Emergency clinician perceptions of end-of-life care in Irish emergency departments: a cross-sectional survey

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ABSTRACT

Background Patients with end-of-life care (EoLC) needs present to the emergency departments (ED) frequently and at times, it can be difficult to provide a high standard of care. Within the Irish setting, there is limited literature on the provision of EoLC in EDs and this study, therefore, aimed to evaluate the perceptions of emergency medicine (EM) clinicians regarding the provision of EoLC in EDs in Ireland.

Methods The End-of-Life Care in Emergency Department Study was a cross-sectional electronic survey study of EM doctors working across 23 of the 29 EDs in the Ireland. This study was conducted through the Irish Trainee Emergency Research Network over a 6-week period from 27 September 2021 to 8 November 2021. Analysis of the survey domains regarding knowledge and attitude has been published previously by the present authors, with this current analysis focusing on communication, education and resources for the provision of EoLC in EDs. Descriptive data on outcomes are reported with additional subgroup analysis according to years of experience in EM.

Results Of the 694 potential respondents, 311 (44.8%) had fully completed surveys. The majority (62% n=193) were between 25 and 35 years of age with 60% (n=186) having <5 years' experience in EM; 58% (n=180) were men. Experienced respondents (>10 years' experience) were more likely to agree that they were comfortable discussing EoL with patients and families than those with <5 years' experience (80% vs 32%) (p<0.001). Questions on ED infrastructure revealed that just 23.5% agreed that appropriate rooms are allocated for EoL patients, with just 11.6% agreeing that the physical environment is conducive to the provision of EoLC.

Conclusion EM clinicians agree that they are comfortable breaking bad news and discussing EoLC with patients and families, but disagree that adequate resources and infrastructure are in place to provide a high standard of EoLC in Irish EDs. Challenges exist centred on training and infrastructure and addressing these may lead to enhanced EoLC in the future.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ It can be a challenge to provide a high standard of care of end-of-life care (EoLC) in the emergency department (ED), for multiple reasons as reported internationally. In Ireland, it is unknown what the perceptions of Irish clinicians are regarding the provision of EoLC, with regards to communication, clinical management and resources.

WHAT THIS STUDY ADDS

⇒ EM clinicians with many years of experience are comfortable discussing EoL with patients and families but less experienced clinicians are not. Regardless of experience, most clinicians feel that the clinical environment in their ED is not conducive to the provision of EoLC, and that there is a clear desire for further training in all aspects of EoLC.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Education and infrastructure are potentially modifiable barriers to the provision of EoLC in Irish EDs as shown in this study, but the findings are likely similar to international EDs. Targeted improvements are likely to improve not only the standard of care but also the confidence of clinicians providing this care.

INTRODUCTION

Emergency medicine (EM) is a specialty developed around the stabilisation and management of acute illness and injury, with EM clinician training focused predominantly on providing treatment to preserve life.[1] However, it is well recognised that patients present to emergency departments (EDs) in the last days or hours of their lives, switching the focus of the EM clinician from life preservation to the provision of comfort and dignity during the dying process.[2–5]

Internationally, studies from Hong Kong, Australia and Kuwait have demonstrated that EM clinicians are comfortable with some aspects of end-of-life care (EoLC), but the ED skillset may not translate into the specific needs required for all EoLC patients.[2 6 7] There is also a sense that 'less is more' and that EM clinicians 'cannot do everything' for all patients, which perhaps leads to the perception that EoLc may be beyond the scope of ED staff.[8–13] Healthcare delivery varies from country to country and it is currently unknown if Irish clinicians have the same perception as international colleagues. Future interventions towards EoLC rely on this knowledge.

In Ireland, the aim of the Adult Palliative Care Services Model of Care is that: 'every person with a

Table 1 Demographics of respondents who completed the survey

	N (%)
Age of respondents	
25–35	193 (62)
36–45	87 (28)
46–55	25 (8)
>55	6 (2)
Gender	
Male	180 (57.9)
Female	129 (41.5)
Prefer not to say	2 (0.6)
Current position	
Intern	6 (1.9)
SHO	111 (36)
Registrar	81 (26)
Specialist registrar	41 (13)
Senior registrar	13 (4.2)
Post CCT fellow	4 (1.3)
Consultant	55 (18)
Years in EM	
<2 years	102 (32.8)
3–5 years	84 (27)
6–10 years	69 (22.2)
11–20 years	41 (13.2)
21–30 years	10 (3.2)
>30 years	5 (1.6)
Type of practice	
Adults only	134 (43.1)
Children only	16 (5.1)
Adults and children	161 (51.8)

