Quality of Physician Orders for Life-Sustaining Treatment Forms Completed in Nursing Homes

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Abstract

Background: The physician orders for life-sustaining treatment (POLST) form allows seriously ill individuals to express their preferences for end-of-life treatments. Despite increased POLST use, little is known about the quality of completed forms.

Objective: We examined the quality of POLST forms prepared for nursing home residents, including whether they had required signatures and clinically consistent care preferences.

Design: We conducted a chart review of POLST forms for a sample of nursing home residents in California.

Setting/Sample: We completed POLST audits for 938 residents in 13 nursing homes in Los Angeles.

Measures: We recorded whether POLST forms were signed by both the patient (or proxy) and the physician, and whether the patient's treatment choices regarding resuscitation and medical intervention were consistent, as required by the California form.

Results: Overall, 69.6% of audited POLST forms had at least one indicator of poor quality. Most lacked a required signature (15.8% lacked a physician signature and 17.4% lacked a patient/proxy signature) and 5.6% had conflicting treatment preferences.

Conclusion: We found 30.4% of POLST forms for nursing home residents were not complete or documented clinically contradictory treatment preferences. Improvement in the quality of POLST forms is needed.

Keywords: advance directives; end-of-life care; nursing homes

Introduction

THE PHYSICIAN ORDERS for life-sustaining treatment (POLST) form allows seriously ill individuals to express their preferences for life-sustaining treatments and comfort measures. Recent studies suggest that POLST are usually honored.^{1–3} Consequently, POLST use is widely recommended for individuals with a life-threatening illness.^{4,5}

Since the POLST form's introduction in 1991, 18 states have implemented POLST programs and 29 more are developing them.⁶ As adoption of POLST forms spreads, concerns about the quality of completed forms have emerged.^{3,7,8} Recent reviews identify challenges ranging from lack of education about the form for providers (Hickman, 2015) to insufficient high-quality evidence that POLST forms and other advance care documents actually engage healthcare professionals in end-of-life discussions.⁷ In addition, there is a dearth of evidence documenting the quality of completed POLST forms, particularly those completed in nursing homes (NHs).

Poor quality POLST forms include forms that document clinically contradictory treatment preferences and are missing required information, including physician signatures and, in some states, patient (or proxy) signatures. One of the few published studies to investigate the quality of completed POLST forms found that 7.3% of 31,294 forms entering into Oregon's statewide POLST registry in 2012 paired a preference to "attempt resuscitation" with a preference for "limited interventions,"⁹ a combination often considered contradictory because cardiopulmonary resuscitation (CPR) involves intubation and mechanical ventilation, interventions typically excluded by requests for "limited" treatment.^{8,10} In response to these findings, Fritz and Barclay call for more research into POLST form completion practices.¹⁰

This study responds to this call by examining the quality and completeness of POLST forms executed in NHs. In particular, we examine the rate of POLST forms that document clinically inconsistent treatment preferences and those missing patient (or proxy) and physician signatures.

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Methods

Participating nursing homes

Conducted in 2012, this study was part of a larger project to provide POLST training to NHs in Southern California. Data for this study were collected at baseline, before the provision of study-related POLST training. NHs were recruited through a study announcement disseminated electronically to a list of NHs within three hours driving distance of the research site. NHs received a \$100 stipend after onsite review of their residents' POLST forms. The study was approved by the research organization's Institutional Review Board.

Data collection procedures

Individual POLST form data. Two researchers conducted chart reviews and coded all available POLST forms on site in each enrolled NH, including forms for both short- and long-stay residents. They accessed POLST forms from residents' medical charts at the nurses' station or a chart room. Charts missing or in use elsewhere were not reviewed. Data were coded using a standardized form previously developed to audit POLST forms.¹¹

Items of interest on the POLST forms included treatment preference items, the patient/proxy signature line, and the physician signature line. POLST forms included three treatment preference sections¹²:

- (A) Resuscitation: (1) attempt CPR and (2) do not attempt to resuscitate.
- (B) Medical intervention: (1) comfort measures only, (2) limited additional interventions, and (3) full treatment.
- (C) Artificially administered nutrition: (1) no artificially administered nutrition, (2) a limited trial, and (3) long-term artificially administered nutrition.

In California, actionable POLST forms, that is, forms that legally can be followed, must include a physician's signature (as of 2016, nurse practitioners and physician assistants may also sign POLST forms) and the patient's or a proxy's signature.^{12,13} In addition, if CPR is selected in the form's first section (A), then full treatment *must* be selected in the second section (B).

