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Emergency Medicine Provider Comfort with Physician Orders for Life-Sustaining Treatment (POLST) Advanced Directive

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ABSTRACT

Introduction	The Physician Orders for Life-Sustaining Treatment (POLST) form has been shown to lead to more goal-concordant care for these patients by providing detailed instructions regarding end-of-life interventions, made by the patient and/or medical decision maker. The aim of this study was to determine the level of awareness and understanding of the POLST form amongst providers at two ACGME-accredited emergency medicine residency programs.
Methods	In this needs assessment study, we assessed awareness by sending a 13-item survey to all residents, faculty, and advanced practice providers in the two EDs in the United States. The content of the survey was developed by the study team using a modified Delphi process with content validity evaluated by a panel of emergency medicine and palliative care experts. We evaluated the association between the level of comfort and knowledge using the form and the level of training using the bivariate analysis.
Results	Of the 205 questionnaires distributed, we received 63 responses (31%). Only 44% of responders reported using a POLST in the past year, and 40% did not feel comfortable interpreting and applying a POLST. Seventy percent of responders do not know where to locate this form. Furthermore, trainees reported a higher degree of familiarity and comfort with POLST forms when compared to staff physicians.
Conclusion	A significant minority of ED providers do not know how to properly apply a POLST form. Our data suggests opportunities to educate ED personnel on locating and applying the POLST form.

INTRODUCTION

Emergency departments (EDs) in the US and worldwide faces an increasing number of older adults and those with high comorbidity seeking care.[1, 2] EDs across the US see many patients with advanced disease who are actively dying.[3] It is crucial for ED clinicians must engage in a goals-of-care (GOC) discussion with all patients, especially those with a limited life expectancy. ED providers must make important decisions that impact the rest of the patient's hospital stay, and early code status discussions have been found to improve the quality of care in some populations.[4] When preferences are unknown or undiscussed, EDs may default to maximally aggressive care.[5]

The Physician Orders for Life-Sustaining Treatment (POLST) form has been developed to help care for these patients as it provides detailed instructions regarding end-of-life interventions and is prepared by the patient and/or medical decision maker ahead of time. Goals of care (GOC) discussions and do not resuscitate (DNR) orders are sensitive matters that are critical to optimal patient care. As about 75% of older adults with serious illnesses, visit an ED during the last six months of life, emergency medicine (EM) trainees to achieving the competency in the GOC is paramount.[6] Aggressive care toward the end of life tends to increase the healthcare utilization and cost.[7] A seamless transition of care from EDs to inpatient units, intensive care units (ICUs), and discharges to a skilled nursing facility or back to the community requires a robust discussion to address care goals. However, it is unclear

whether EM residents, advanced practice providers (APPs), or even staff physicians and APPs receive adequate training for mastering the goals of care discussion, including the interpretation of the POLST document.

Our objective was to identify this knowledge gap regarding EM residents and attendings' understanding of the POLST document in caring for patients in the ED. We undertook a survey study of two academic EM programs to conduct a needs assessment for the POLST document in the current ED practice.

METHODS

Study Design

We conducted a survey study to assess the needs around the use of the POLST document amongst residents and faculty clinicians from two ACGME Emergency Medicine programs in the United States.

Study Population

The study population was drawn from two ACGME-accredited EM residency programs, one in Iowa and another in Texas, where the listserv includes EM faculty, APPs, and EM residents.

Survey Content

In this study, we aimed to determine the level of awareness and understanding of the POLST form amongst providers. The content of the survey was developed by the study team using the modified Delphi process with content validity evaluated by a panel of emergency medicine and palliative care experts. Demographic questions included on the questionnaire included the role of the survey responder (physician resident, attending, PA, ARNP), the state they practice in, the duration of clinical practice as well as any training they may have had in end of life care. Specific questions were asked about the purpose and understanding of, and how to apply the POLST form, comfort level with the form, concerns regarding the application of the POLST form and use of the POLST form in specific clinical settings. We developed a total of 13 questions, some of which were binary and some of which were answered on a Likert Scale (Tables 1 and 2). A list of questions is listed in Appendix 1.

Table 1: Survey Demographics

	Responses	**Total # of study population**	**Response rate**
	63	130	48%
State	**POLST used**	**POLTS not used**	**P-value**
Texas	7 (23)	21 (68)	<0.0001
Iowa	24 (77)	10 (32)	
Type of Provider	Number (%)		
Attending	26 (41.2)		
APP	3 (4.8)	NA	NA
Resident	27 (42.9)		
Nurse	2 (3.2)		
EMT	0 (0)		
Paramedic	0 (0)		
Other (unknown)	5 (7.9)		

POLST: Physician Orders for Life-Sustaining Treatment, APP: Advanced practice provider, EMT: Emergency medical technician

Survey Administration

We sent a survey to all residents, faculty, and advanced practice providers in the two EDs. For those who did not respond, we sent a reminder in 2 weeks, and treated them as non-respondents if we did not subsequently receive a completed questionnaire.