CCT, CCT, Certificate of Completion of Training; EM, emergency medicine; SHO, senior house officers.

life-limiting condition can easily access a level of palliative care appropriate to their needs regardless of care setting or diagnosis to optimise quality of life'.[14] The present authors have recently surveyed EM clinicians in Ireland (End-of-Life Care in Emergency Department Study (EDEL)) regarding their attitude and knowledge of EoLc in EDs. This analysis found that there is a positive attitude towards treating EOL patients, and a recognition that adequate comfort at this time can minimise the suffering endured by patients and families.[15] However, this analysis also demonstrated a lack of awareness and knowledge of EoLC, particularly among less experienced doctors.

Within the Irish setting, there is limited evidence regarding the adequacy of EoLC in EDs. This analysis aimed to further describe the findings of the EDEL survey regarding EM clinician perception of EoLC communication, education and infrastructure in Irish EDs.

METHODS

The methods, survey design and survey development for this study have been described previously.[15] The Irish Trainee Emergency Research Network (ITERN) conducted the survey from 27 September 2021 to 8 November 2021. ITERN is a research network led by EM trainees, which aims to provide a platform for multicentre studies to be undertaken in Ireland.[16] The findings were reported in accordance with the Checklist for Reporting Results of Internet E-Surveys.[17] Ethical approval was obtained from the Clinical Research Ethics Committee of the Cork Teaching Hospitals, with each participating site gaining institutional approval before commencement. CREC Review Reference Number: ECM 4 (b) 1 June 2021. There was no involvement of patients or public in this study.

Setting

There are 29 EDs in Ireland, which can be classified into three categories: 21 mixed adult and paediatric EDs, 3 paediatric-only EDs and five adult-only EDs. Of these, 16 are accredited training centres for EM. The clinical team in an Irish ED consists of consultants and Non-Consultant Hospital Doctors (NCHDs). NCHDs hold a mix of training and non-training positions. Senior house officers are postinternship doctors who work from postgraduate year (PGY) 2–4, while registrars (not in training) are PGY 3–5. Specialist registrars (on training) are PGY 4–8, and fellows are PGY 8 and above. They undertake postcompletion of training subspecialisation that can last up to 2 years before becoming consultants.

Participants

Invitations were disseminated electronically by ITERN to site leads, who enrolled their ED in the study. 79% (n=23) of EDs agreed to participate in the EDEL. Mixed adult and paediatric EDs accounted for 69.6% (n=16) of sites registered, with the remainder being adult only (21.7%, n=5) and paediatric only (8.7%, n=2). ED attendances ranged from 25 000 to 82 000 patients per year. Invitations were disseminated locally by site leads in each ED to their departmental colleagues via email or Whatsapp messaging groups.

Doctors who had been employed in their main role as ED doctors in the preceding month were included. This included EM consultants, EM specialist training doctors, General Practice trainees, clinical fellows and non-trainee EM doctors. A total of 694 doctors worked across the included sites during the study period.

Survey development

The survey tool used in this study was adapted from a validated palliative care evaluation toolkit by Eagar *et al* and the CODE-EM questionnaire (Care of the Dying Evaluation Emergency Medicine) and combined with questions from Shearer *et al* for the Irish context.[6 18 19] The final EDEL survey tool consisted of a 107-item questionnaire (online supplemental appendix 1). This analysis focused on domains 1, 4, 5 and 6 (Demographics, Communication in EoLC, EoL Clinical Management and EoLC Services and Resources, respectively).

Patient and public involvement

Patients or the public were not involved in the design, or conduct, or reporting or dissemination plans of this study.

Survey distribution and recruitment

The survey was administered via the online secure Research Electronic Data Capture (REDCap) platform with no participant identifiers. The Royal College of Surgeons in Ireland provided access to REDCap but was otherwise not involved in the study.

At the start of the survey, participants were provided with information about the study, followed by a consent section. Participation in the survey was voluntary and anonymous, with no incentive to return. Participants were allowed to exit the survey at any time if they no longer wished to participate. Survey duration was approximately 20 min, and participants could return to re-enter their record and complete responses.

