healthcare

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Supplementary Material

End-of-Life Care Challenges from Staff Viewpoints in Emergency Departments: Systematic Review

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Table S1. Terms: PubMed.

Term 1	Emergency Service, Hospital, emergency department, emergency room,
Term 2	Terminal Care, Palliative Care, end of life,
Term 3	Attitude of Health Personnel, Health Personnel/psychology, staff views, staff opinion, staff opinions, staff attitudes
Complete phrase	((((“Emergency Service, Hospital”[Mesh]) OR “emergency department” OR “emergency room” OR “emergency rooms”) AND ((“Terminal Care”[Mesh] OR “Palliative Care”[Mesh]) OR “end of life”) AND ((“Attitude of Health Personnel”[Mesh] OR “Health Personnel/psychology” [Mesh]) OR “staff views” OR “staff opinion” OR “staff opinions” OR “staff attitudes”)))

Table S2. Quality Assessment Appraisal for Quantitative Studies.

Study	Beckstrand et al., 2008	Beckstrand et al., 2012	Beckstrand et al., 2012	Beckstrand et al., 2017	RICHARDSON et al., 2016	Wolf et al., 2015
Selection Bias	3	3	3	3	3	2
Study Design	3	3	3	3	3	3
Confounders	3	3	2	3	1	3
Blinding	2	2	1	2	2	3
Data Collection Methods	1	1	1	1	2	1
Withdrawals and Drop-out	1	N/A	1	3	2	1
Global Rating	3	3	1	3	3	3
Final Decision of both reviewers	WEAK	WEAK	WEAK	WEAK	WEAK	WEAK

1: strong: 2; Moderate; 3: Weak.

Table S3. Quality Assessment Appraisal for Qualitative Studies.

Study	Bailey et al., 2011	Fassier et al., 2015	Granero-Molina et al., 2016	Hogan et al., 2016	Kongsuwan et al., 2016	SHEARER et al., 2014	Stone, et al., 2011	Tse, et al., 2016	Wolf et al., 2015
Question/objective sufficiently described?	2	2	2	2	2	2	2	2	2
Study design evident and appropriate?	2	2	2	2	2	1	1	2	2
Context for the study clear?	2	1	2	2	1	1	2	1	2
Connection to a theoretical framework/wider body of knowledge?	2	1	2	0	2	1	1	0	1
Sampling strategy described, relevant and justified?	1	2	2	1	2	1	0	0	2
Data collection methods clearly described and systematic?	2	2	2	1	1	1	1	1	2
Data analysis clearly described and systematic?	2	2	1	2	2	1	2	2	2
Use of verification procedure(s) to establish credibility?	2	1	2	2	2	0	1	2	2
Conclusions supported by the results?	2	2	2	2	2	2	2	1	2
Reflexivity of the account?	2	2	0	2	2	1	1	0	2
Overall scores out of 20	19	17	17	16	18	11	13	11	19

2: Yes; 1: Partial; 0: No.

Table S4. Themes and Sub-themes.

1-EOLC education and training.

Sub-Theme / REF	EOLC Training	EOLC Education	Profession Attitude
Author: Wolf et al., 2015. Country: USA	Concerns around challenges with EOL care, appropriate training for nurses.	Dissonance between the nature of emergency care and the nature of EOL care	
Author: Beckstrand et al., 2017 Country: USA	The lack of an ideal death (e.g., the nurse personally knows the patient, issues with family members, and unknown patient wishes) was the top obstacle		
Author: Granero-Molina et al., 2016 Country: Spain	"Lack of a palliative culture"		"Being self-critical with professional attitudes,": Nurses noted that they treat patients in impersonal and dehumanized way and Such attitudes cannot be excused by situations of overcrowding.
Author: Tse, Hung and Pang, 2016 Country: Hong Kong	enhancing personal growth and professionalism		
Author: Bailey, Murphy and Porock, 2011 Country: UK		Dissonance between the nature of emergency care and the nature of EOL care	Care quality dissatisfaction
Author: Fassier, Valour, Colin and Danet, 2016 Country: France			Physicians revealed a representation of elderly patients that comprised both negative and positive stereotypes, and expressed the concept of physiologic age. These age-related factors influenced physicians' decision making in resuscitate/not resuscitate situations.
Author: Stone et al., 2011 Country: USA		Respondents felt that palliative care is not prioritized appropriately, leading patients to be unaware of their options for end-of-life care. Providing educational materials and courses that have been developed from the ED perspective should be included in ongoing continuing medical education.	
Author: Richardson et al., 2016 Country: Australia	Focused training may improve decision-making consistency between emergency physicians (EP) and emergency registrar (ER).	Focused education may improve decision-making consistency between EP and ER.	That there are differences between EP and ER in the level of treatment provided, rates of withdrawal, the considerations that were rated important and the time to death for patients. It also showed that ER made a significant number of end-of life decisions on their own.
Author: Shearer, Rogers, Monterosso, Ross-Adjie and Rogers, 2014 Country: Australia	No clinical proficiency in symptom control.	Most reporting only working knowledge of palliative care but clinical proficiency in symptom control.	