Statistical Analysis

We collated a descriptive analysis. Then, we measured the internal reliability using Crohbach's test and reported the alpha coefficients. We also evaluated the multivariate logistic regression with the outcome variable of Q13 (had the respondent used a POLST form in practice within the last year). Lastly, we conducted a bivariate analysis of those who used the POLST form (Table 1) and compared the responses between attending physicians and resident physicians (Table 2).

Table 2: Survey Responses Stratified on Whether they used POLST Form Before

	POLST form used	POLST form not used	P-value
I understand the purpose of a POLST form.			
Strongly disagree	1 (3.2)	4 (13)	0.003
Somewhat disagree	0 (0)	5 (16)	
Neither agree nor disagree	1 (3.2)	5 (16)	
Somewhat agree	10 (32)	12 (39)	
Strongly agree	18 (58)	5 (16)	
Missing	1 (3.2)	0 (0)	
I know how to interpret a POLST form.			
Strongly disagree	0 (0)	6 (19)	<0.0001
Somewhat disagree	2 (6.5)	4 (13)	
Neither agree nor disagree	1 (3.2)	11 (35)	
Somewhat agree	14 (45)	8 (26)	
Strongly agree	14 (45)	2 (6.5)	
I know how to apply a POLST form.			
Strongly disagree	0 (0)	5 (16)	<0.0001
Somewhat disagree	3 (9.7)	9 (29)	
Neither agree nor disagree	2 (6.5)	7 (23)	
Somewhat agree	13 (42)	8 (26)	
Strongly agree	13 (42)	2 (6.5)	
I would feel comfortable following a POLST presented by a patient even if it is not in their medical record.			0.013
Strongly disagree	0 (0)	4 (13)	
Somewhat disagree	1 (3.2)	3 (9.7)	
Neither agree nor disagree	1 (3.2)	6 (19)	
Somewhat agree	9 (29)	9 (29)	
Strongly agree	20 (65)	9 (29)	
I know where to locate a POLST form in my practice location.			<0.0001
Yes	16 (52)	1 (3.2)	
No	15 (48)	30 (97)	
A POLST automatically supersedes the decisions of a durable power of attorney in an emergent situation.			0.018
Yes	7 (23)	16 (52)	
No	24 (77)	15 (48)	

POLST: Physician Orders for Life-Sustaining Treatment, APP: Advanced practice provider, EMT: Emergency medical technician

Lastly, we divided them into two groups based on findings from question 13, whether using POLST form within the past year. Then, we compared the responses between attending physicians and resident physicians (Table 3). Overall, residents reported a better understanding of the purpose and

application of the POLST document (Table 3). Residents reported higher use of the POLST form and knowledge of where to find the form than did attending staff.

Table 3: Comparison Between Attending Physicians and Resident Physicians

	Attending (28)	Residents (34)	P-value
I understand the purpose of a POLST form.			
Strongly disagree			0.023
Somewhat disagree	4 (14)	1 (2.9)	
Neither agree nor disagree	5 (18)	0 (0)	
Somewhat agree	4 (14)	2 (5.9)	
Strongly agree	7 (25)	15 (44)	
Missing	8 (29)	15 (44)	
	0 (0)	1 (2.9)	
I know how to interpret a POLST form.			
Strongly disagree			0.001
Somewhat disagree	5 (18)	1 (2.9)	
Neither agree nor disagree	5 (18)	1 (2.9)	
Somewhat agree	9 (32)	3 (8.8)	
Strongly agree	5 (18)	17 (50)	
	4 (14)	12 (35)	
I know how to apply a POLST form.			
Strongly disagree			0.021
Somewhat disagree	4 (14)	1 (2.9)	
Neither agree nor disagree	9 (32)	3 (8.8)	
Somewhat agree	5 (18)	4 (12)	
Strongly agree	6 (21)	15 (44)	
	4 (14)	11 (32)	
I have applied a POLST form to patient care within the past year .			<0.0001
Yes	7 (25)	24 (71)	
No	21 (75)	10 (29)	
I know where to locate a POLST form in my practice location.			<0.0001
Yes	1 (3.6)	16 (47)	
No	27 (96)	18 (53)	

POLST: Physician Orders for Life-Sustaining Treatment, APP: Advanced practice provider, EMT: Emergency medical technician

RESULTS

We had 63 responses of 130 questionnaires sent for a response rate of 48%. The internal reliability test using Cronbach's alpha test appears to be reasonable with the alpha coefficient of 0.76 for a test scale based on all the items. Even though some item-test correlations are not ideal with only a weak correlation, (>0.2), some items show high correlation (>0.5), and some are perfect (>0.8).