Data collection protocol. Researchers used the POLST audit form to collect the previously mentioned items of interest. As a reliability check, two researchers separately coded 20 completed POLST forms, achieving kappa values of 1.00 for each item collected.

Data coding. POLST forms were deemed "consistent" if CPR was selected in section A and full treatment in section B; CPR was selected and section B was left blank (in this case, full treatment is presumed); or do not resuscitate (DNR) was selected in section A with any other section B option selected. The physician signature was coded as either present or not present. We coded a POLST form as signed by the patient/proxy only if either or both signatures appeared on the form. A POLST form was coded as unsigned if this section was left blank; if a staff member noted that consent from the patient or proxy was obtained verbally or by phone, but the patient's or proxy's signature was lacking; or if a NH staff member or the physician signed the form on behalf of the patient.

Facility data. We obtained descriptive data for NHs from CalQualityCare.org, which publishes consumer information about California NHs.^{14,15}

Analysis

We conducted descriptive analyses for variables of interest.

Results

Nursing homes and participants

Thirteen NHs participated in the study. Table 1 presents descriptive data for the facilities. These NHs are not necessarily representative of all California NHs. We reviewed 942 POLST forms, with 4 forms dropped because of missing codes for at least one variable of interest, leaving a final sample of 938 forms. None of the medical charts we accessed included more than one completed POLST form per resident. The estimated percentage of residents in each NH for which we reviewed a POLST form ranged from 37.5% to 100% (mean = 74.1%).

TABLE 1. FACILITY DESCRIPTORS AND NUMBER OF PHYSICIAN ORDERS FOR LIFE-SUSTAINING TREATMENT FORMS REVIEWED IN 2012 SAMPLE OF SOUTHERN CALIFORNIA NURSING HOMES

Facility	No. of beds	Occupancy rate	Estimated No. of beds occupied	No. of POLST forms reviewed	Percentage of estimated occupied beds with reviewed POLST forms
1	95	0.85	81	79	97.5
2	59	0.98	58	53	91.4
3	98	0.80	78	58	74.4
4	72	0.82	59	41	69.5
5	145	0.74	107	74	69.2
6	45	1.00	45	39	86.7
7	116	0.72	84	85	100.0
8	80	0.95	76	55	72.4
9	99	0.97	96	36	37.5
10	120	0.96	115	59	51.3
11	231	0.90	209	100	47.8
12	196	0.93	182	170	93.4
13	131	0.92	121	89	73.6
Mean	114	0.89	101	72.1	74.6

POLST, physician orders for life-sustaining treatment.

TABLE 2. PHYSICIAN ORDERS FOR LIFE-SUSTAINING TREATMENT ITEMS REQUIRED FOR VALIDITY (N=938)

<i>POLST items reviewed</i>	<i>Present, n (%)</i>	<i>Absent, n (%)</i>
Physician signature	790 (84.2)	148 (15.8)
Patient or proxy signature	774 (82.6)	164 (17.4)
Physician and patient/proxy signatures	670 (71.4)	268 (28.6)
Sections A and B consistent	886 (94.4)	52 (5.6)
All signatures and sections A and B consistent	653 (69.6)	285 (30.4)

Individual POLST form items audited

Table 2 presents our audit results. Of the reviewed POLST forms, 28.6% lacked at least one signature, 15.8% were without the physician's signature, and 17.5% were without the patient/proxy signature. Of the POLST forms without a patient/proxy signature, 8.8% were without a signature altogether, whereas 7.8% indicated that consent was obtained verbally or by phone, but lacked the patient's or proxy's signature; 0.7% of these POLST forms were signed by an NH staff member or physician for the patient. Sections A and B treatment choices were inconsistent on 5.6% of reviewed POLST forms. Overall, 30.4% of the reviewed forms were without at least one signature or had inconsistent care choices. Of these, further analysis showed that 80.8% had an error in just one required item, most frequently a missing signature (93.4% of such cases).

