Concordance of Prehospital and Emergency Department Cardiac Arrest Resuscitation with Documented End-of-Life Choices in Oregon

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CERTIFICATE OF APPROVAL

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Abstract

Study Objective: Resuscitation measures should be guided by prior patient choices regarding their end-of-life care when they exist. We evaluate the concordance of prehospital and emergency department (ED) care provided for patients in out-of-hospital cardiac arrest (OHCA) with a statewide registry of resuscitation orders in Oregon.

Methods: This was a retrospective cohort study of patients found by EMS providers in OHCA in five counties in 2010. We used probabilistic linkage to match patients found in OHCA with previously signed documentation of end-of-life decisions in the Oregon Physician Orders for Life-Sustaining Treatment (POLST) registry. We evaluated resuscitation interventions in the field, ED transport, and hospital admission. We used logistic regression analysis to examine patient-based factors associated with presence of a signed POLST form.

Results: There were 1,577 patients found in OHCA in this cohort, of whom 82 had a previously signed POLST form. When compared to patients with POLST orders to attempt resuscitation, patients with POLST do-not-resuscitate (DNR) orders had less field resuscitation (22% versus 84%; difference 62%, 95% CI 45%-79%), ED transport (12% versus 63%; difference 51%; 95% CI 31%-70%) and hospital admission (6% versus 38%; difference 32%, 95% CI 13%-50%). Older patients, non-white patients, and patients not living in private residences were most likely to have an active POLST form.

Conclusions: In this sample of patients in OHCA, prehospital and ED care were generally concordant with previously documented end-of-life orders by emergency care providers. These findings suggest that a statewide POLST program can effectively guide providers with patient pre-existing end-of-life choices in the setting of critical illness.

Introduction

Background

For patients with advanced illness and frailty, preferences and goals of care should guide resuscitation measures in the out-of-hospital and emergency department (ED) settings. Choices regarding medical management are complicated and personal, and may be influenced by family support, religion, racial or ethnic background, and personal experience with hospice care.[1,2,3,4] While advance directives are a widely available means for patients to document their preferences, they are not actionable medical orders and are often unavailable in emergent situations when it would otherwise significantly change management.[5,6] Complicated or unclear advance directives and living wills are easily misinterpreted in the prehospital and ED setting.[7] Expert recommendations to improve clear and direct documentation of patient decisions have been made since the 1990s, however proper communication of these wishes remains elusive.[8,9] Since 1991, Oregon providers have used a standardized form, the Physician Orders for Life-Sustaining Treatments (POLST), to address and document end-of-life goals for patients with advanced illness and/or frailty. The POLST form is designed to be portable and actionable across treatment settings including at home, in nursing care facilities, or in the hospital.[10] The form, completed in consultation and signed by a medical provider, directs treating providers to provide or avoid cardiopulmonary resuscitation (CPR), feeding tubes, and transportation to the hospital through a series of clear and specific orders centered on goals of care. POLST orders allow documentation of more nuanced treatment preferences compared to standard do not resuscitate orders and are more direct than other end-of-life documentation formats.[11] POLST has found good acceptance with hospice facilities, EMS providers, and nursing facilities in Oregon.[12,13,14]

Importance

The utility of the POLST program has not been extensively studied outside of nursing and hospice facilities. A Washington study examining non-POLST hospital documentation found frequent discordance of care delivery with documented wishes, suggesting that patients in the general population may be more at risk of miscommunicated or uncommunicated end-of-life decisions.[9] Since 2010, the Oregon POLST program has implemented a call-in database accessible to EMS and hospital providers with the goal of expeditiously and correctly relaying prior POLST documentation. Reliability of information obtained by phone with paper documentation has been previously validated.[15] As the POLST form is evaluated for expansion to other states, it is necessary to assess whether Oregon's system of POLST form availability and access results in concordant care during critical illness, as well as assessing prehospital indicators associated with signed POLST forms in the registry.

Goals of This Investigation

We sought to evaluate the concordance of care provided by out-of-hospital and hospital providers with previously documented POLST orders in the setting of OHCA. Our primary outcome measures included resuscitation interventions at the scene, ED transport, and hospital admission. As a secondary aim, we reviewed POLST call center records to evaluate the impact of real-time access to electronic POLST forms on prehospital and ED resuscitation. Finally, we evaluated independent predictors for the presence of a POLST form among patients receiving EMS resuscitation after OHCA.

Methods

Study Design

This was a secondary analysis of a prospective cohort of patients in OHCA evaluated by EMS and linked to registered POLST forms from a statewide database. Institutional review boards at the state and university level approved this protocol.