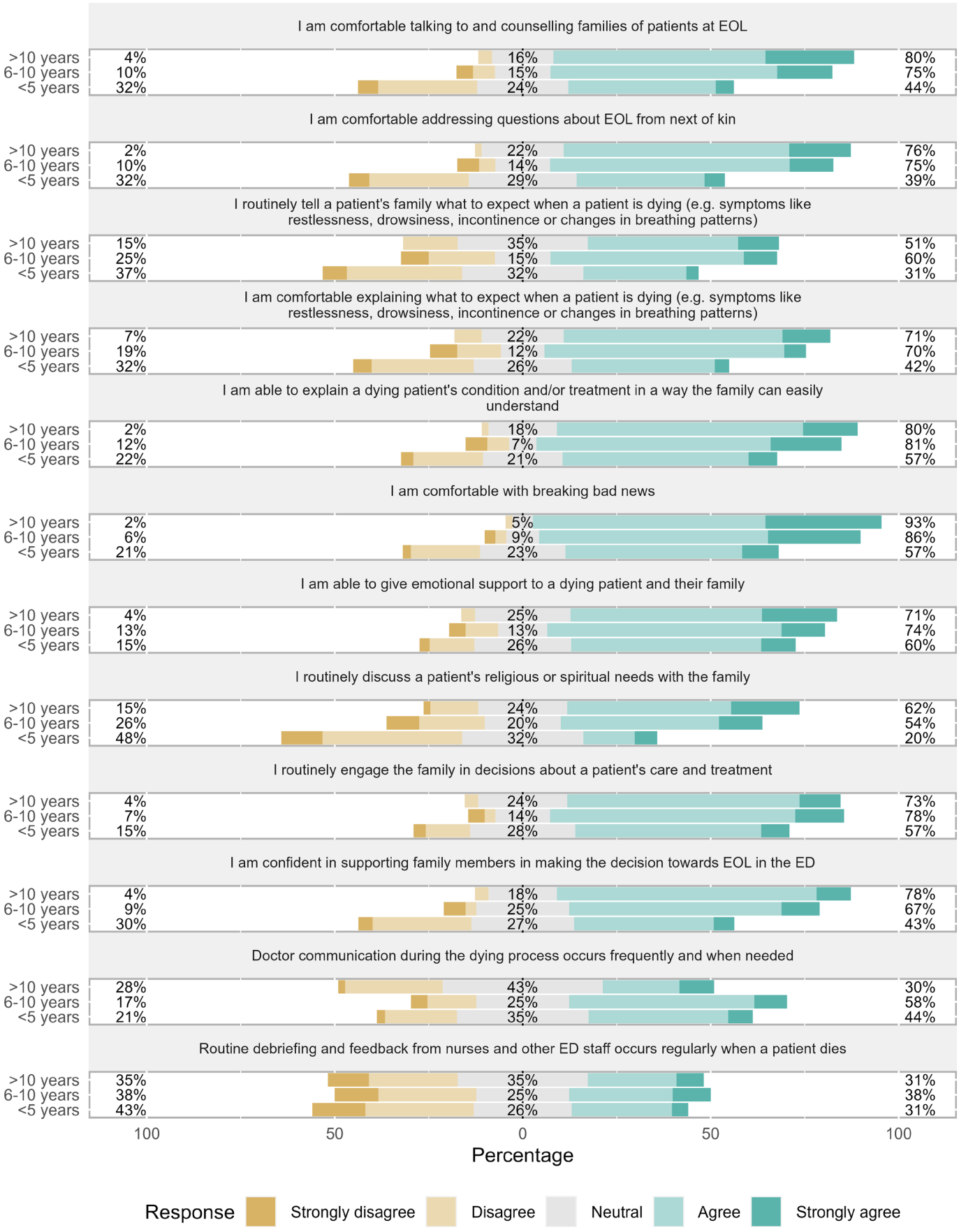

Figure 1 Communication in EOL care in ED according to years in EM. ED, emergency department; EM, emergency medicine; EOL, end-of-life.

