd Chang, MD (Children’s Hospital Los Angeles, Los Angeles, CA); Andrea Cruz, MD, and Charles G. Macias, MD (Baylor College of Medicine, Texas Children’s Hospital, Houston, TX); Todd A. Florin, MD, MSCE (Cincinnati Children’s Hospital Medical Center, Cincinnati, OH); Anupam B. Kharbanda, MD, MSc (Children’s Hospitals and Clinics of Minnesota, Minneapolis, MN); Prashant Mahajan, MD (University of Michigan, Detroit, MI); Rakesh Mistry, MD, MS (University of Colorado, Denver CO); David Schnadower, MD, MPH (Washington University School of Medicine, St Louis, MO); Rachel Stanley, MD, MHSA (Nationwide Children’s Hospital, Department of Pediatrics, The Ohio State University, Columbus, OH); Lise Nigrovic, MD, MPH, and Kenneth Michelson, MD (Children’s Hospital Boston, Boston, MA); and Joe Zorc, MD (The Children’s Hospital of Philadelphia, Philadelphia, PA).

PERC—Martin Osmond, MD, and Amy Plint, MD (Children’s Hospital of Eastern Ontario, Ontario, Canada); Stephen Freedman, MD, David Johnson, MD, Diana Murray, MD, and Sarah Williamson-Urquhart, BScKin (Alberta Children’s Hospital, Alberta, Canada); Janet Curran, PhD (IWK Health Center, Nova Scotia, Canada); Andrew Dixon, MD (Stollery Children’s Hospital, Alberta, Canada); Garth Meckler, MD (BC Children’s Hospital, British Columbia, Canada); Liza Bialy, BSc, MPH (Children’s Hospital of Eastern Ontario, Ontario Canada).

PERUKI—Mark Lyttle, MBChB (Bristol Royal Hospital for Children, Bristol, United Kingdom); Ian Maconochie, PhD (St Mary’s Hospital, London, United Kingdom); Stuart

Hartshorn, MA, MB, BChir (Birmingham Children’s Hospital, Birmingham, United Kingdom); Steven Foster, MBChB (Royal Hospital for Children, Glasgow, United Kingdom); Cath Bevan, MBBS (Royal Alexandra Children’s Hospital, Brighton, United Kingdom); Ronan O’Sullivan, MB, BCh, BAO, MBA (Cork University Hospital, Cork, Ireland).

PREDICT—Nicholas Cheng, MBBS (The Children’s Hospital at Westmead, Sydney, NSW, Australia); Michael Zhang, MBBS (John Hunter Hospital, Newcastle, NSW, Australia); Simon Craig, MBBS (Monash Children’s Hospital, Melbourne, VIC, Australia); Franz E Babl, MD (Royal Children’s Hospital, Melbourne, VIC, Australia); and Stuart Dalziel, MBBS (Starship Children’s Hospital, Auckland, New Zealand).

REPEM—Santiago Mintegui Raso, MD (Cruces University Hospital, Bilbao, Basque Country, Spain); Borja Gómez, MD (Cruces University Hospital, Bilbao, Basque Country, Spain); Liviana Da Dalt, MD (University of Padova, Padova, Italy); Alain Gervaix, MD (Hôpitaux Universitaires de Genève, Genève, Switzerland); Ian Maconochie, MD (St Mary’s Hospital, London, United Kingdom); Henriette Moll, MD (Erasmus MC-Sophia’s Children’s Hospital, Rotterdam, The Netherlands); Yehezkel Waisman, MD (Schneider Children’s Medical Center of Israel, Petah Tikva, Israel); Niccolò Parri, MD (Meyer University Children’s Hospital, Florence, Italy); and Luigi Titomanlio, MD, (Robert Debré Hospital, Paris, France).

Network sites and site representatives of the study groups include:

PECARN (HEDA PIs):

GLEMSCRN Node—University of Michigan (Ann Arbor, MI): Alexander Rogers, MD; Children’s Hospital of Michigan (Detroit, MI): Prashant Mahajan, MD, MPH, MBA; Nationwide Children’s Hospital (Columbus, OH): Daniel Cohen, MD.