Our survey showed that only 44% of responders have used a POLST in the past year, 40% do not feel comfortable interpreting and applying the form, and 72% of responders do not know where to locate this form in their workplace. Our data shows that there is a lack of knowledge regarding the POLST form use and how to easily access it for our patients. (Table 1 and 2)

DISCUSSION

We conducted a needs assessment survey to identify a knowledge gap in using the POLST form in the two different academic EM programs in the United States. From the mixture of EM residents and attending staff, we observed the following: a facility-level variation exists, a higher level of POLST

knowledge is correlated with previous use, and EM residents report greater comfort with the POLST form and are more likely to have used it than attending staff. Hickman et al. conducted a systematic review on the POLST form and concluded that the evidence for POLST reflecting patient or surrogate treatment preferences is lacking,[8] Moss et al. conducted a state-wide survey and concluded that POLST education is necessary to improve any contradicting orders.[9] McGough et al. conducted a pre- and post-test to evaluate the nursing staff's knowledge of POLST and demonstrated the impact of the educational intervention.[10] Our study findings can shape the next step, which requires a scalable training to educate providers about the POLST form in the context of goals-of-care discussions in the clinical setting.

Those discrepant responses from participants from EM programs in Iowa and Texas require an evaluation of the literature. The state of Iowa, where one site is located, mandates that any resident of a skilled care facility resident must have a POLST form created and signed by the primary care provider.[11] This form must accompany the patient from the skilled care facility to the ED. State regulations in Texas have not ratified the POLST as a form of advanced care planning.[11, 12] Recent legislative proceedings, such as in Texas, have led to confusion for healthcare providers regarding the DNR status for patients as in Texas. Previous studies have shown that even with legislative implementation, one difficulty is the provision of high-yield education.[13] Therefore, there is a need to develop a scalable material usable in more than one program.

It is not surprising that those who had used POLST forms were more likely to know the implication. The purpose of the POLST form is to ensure that the wishes of patients with advanced illness or frailty are honored across settings of care, and patients' wishes and preferences are even more important in the context of age-friendly health care, where "what matters" is one of the key components of the 4Ms framework.[14-16] Actual use in the clinical setting may improve understanding of how the form works. Delphi groups recommended several educational domains, such as actual practice-based learning rather than just knowledge in the palliative care competency.[17] To achieve a competency, we recommend the exposure to the POLST form and goals of care discussion in the clinical setting with adequate supervision, after classroom learning that broadly covers the 4Ms broadly and the "what matters" component.

The appropriate use of DNR orders can reduce healthcare costs while respecting patients' wishes.[18] Surprisingly, our survey showed that residents were more comfortable with the POLST form than attending staff. As recently as 2018, emergency physicians reported feeling inadequately trained in addressing end-of-life issues.[19] Our observation that trainees report a higher familiarity and comfort with POLST forms suggests that EM trainees are receptive to education on these issues, opening an opportunity to expand the target learners to both EM residents, APPs, and attending physicians by using the residency didactics to cover the 4Ms framework broadly and the POLST form as a part of the "what matters" conversation at the bedside.

Limitations

The study has several limitations. First, the response was based on each responder's perception of the POLST Second, construct underrepresentation and construct-irrelevant variance could have affected the validity of the survey questions. Third, rater and recall bias must be considered in the results, as the responder was anonymous in the survey. Fourth, we could not evaluate the potential effects of confounders. Fifth, our study team did not include APPs or nursing staff, so there is a potential concern for content validity.

Proposed Curriculum

A discussion of "what matters", a key component of elder care, is one topic that any EM clinicians should be prepared to exercise.[20] Research is needed to evaluate the quality of POLST decisions, explore the experiences of patients and their surrogates, develop decision-support tools, improve clinician education, and assess the effect of POLST on care outcomes through intervention and population-based studies.[8] Our survey indicates that EM clinicians must understand the role of the POLST documents.

So, a potential training can include the regulating the POLST, where to find a form, when considering the content of the POLST form is relevant, and how to incorporate the POLST form into the goals of care discussion.

CONCLUSION

This survey analysis demonstrated the current knowledge gaps in the EM residents and attending staff. Using the POLST form in the clinical setting seems to improve the knowledge and confidence in using the form. Also, interpretation the POLST form is an educational opportunity for residents and attending staff. Thus, we recommend that the POLST form be integrated into the education around the goals of care discussion and implementing "what matters (to the patient),"[14, 15] a component of the 4Ms framework in the age-friendly health system in graduate and continuous medical education.

KEYWORDS

Advance directive, Goals of care, Geriatrics

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CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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