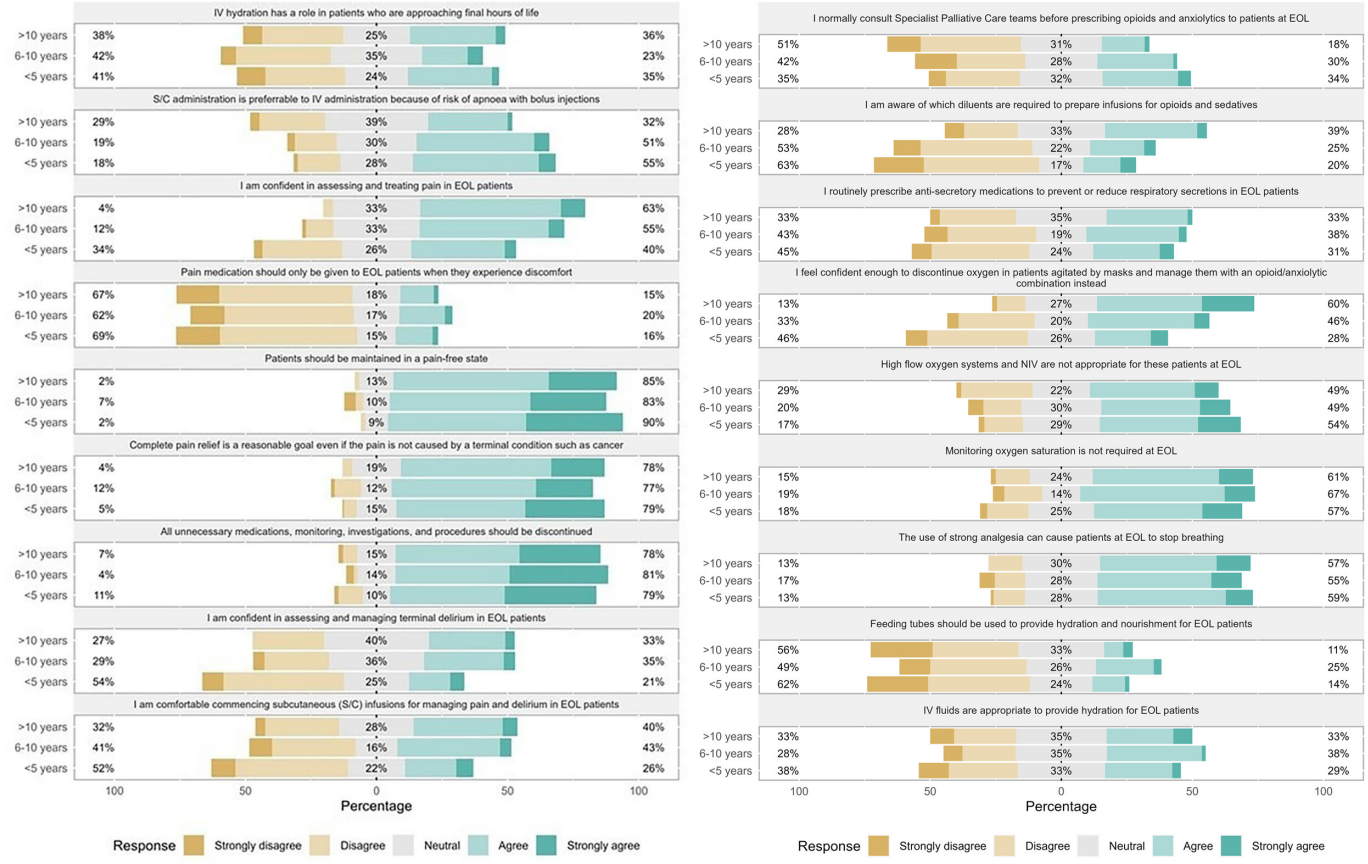

Figure 2 Clinical management in ED according to years in EM. ED, emergency department; EM, emergency medicine; EOL, end-of-life.

The time to complete the survey was not measured. The survey was open, and not password protected. This study did not use methods to prevent participants answering the survey two times.

Statistical analysis

The survey consisted of 107 questions. Only the participants with complete survey responses were included in the final analysis as completed domains were needed to undertake analysis as the incomplete responses were varied in their level of completion. Scores were assigned for each of the 5-point Likert scale options for each question (5=strongly agree, 1=strongly disagree), and the mean score of each question was calculated to reflect the level of agreement for each item. When agreement is reported, this refers to clinicians who reported 'agreed' or 'strongly agreed'. To evaluate variations, EDs were grouped into those greater than 50 000 (>50 K) versus less than 50 000 (<50 K) annual attendances. This method has been used previously in an Irish multisite airway study and was found to be an accurate discriminator of differences between ED facilities, infrastructure and staffing.[20] Descriptive statistics were used to characterise the clinicians' perceptions of the relevant domains,[1 4 5 7] with clinicians grouped into ≤5 years, 6–10 years or >10 years in EM to evaluate differences in experience; estimates are provided with 95% CIs. Years of experience were chosen as it was felt to be a more accurate discriminator of time spent providing EoLC in EDs versus role. A trainee may have many years of ED experience prior to joining a training programme, or a new consultant will have a different perspective to a consultant of 35 years, so the authors felt this was a more accurate discriminator. Differences between groups were tested using the χ^2 test, or Kruskal–Wallis test with means/SD reported. Statistically significant results were accepted at a p value of less than 0.05. Statistical analysis was performed using the statistical programming language R V.3.6.3.[21]