HOMERUN Node—Cincinnati Children’s Hospital Medical Center (Cincinnati, OH): Lynn Babcock, MD, MS; Washington University School of Medicine (St. Louis, MO): David Schnadower, MD; Children’s Hospital of Wisconsin-Medical College of Wisconsin, (Milwaukee, WI): David Brousseau, MD, MS.

PEM-NEWS Node—Children’s Hospital of New York (New York, NY): Maria Kwok, MD, MPH; Texas Children’s Hospital (Houston, TX): Charles Macias, MD, MPH, Andrea Cruz, MD, MPH; Children’s Hospital Colorado (Denver, CO): Lallit Bajaj, MD, MPH.

PRIDENET Node—Children’s Hospital of Pittsburgh (Pittsburgh, PA), Robert Hickey, MD; Hasbro Children’s Hospital, Brown University (Providence, RI): Thomas Chun, MD, MPH; Nemours/A.I. duPont Hospital for Children, Jefferson University (Wilmington, DE): Jonathan Bennett, MD.

PRIME Node—University of California (Davis, CA): Leah Tzimenatos, MD; Children’s Hospital of Philadelphia (Philadelphia, PA): Joe Zorc, MD, MSCE; University of Utah and Primary Children’s Medical Center (Salt Lake City, UT): Douglas Nelson, MD.



WB-CARN Node—Children’s National Medical Center (Washington, DC): Kathy Brown, MD; Lurie Children’s Hospital (Chicago, IL): Elizabeth Powell, MD, MPH; Children’s Hospital of Boston (Boston, MA): Lise Nigrovic, MD, MP.

#### PERC:

BC Children’s Hospital (Vancouver, BC, Canada): Quynh Doan, MD; Alberta Children’s Hospital (Calgary, AB, Canada): Antonia Stang, MD; Stollery Children’s Hospital (Edmonton, AB, Canada): Andrew Dixon, MD; Royal University Hospital (Saskatoon, SK, Canada): Ahmed Mater, MD; The Children’s Hospital of Winnipeg (Winnipeg, MB, Canada): Darcy Beer, MD; Children’s Hospital London Health Sciences Center (London, ON, Canada): Gary Joubert, MD; McMaster Children’s Hospital (Hamilton, ON, Canada): Anthony Crocco, MD; The Hospital for Sick Children (Toronto, ON, Canada): Adrienne Davis, MD; Kingston General Hospital/Hotel Dieu Hospital (Kingston, ON, Canada): Andrea Moore, MD; Children’s Hospital of Eastern Ontario (Ottawa, ON, Canada): Waleed Alqurashi, MD; Montreal Children’s Hospital (Montreal, QC, Canada): Sasha Dubrovsky, MD; CHU Sainte-Justine (Montreal, QC, Canada): Evelyne Trottier, MD; Center Hospitalier de l’Université Laval (Quebec, QC, Canada): Mathieu Blanchet, MD; IWK Health Center (Halifax, NS, Canada): Katrina Hurley, MD; Janeway Children’s Health and Rehabilitation Center (St. John’s, NL, Canada): Robert Porter, MD.