2-ED design.

Sub-Theme / REF	ED Physical Design	Pt Privacy
Author: Beckstrand et al., 2008 Country: USA	Poor design of emergency departments	
Author: Beckstrand et al., 2012 Country: USA	Nurses did not report that ED design was as large an obstacle to EOL care as previous studies had suggested. Nurses reported that the ED design helped EOL care at a greater rate than it obstructed EOL care	The most common request for design change was private places for family members to grieve
Author: Beckstrand et al. 2012. Country: USA	The poor design of emergency departments that does not allow for privacy of dying patients or grieving family members	
Author: Hogan et al., 2016 Country: Canada	The environment made it difficult to care for dying patients and their families because of unpredictability, busyness, noise	The environment made it difficult to care for dying patients and their families because of lack of privacy
Author: Kongsuwan et al., 2016 Country: Thailand		Lacking for privacy for peaceful deaths

3-Lack of family support.

Sub-Theme / REF	Understanding of Family Members	Answering Family Members' Calls during Their Shifts	Support of Bereaved Family Members
Author: Beckstrand et al., 2008 Country: USA	Family members not understanding what "life-saving measures" really mean		
Author: Beckstrand et al. 2012. Country: USA	The top 3 perceived obstacles by rural emergency nurses were: (1) family and friends who continually call the nurse for an	The top 3 perceived obstacles by rural emergency nurses were: (1) family and friends who continually call the nurse for an	
Author: Hogan et al., 2016 Country: Canada			These nurses were also put in the position of caring for the suddenly bereaved family members, which was viewed as an especially challenging aspect of their role
Author: Granero-Molina et al., 2016 Country: Spain	"Family obstinacy and hospital rescue," with the subthemes "making ill-advised choices" and "avoiding burden."		

4-Work Load.

Sub-Theme / REF	Work Load
Author: Beckstrand et al., 2008 Country: USA	ED nurses' workloads being too high to allow adequate time for patient care
Author: Beckstrand et al., 2017 Country: USA	Insufficient ED staff
Author: Kongsuwan et al., 2016 Country: Thailand	"no time for palliative care"

5-ED staff communication and decision making.

Sub-Theme / REF	Conflicts between Physicians and Nurses	Physicians' Communication	EOL Decision Making
Author: Beckstrand et al., 2017 Country: USA	Power struggles between nurses and physicians		
Author: Fassier, Valour, Colin and Danet, 2016 Country: France		Three main communication patterns framed the decisions: interdisciplinary decisions, decisions by 2 physicians on their own, and unilateral decisions by 1 physician. • Conflicts and communication gaps occurred at the ED	End-of-life decisions were perceived as more complex in the ED, in the absence of family or of information about elderly patients' end-of-life preferences, and when there was conflict with relatives, time pressure, and a lack of training in end-of-life decision making. During decision-making, patients' safety and quality of care were potentially compromised by delayed or denied intensive care and lack of palliative care.

6-EOLC quality in ED.

Sub-Theme / REF	Improving Dying Person Care	Measuring EOLC
Author: Hogan et al., 2016 Country: Canada		"Needing to know you've done your best."
Author: Granero-Molina et al., 2016 Country: Spain	"Being exposed in a cold world," with the subtheme "improvising dying person care"	

7-Recourses availability (time, space, appropriate interdisciplinary personnel).

Sub-Theme / REF	Recourses Availability (Time, Space, Appropriate Interdisciplinary Personnel)
Author: Wolf et al., 2015. Country: USA	A lack of resources to provide this type of care in the emergency setting.
Author: Tse, Hung and Pang, 2016 Country: Hong Kong	Expressing ambiguity toward resource deployment

8-Integrating PC in ED.

Sub-Theme / REF	Integrating PC in ED
Author: Stone et al., 2011 Country: USA	Palliative care is very important to provide even in the challenging setting of the ED. In general, respondents spoke of these benefits in three distinct categories: patient, family, and provider benefits. Patients: Pain management &Quality of life Families: More prepared for death Health providers: Training can broaden perspective for emergency physicians in training & Increased job satisfaction

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