RESULTS

A total of 441 responses were received from 23 sites, representing a response rate of 63.5%. Of these, 311 fully completed the survey and were included in the analysis, giving a final response rate of 44.8%. Regarding size of ED, there were 114 responses for <50K, vs 197 responses for >50K. The median response rate for all sites was 63.3% (IQR 35.7, 71.6%; range 0%–95.7%). There was no difference between respondents who did and did not complete the survey regarding age, gender, clinical grade and years of experience. The demographics of the respondents are shown in table 1.

Communication in EoLC in the ED

Most respondents (70%) agreed that they felt comfortable breaking bad news to patients or families. Most respondents (65%) agreed that they would routinely engage families in EoLC discussions and decisions for a patient. More experienced clinicians (>10 years in EM) had higher levels of agreement that they were comfortable addressing questions about EoLC from families than those with <5 years of EM (76% vs 39%, p<0.001), and more experienced clinicians agreed that they were confident in supporting family members in decision-making around EoLC in the ED than junior clinicians (78% vs 43%, p<0.001) as shown in figure 1. Religious preferences can be important to patients and families, and 62% of clinicians with >10 years of

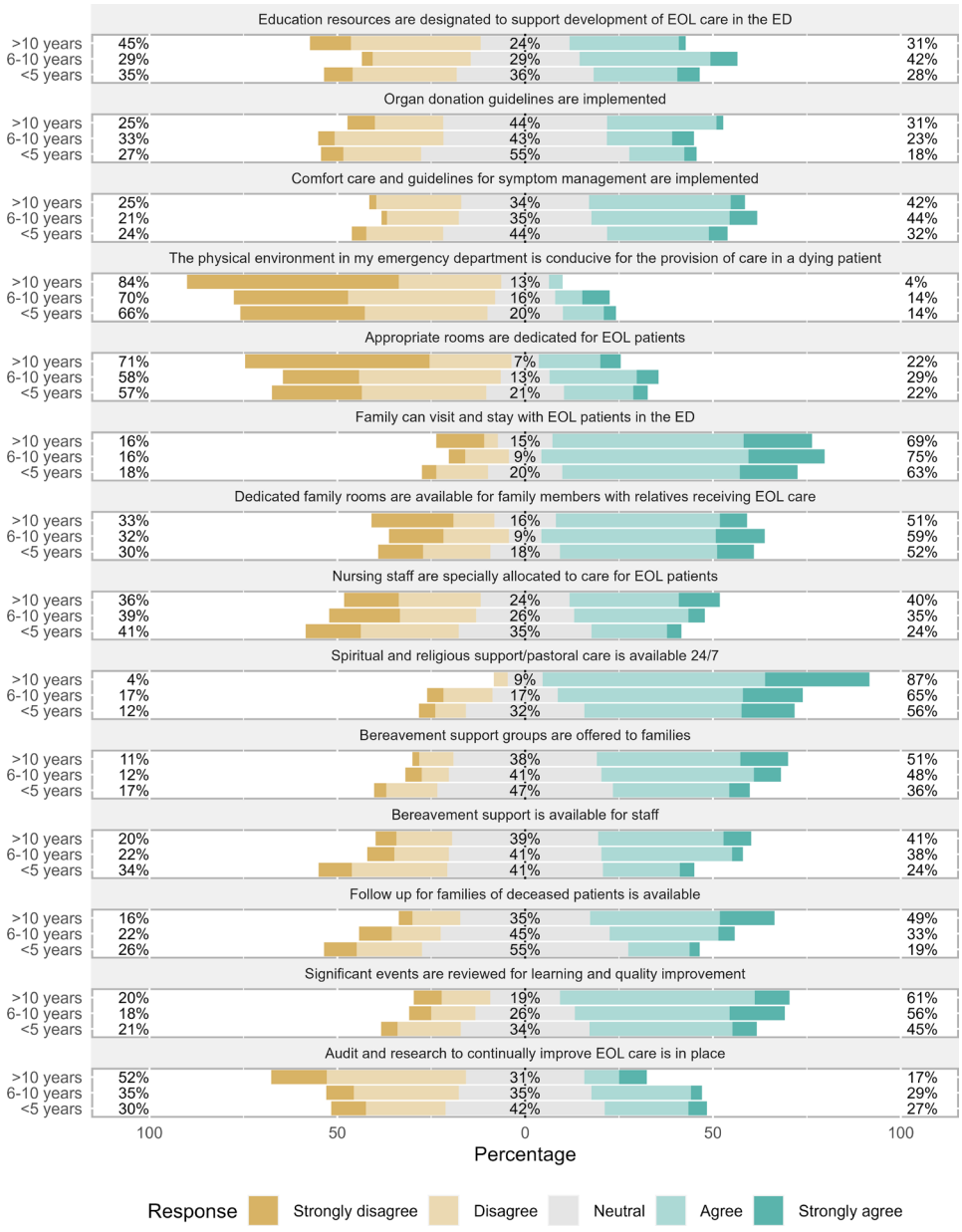

Figure 3 EOL services and resources according to years in EM. ED, emergency department; EM, emergency medicine; EOL, end-of-life.

EM agreed that they discuss religious beliefs with families and patients, vs 20% of those with <5 years of EM (p<0.001).

Clinical management in the ED