#### PERUKI:

Aberdeen Royal Infirmary (Aberdeen, Scotland): Mark Mitchelson, MBChB, BSc (Med Sci); Royal Belfast Hospital for Sick Children (Belfast, Northern Ireland): Julie-Ann Maney, MB, BCh, BAO; Birmingham Children’s Hospital (Birmingham, England): Stuart Hartshorn, MA, MB, BChir; Royal Alexandra Children’s Hospital (Brighton, England): Cath Bevan, MBBS; Bristol Royal Hospital for Children (Bristol, England): Sarah Potter, BSc (Hons); Frenchay Hospital (Bristol, England): Paul Younge, BSc, BM, DA; Children’s Hospital for Wales (Cardiff, Wales): Colin V. E. Powell, MBChB, MD; Cork University Hospital (Cork, Ireland): Ronan O’Sullivan, MB, BCh, BAO, MBA; Royal Derby Hospital (Derby, England): Gisela Robinson, MBBS, MSc (Med Ed); Our Lady’s Children’s Hospital Crumlin (Dublin, Ireland): Carol Blackburn, MB, BCh, BAO; Tallaght Children’s Hospital (Dublin, Ireland): Turlough Bolger, MB, BCh, BAO; Temple Street Children’s University Hospital (Dublin, Ireland): Roisin McNamara, MB, BCh, BAO; Royal Hospital for Sick Children (Edinburgh, Scotland): Paul Leonard, MBChB; Royal Devon and Exeter Hospital (Exeter, England): Adam Reuben, MBChB; Royal Hospital for Sick Children (Yorkhill) (Glasgow, Scotland): Vince Choudhery, MBChB; Crosshouse Hospital (Kilmarnock, Scotland): Joanne Mulligan, MBChB; Forth Valley Royal Hospital (Larbert, Scotland): Roger Alcock, MBChB BSc(Hons); Leicester Royal Infirmary (Leicester, England): Ffion Davies, MBChB; Alder Hey Children’s Hospital (Liverpool, England): Bimal Mehta, BSc, MBChB; Barts and The London (London, England): Ami Parikh, BM; Chelsea and

Westminster Hospital (London, England): James Ross, MA, MSc, MBChB; Evelina Hospital (London, England): John Criddle, MBBS, BSc; King’s College Hospital (London, England): Emer Sutherland, BSc MedSci (Hons), MBChB; Lewisham and Greenwich Healthcare Trust (London, England): Tina Sajjanhar; Royal Free Hospital (London, England): Shye Wong, MBBS, BSc (Hons); St George’s Hospital (London, England): Jai Thiagarajan; St Mary’s Hospital (London, England): Ian Maconochie, PhD; North Manchester General Hospital (Manchester, England): Andrew Rowland, BMedSci (Hons), BMBS (Hons); Royal Manchester Children’s Hospital (Manchester, England): Katherine Potier, MBChB, BSc; Nottingham Children’s Hospital (Nottingham, England): Clare Dieppe, MBChB, MSc; Royal Alexandra Hospital (Paisley, Scotland): Lucy Thomas, MBChB; Derriford Hospital (Plymouth, England): Jason Smith, MD; Queen Alexandra Hospital (Portsmouth, England): Chris Vorwerk; Salford Royal Hospital (Salford, England): Kate Lenton, BM; Sheffield Children’s NHS Foundation Trust (Sheffield, England): Derek Burke, MBChB; University Hospital Southampton (Southampton, England): Jason Barling; Sunderland Royal Hospital (Sunderland, England): Niall Mullen, MBChB; Morriston Hospital (Swansea, Wales): Kirsty Dickson-Jardine.

#### PREDICT:

Canberra Hospital (Canberra, ACT, Australia): Kam Sinn, MBBS; The Children’s Hospital at Westmead (Sydney, NSW, Australia): Mary McCaskill, MBBS; The Gold Coast Hospital (Gold Coast, QLD, Australia): Shane George, BSc, MBBS, MPH; John Hunter Hospital (Newcastle, NSW, Australia): Michael Zhang, MBBS; Kidz First Middlemore Hospital (Otahuhu, Auckland, New Zealand): Jocelyn Neutze, MBChB; Lady Cilento Children’s Hospital (Brisbane QLD, Australia): Natalie Phillips, MBBS; Monash Children’s Hospital (Melbourne, VIC, Australia): Simon Craig, MBBS; Princess Margaret Hospital, (Subiaco, WA, Australia): Meredith Borland, MBBS; Royal Children’s Hospital (Melbourne, VIC, Australia): Franz E. Babl, MD; Starship Children’s Hospital (Auckland, New Zealand): Stuart Dalziel, MBChB, PhD; Sunshine Hospital (Melbourne, VIC, Australia): Lisa Barrow, MBBS; Sydney Children’s Hospital (Sydney, NSW, Australia): Arjun Rao, MBBS; The Townsville Hospital Townsville (Townsville, QLD, Australia): Jeremy Furyk, MBBS; Women’s and Children’s Hospital (Adelaide, SA, Australia): Amit Kochar, MD.