Discussion

Overall results

We found that 30.4% of POLST forms audited in 13 California NHs had at least one error or missing item. These results are generally consistent with the few reports of POLST form reviews. In Oregon, 25.5% of 55,366 POLST forms submitted to the state's registry in 2015 were returned as "not registry ready (NRR)."¹⁶ The physician's signature was missing or ineligible in 16.0% of these forms, compared with 15.8% of forms examined in our study. A related study found that 7.3% of POLST forms in the Oregon registry in 2012 documented inconsistent treatment preferences, compared with 5.6% of POLST forms in our study.⁹

Our findings differ somewhat from those reported in a recent study of POLST use in California NHs. Jennings et al. (2016)¹⁷ reported a lower rate of missing signatures on completed POLST forms, with 10% of forms completed in 2011 without a physician signature, 2% without a resident/proxy signature, and 1% without both signatures. The differences in study results may be due, in part, to differences in data collection procedures. In the earlier study, NHs self-reported POLST data using the federally required Minimum Data Set (MDS) resident assessment form. By contrast, we abstracted information from POLST forms that we reviewed in person. This protocol allowed us to identify POLST forms for which resident/proxy consent reportedly was obtained by phone or verbally as well as forms that were signed by staff members or physicians on behalf of residents/proxies. We deemed these forms "unsigned." A secondary analysis of MDS does not allow for a similar assessment of POLST data.

Clinical implications

Although the research is nascent, the cumulative findings of our and other recent studies suggest that a concerning percentage of completed POLST forms are of poor quality and not valid. This conclusion is concerning for two related reasons. First, as noted earlier, POLST forms that document inconsistent care preferences or lack a required signature are not enforceable. Such POLST forms may prevent NH residents from receiving care consistent with their preferences. In particular, residents preferring limited treatment could receive unwanted aggressive care, because the default action for an unenforceable POLST form is to provide all care possible.

Second, inadequately completed forms may reflect poor POLST processes. A POLST form lacking a required signature, for instance, may signal that a person important to shared decision making—that is, the physician, resident, or proxy decision maker—was absent from the POLST discussion. Similarly, a POLST form with contradictory care preferences suggests that the patient/proxy misunderstands the full importance of the choices he or she is electing.

Several factors may contribute to poor quality POLST forms in NHs. According to a report summarizing results of a California survey of long-term care ombudsman, physicians in NHs sometimes complete and sign an "advisory POLST," in which the physician recommends POLST care choices for a resident, before consulting with that resident (or proxy).¹⁸ These advisory POLST forms may not reflect patient care preferences, but may be followed inadvertently once filed in a resident's medical chart, even if they lack the resident's (or proxy's) signature. The report also noted that POLST forms often are completed in NHs by nonhealthcare individuals, including admission clerks.¹⁸ Such practices are contrary to best practice guidelines, which recommend that POLST forms be completed by a healthcare professional—typically the professional legally authorized to sign the medical order—in conversation with the patient.¹⁹ In other studies, NH providers have identified lack of physician availability as a chief problem with POLST form completion.⁴

Recommendations

One way to reduce the number of POLST forms with missing signatures or contradictory care choices is to screen forms through a POLST registry. The POLST registry in Oregon, for instance, identifies NRR forms and returns them so that the senders can correct the completion problems. The problem here is that a substantial number of NRR forms are never returned.

Another strategy to prevent these POLST form errors is to include a checklist of the form's minimum required items. Clinicians would be asked to confirm that the form meets these requirements, thus prompting practitioners to self-audit the form.

We also recommend that POLST form developers clarify what constitutes a "signature" by a patient or the patient's legal decision maker. Does an NH staff member's documentation of a resident's verbal consent or a proxy's phone consent constitute approval of a POLST form? Such questions raise concerns about potential abuse of the consent process, especially as it applies to frail or cognitively impaired NH residents.

Finally, related to above, we recommend more research to examine how POLST discussions are conducted in NHs. Increasing number of researchers and advocates have

identified the need to bridge this gap in knowledge.^{3,17,20} Better understanding of the POLST conversation may shed light on the results found in this study. We also recommend more research to examine whether inadequately completed POLST forms influence patient-related outcomes.

Limitations

We collected data from a convenience sample of NHs, which are not necessarily representative of NHs in California or nationally.¹⁴ In addition, we did not record how many accessed charts lacked a completed POLST form, nor did we review charts missing from the chart room. That noted, we have no reason to believe that missing charts created a selection bias in our sample.

Conclusions

This study found a fairly high rate of poor quality POLST forms in NHs.

POLST forms that fail to meet minimum requirements for completion can compromise care quality by impeding patients' access to the end-of-life treatment they prefer. They also raise concerns about the quality of POLST discussions in NHs. POLST form modifications and more research may address these problems.

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