EM clinicians agreed (67%) that pain medication should not be withheld until patients receiving EoLC experience discomfort with 87% agreeing that patients should be pain free as much as possible. Most respondents (58%) agreed that strong analgesia at high doses could cause apnoea in opioid-naive patients, with 47.6% agreeing that they are confident in assessing and treating pain in EoLC patients. More experienced clinicians agreed that they were more confident in assessing pain in patients at EoLC when compared with clinicians with <5 years of EM (63% agree vs 40%, p<0.001) as shown in figure 2.

EoLC services and resources

Regarding educational support for the provision of 'good' EoLC in the ED, 31.5% agreed that resources were available, if needed. Only 11.6% of respondents agreed that the physical environment in the ED is conducive to the provision of EoLC, and 32.2% of respondents agreed that routine debriefing and feedback occurred after a death. More experienced clinicians had higher agreement that there is pastoral support available (87% vs 12%, p<0.001). Overall, the minority of respondents agreed with most questions regarding EoLC services and resources as shown in figure 3 and online supplemental figure 1 and tables 1 and 2.

Training, education and service improvement

As shown in figure 4, respondents predominantly agreed on the need for training regarding communication, advanced care planning and symptom control for EoLC patients in EDs. There was no difference between facility size or years in EM demonstrated as shown in online supplemental tables 3 and 4.

DISCUSSION

This prospective cross-sectional survey of Irish EDs has demonstrated the willingness of EM clinicians to engage with patients