#### REPEM:

Meyer University Children’s Hospital (Firenze, Italy): Niccolò Parri, MD; Cruces University Hospital (Bilbao, Spain): Javier Benito, MD; Cukurova University (Adana, Turkey): Hayri Levent Yilmaz, MD; University of Padova (Padova, Italy): Liviana Da Dalt, MD; Hacettepe University, Ihsan Dogramaci Children’s Hospital (Ankara, Turkey): Ozlem Teksam, MD; Hamad Medical Corporation (Doha, Qatar): Geetanjali Srivastava, MD; Heim Pal Children’s Hospital (Budapest, Hungary): Zsolt Bogнар, MD; Hôpitaux Universitaires de Genève (Genève, Switzerland): Alain Ger-vaix, MD; Hospital Targu Mures (Targu Mures, Romania):

Diana Moldovan, MD; Hospital Universitari Sant Joan de Déu (Barcelona, Spain); Carles Luaces-Cubells, MD; King Faisal Specialist Hospital and Research Center (Riyadh, Saudi Arabia); Nadeem Qureshi, MD; Necker Enfants Malades Hospital (Paris, France); Gerard Cheron, MD; Onze Lieve Vrouwe Gasthuis (Amsterdam, The Netherlands); Felix Kreier, MD; Rio Hortega University Hospital (Valladolid, Spain); Roberto Velasco, MD; Robert Debré Hospital (Paris, France); Luigi Titomanlio, MD; Schneider Children's Medical Center of Israel (Petah Tikva, Israel); Yehezkel Waisman, MD; Service de Biostatistique, Epidémiologie, Santé Publique et Informatique Médicale—CHU de Nîmes (Nîmes, France); Sandrine Leroy, MD; Sophia's Children's Hospital (Erasmus MC, Rotterdam, The Netherlands); Henriette Moll, MD; Szent Gyorgy Teaching Hospital (Szekesfehervar, Hungary); Gabor Simon, MD; University Hospital Ghent (Ghent, Belgium); Patrick Van de Voorde, MD; Cruces University Hospital (Bilbao, Spain); Santiago Mintegi, MD.

**Table I. Respondent characteristics**

Characteristics	Respondents
Age, mean (SD); median	39.5 (9.7); 38.0
Sex (%)	
Female	59.3
Male	40.7
Occupation (%)	
Physician	62.2
Nurse	37.8
Years of experience, mean (SD); median	
All patient care	15 (9.8); 13.0
ED patient care	9.5 (7.5); 8.0
ED type (%)	
PED ED	48.2
Combined pediatric and adult ED	33.5
Adult ED	16.1
Other (did not fit criteria)	2.2
Hospital affiliation (%)	
Academic/university hospital	72.7
Nonacademic/university hospital	27.3
Availability of mental health practitioners (%)	
Available at least a few hours per d	52.5
Available on call	26.0
None available	18.2
No categories applied (eg, varying availability)	3.3
Training in psychosocial care for injured children (%)	
No training	88.9
Training in the past y	1.8
Training 1-5 y ago	5.2
Training 5-10 y ago	2.3
Training over 10 y ago	1.8
Country of employment (%)	
China	17.3
US	16.2
United Kingdom	12.5
Australia	9.5
Canada	9.0
New Zealand	9.0
Italy	5.2
South Korea	2.4
France	2.2
Switzerland	1.4
Ireland	1.3
The Netherlands	1.3
Argentina	1.2
Belgium	1.2
South Africa	.9
Other	9.4

*PED ED*, pediatric ED.