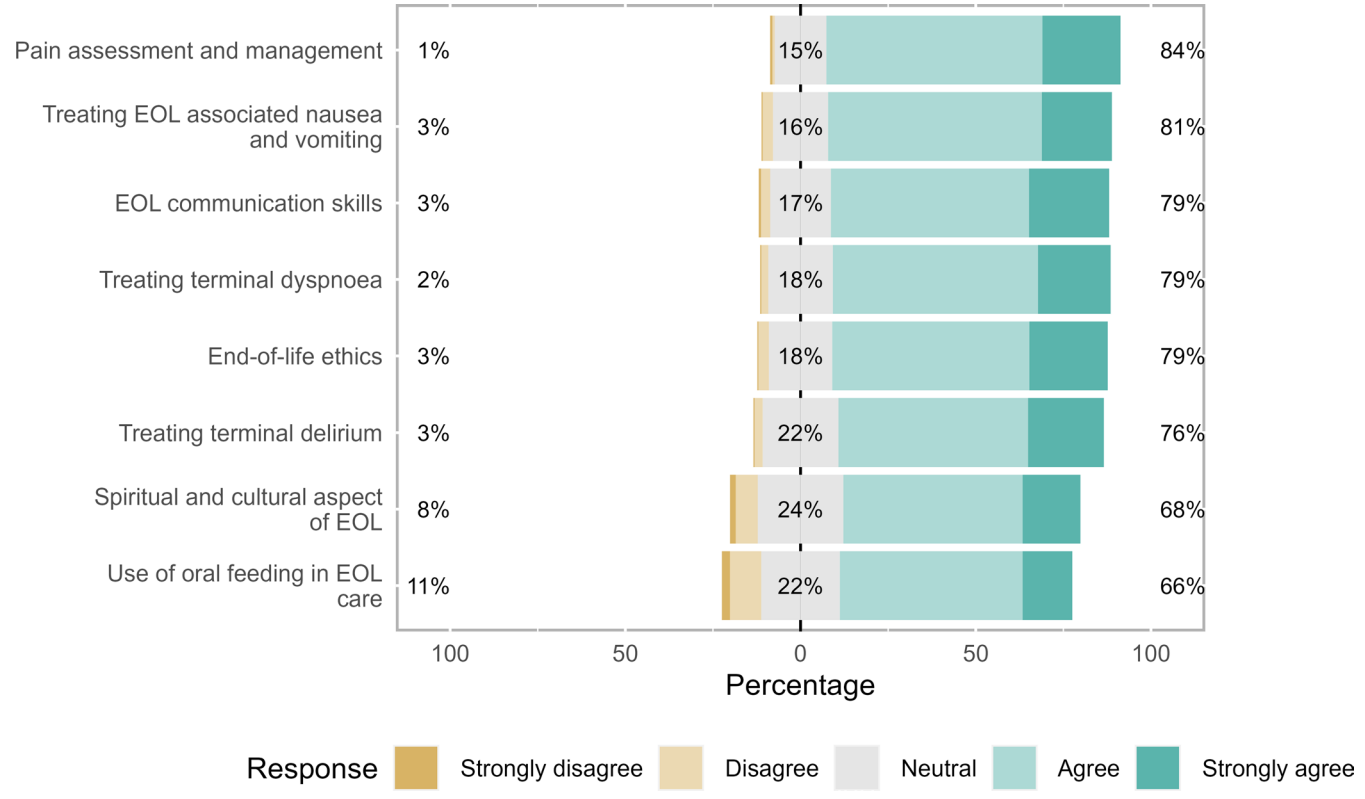

Figure 4 Training, education and service improvement according to years in EM. EM, emergency medicine; EOL, end-of-life.

and families regarding EoLC; however, participants reported perceptions that could acts as barriers to providing good care including a lack of knowledge, infrastructure and education.

Findings from this study suggest that EM clinicians are aware of the importance of providing good care for patients during significant events in their lives. Overwhelmingly the respondents expressed competence or confidence with breaking bad news and were positive about engaging with families about EoLC. This is representative of the specialty, where breaking bad news is unfortunately a common occurrence, often without warning or having prior knowledge of the family or medical history, and these events can often follow a very acute and short illness.[22] This likely explains why clinicians with >10 years of experience and presumed experience dealing with dying patients were more comfortable discussing and answering questions from family members about EoLC than junior clinicians. Clinicians with >10 years experience were also more likely to agree that they discussed religious beliefs, as it is a process they have likely gone through on multiple occasions in their careers. As the dominant religion in Ireland, older patients are likely to follow the Catholic faith and therefore likely to see pastoral involvement as very important at the end of their lives. However, as Ireland becomes more diverse religiously and ethnically, EM clinicians will need to be comfortable addressing religious wishes of all patients at the end of their life.

Henson *et al* analysed ED visits for all patients with cancer in England who died over a 1-year period and reported that while EM clinicians are willing to care for EoLC patients, there are numerous challenges, among which is the lack of a specific palliative care skill set.[23] In this analysis, respondents were confident that EoLC patients should be cared for in a pain-free state and that pain medication should not be withheld. However, when questioned about specific palliative care management, most were not comfortable commencing continuous subcutaneous infusions, were unaware of which diluents to use for medications, did not routinely prescribe anti-secretory medications, or felt comfortable discontinuing oxygen for agitated EoLC patients. Pain is a major component of emergency care, and EM clinicians are confident in managing pain and the subsequent side effects of analgesia, including emesis. These symptoms are managed daily by an EM clinician, and these skills translate across many patient presentations including EoLC. However, in terms of pain control in patients with chronic and more complex and refractory pain, this study highlights that EM clinicians do not express the same comfort levels, and perhaps feel that their knowledge is lacking in this area. This also creates an opportunity for development of collaborations between EM and palliative care teams, to enhance the care provided for these patients when they arrive in ED.

Current staffing and occupancy constraints mean that less than one-third of the respondents agreed that patients at EoL have a single room during their stay in the ED or have a staff member specifically allocated to their care. The majority of respondents felt that the ED environment was the wrong place to receive EoLC. These responses are likely representative of capacity issues in EDs, which impact all patients, not just those experiencing EoLC, which is consistent with international studies.[3 24] Lack of time, space and infrastructure are widely reported as barriers to providing high-quality EoLC.[25 26]

Less than half of the respondents agreed that they were offered psychological support following the death of a patient. It is well established in the prehospital setting that caring for a dying patient is a stressful event, and in an emergency setting, similar to prehospital, it can be challenging to develop rapport with patients or families due to the acute nature of the presentation.[27 28] This balance between providing patient-centred care and providing comfort to a

family is challenging and has the potential to lead to moral distress for ED staff, something which staff psychological support such as the Employment Assistance Programme offered by the Health Service Executive may help to address.[27 29 30] Services such as this are likely underutilised.

In the domains of this study previously reported, we found that inadequate education is a significant barrier to the provision of 'good' EoLC in Irish EDs with only 20% of Irish EM clinicians reporting they had formal EoLC training, and 75% reporting that they had little or no EOLC knowledge.[15] Educational resources, guideline adherence, audits and debrief were all aspects of EoLC that were considered inadequate in this study as per the respondents. As highlighted in figure 4, respondents agreed that all aspects of EoLC regarding communication, advanced directives and symptom management could be taught more often and effectively. Developing these competencies for staff may allow for more confidence and comfort when managing EoLC and likely lead to better care for patients. A national EoLC guideline was published for Irish EDs in 2020 but guidelines such as this are being used by less than half of the survey respondents.[31] Better awareness, promotion and dissemination of such resources may help staff be more confident providing EoLC. This resonates internationally, where both Shearer and Wong recommend educational programmes as means of developing the palliative care skill set for EM clinicians.[6 7] The Royal College of Emergency Medicine produced the End of Life Care Toolkit in 2020 with the mantra; 'When it comes to dying, we only have one chance to get it right', emphasising that EoLC is core business for EM, and an important facet of care unique to ED.[5] A similar educational approach may be useful for Irish EM trainees.

Limitations

Incomplete responses were excluded from the analysis to ensure accuracy of the reported data. The reasons for non-completion are unknown but given the survey duration was approximately 20 min, this may have deterred completion of the survey given the busy work schedules of EM doctors with respondent fatigue a relevant consideration. Other potential limitations include social desirability and acquiescence, but the results of this survey are similar to other international studies, likely reflecting the true opinions of the clinicians responding. The response rate (44.8%, n=311) may be considered a limitation, however is of a magnitude, age and geographical spread that we believe is representative of the EM workforce in Ireland. This study solely represented the views of Irish EM clinicians; its international generalisability is unknown.

CONCLUSION

This study has shown that EM clinicians perceive EoLC as important, and due to the nature of the job, providing EoLC is a common occurrence due to the nature of unscheduled, undifferentiated emergencies. Clinicians in this survey with more experience felt more comfortable with EoLc than less experienced clinicians. However, regardless of experience, there are perceived barriers to the provision of this care regarding infrastructure, training and a lack of educational and debriefing supports for staff. Improved departmental infrastructure, staffing and educational supports are potential solutions to develop this skillset and inclusion of EoLC training into the EM curriculum may provide a vector for improving care.

Correction notice Since this article first published, the right hand side of figure 2 has been updated.

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Contributors JF: project management with ITERN, survey building and distribution, manuscript writing, responsible for overall content as guarantor. EU: project management with ITERN, survey building and distribution, manuscript writing. Both JF and EU contributed equally to this paper and are joint first authors. SS: survey conceptualisation and distribution. JM: project management with ITERN, manuscript editing. OK: survey conceptualisation and design. LB: statistical analysis. MJO'L: survey design, manuscript editing. CD: survey design, manuscript editing.

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Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by Clinical Research Ethics Committee of the Cork Teaching Hospitals. CREC Review Reference Number: ECM 4 (b) 01/06/2021. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer-reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplementary information. There is no additional data available.

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