Note: N = 2648.

**Table IV.** Respondents' view of psychosocial care aspect as part of their job

Aspect of psychosocial care	"Not my job" (%)
1. Respond calmly and without judgment to a child's or family's strong emotional distress	1.2
2. Talk with children in age appropriate language	1.0
3. Tailor your approach according to a family's cultural background	1.0
4. Assess and manage pain in children	1.4
5. Explain procedures to children and parents	1.2
6. Inform a child about an injured/deceased family member	4.2
7. Help a child/parent who is anxious to calm down by teaching relaxation (eg, breathing) techniques	1.4
8. Assess a child's or family's distress, emotional needs, and support systems	1.7
9. Elicit trauma details from a child or family without them being exposed to more distress	1.2
10. Respond to a child's (or parent's) question about whether the child will die	1.6
11. Liaise with staff who can provide practical assistance to a family (eg, social work)	2.7
12. Take action to get someone close (a parent, family member or friend) available to the child in the ED	1.9
13. Encourage parents to make use of their own social support system (family, friends, spiritual community, etc.)	1.1
14. Educate children and families about common traumatic stress reactions	2.2
15. Teach parents or children specific ways to cope with procedures in the ED	1.5
16. Provide information to parents about emotional or behavioral reactions that indicate that the child may need help (when back at home)	2.4
17. Educate parents or children about how to access mental health services if needed	2.6
18. Manage your own emotional responses to children's pain and trauma	0.9

Note. N = 2648. The 5 aspects of psychosocial care that had the highest percentages are highlighted.

**Table VII.** Respondents' views of their ED's performance

	Poor (1) (%)	Fair (2) (%)	Good (3) (%)	Excellent (4) (%)	Mean (SD)
<b>General aspects</b>					
1. Providing psychosocial care to injured children and their families	12.9	31.9	42.7	12.4	2.5 (.87)
2. Helping staff manage their own emotional responses to patients' pain and trauma	16.1	35.0	39.3	9.6	2.4 (.87)
3. Using scientific evidence as a basis for psychosocial care for patients and staff	26.9	39.1	28.4	5.6	2.1 (.87)
<b>Specific aspects (8 elements of PFA)</b>					
1. Contact and engagement	6.5	24.5	50.1	19.0	2.8 (.81)
2. Safety and comfort	5.3	24.2	48.5	22.0	2.9 (.81)
3. Stabilization	4.1	23.8	50.5	21.6	2.9 (.78)
4. Information gathering on current needs and concerns	8.1	26.8	47.8	17.4	2.7 (.84)
5. Practical assistance	8.1	28.0	45.1	18.8	2.7 (.85)
6. Connecting children/families with social supports	14.1	27.7	41.5	16.7	2.6 (.92)
7. Giving information on coping	18.0	40.7	33.7	7.6	2.3 (.85)
8. Linking children/families with collaborative services	17.5	33.1	37.3	12.2	2.4 (.92)

PFA, Psychological First Aid.

Note: N = 2566-2621 respondents who perceived the aspect of psychosocial care as part of the ED's role.

**Table VIII. Respondents' training preferences**

<b>Training mode</b>	<b>First preference (%)</b>	<b>Second preference (%)</b>	<b>First or second preference (%)</b>
Online: interactive website (eg, webinar, video examples, quizzes)	25.0	18.6	43.6
Group training in-person in 1 block of h	23.4	16.9	40.3
Online: website and written information	16.0	17.0	33.0
Group training in-person spread over a number of wk	13.1	15.6	28.7
A book on the topic	7.8	10.5	18.3
Individual mentor sessions with an experienced clinician of my own profession	9.3	7.1	16.4
Individual mentor sessions with a mental health clinician	5.6	7.4	13.0
No second preference		6.9	
Total	100.0	100.0	

Note: N = 2466 respondents who indicated a wish for training. The training modes are ordered from most to least popular as first or second preference.