Setting

The study included patients evaluated by EMS providers in OHCA in five counties surrounding Portland, Oregon represented in the Oregon POLST Registry in 2010. These counties are part of the Resuscitation Outcomes Consortium and have maintained an epidemiologic prospective registry of patients with OHCA since 2005 (Epistry).[16] Regions include urban and suburban areas, plus some outlying rural areas.

Selection of Participants

We included all patients for whom the 9-1-1 EMS system was activated in the 5 counties and were found in cardiac arrest between January 1st and December 31st, 2010. The details of Epistry have been previously described.[16] We excluded interhospital transfers if the initial presentation did not involve EMS or occurred outside the study region.

Methods of Measurement

The primary predictor variable was "Do Not Attempt Resuscitation" or "Attempt Resuscitation" on a previously signed POLST form (Figure 1). We also evaluated the POLST-specified intensity of treatment order "Comfort Measures Only." We used probabilistic linkage (LinkSolv version 8.2; Strategic Matching, Inc., Morrisonville, NY) to match registered POLST forms with patients in the Epistry database during the 12-month time period. Similar methodology has validated for matching EMS databases to a trauma registry and rigorously evaluated for

matching EMS data to other sources of administrative hospital data.[17,18] All matches were reviewed case-by-case following linkage to avoid mismatched subjects.

Patients with registered POLST forms signed after the OHCA event were excluded from analysis. Patients with POLST forms in the registry signed before the OHCA event but which were received by the registry after the OHCA event were considered as having a POLST form. Patients whom had resuscitation ceased by EMS providers due to DNR orders documented in the EMS chart, but without a matched record from the POLST registry, were excluded from primary analysis and evaluated separately combined with the POLST-DNR group in a sensitivity analysis to assess for misclassification bias. Patients neither in the POLST registry nor having documented DNR orders by EMS providers were defined as "No POLST, No DNR." Demographic information and factors of the scene of arrest included age, sex, presenting cardiac rhythm, place of arrest, bystander CPR, response interval and witnessed arrest. For patients not receiving resuscitation, only name and date of birth were collected for Epistry. Telephone calls from treating providers (e.g., EMS and ED) to the POLST registry call center were also evaluated when matched to OHCA patients with active POLST forms.

An exploratory regression analysis was completed assessing information available in the prehospital setting for associations with presence of a POLST form. Prehospital variables included patient age, gender, type of residence (private residence, health facility, public location), witnessed vs. unwitnessed arrest, and racial background (white, non-white, missing or other). The sample was restricted to those patients receiving prehospital resuscitation and whom had age documented, and the outcome of interest was presence of any POLST form signed prior to the OHCA event. Model diagnostics were assessed by Hosmer-Lemeshow goodness of fit test.

Outcome Measures

The primary outcome measure in this study was delivery of resuscitation, defined as any chest compressions or further therapeutic interventions. Delivery or cessation of resuscitation was defined at three time points for each patient: initially at EMS arrival, prior to ED transport, and in the ED. For those patients receiving resuscitation that was ceased prior to ED arrival, we assessed the reason for cessation of resuscitation categorized from EMS documentation (considered futile, DNR [written or verbal], obviously dead, unknown). Secondary outcome measures included out-of-hospital procedures (intravenous access, intraosseous access, epinephrine, cardioversion attempted, advanced airway placement), survival to hospital discharge, and presence of a previously signed POLST form.

Data Analysis

We used descriptive statistics (means and proportions) to characterize the demographics and OHCA presentations of these patients. We assessed primary and secondary outcomes using descriptive statistics and two-sample tests of proportion. We used logistic regression to assess patient demographic variables and prehospital indicators associated with likelihood of the presence of a POLST form signed prior to the OHCA event. We considered $p < .05$ as a threshold for statistical significance, and 95% confidence intervals were included as appropriate. Database management and analysis was completed using STATA (version 10; StataCorp, College Station, TX).

Results

Characteristics of Study Subjects

There were 1,577 patients in OHCA evaluated by EMS in the 5 counties, of whom 951 (60%) had EMS resuscitation provided at the scene of arrest. Of the 36,529 patients with active POLST forms in the Oregon POLST registry during 2010, we matched POLST forms for 94 OHCA patients; 82 of these forms were signed prior to the OHCA event. Fifty (61%) POLST forms indicated a DNR order and 32 (39%) specified "Attempt Resuscitation." Of those with orders for DNR, 21 (42%) had Comfort Measures Only orders. There were 35 patients without matched POLST forms who had EMS resuscitation ceased prior to ED arrival for EMS-documented DNR status; these patients were removed from the non-POLST group for initial analysis and assessed in a sensitivity analysis as previously described. Characteristics of the study sample are included in Table 1.

Main Results

Of the 50 patients with a DNR order specified through a POLST form signed prior to arrest, 11 (22%) had resuscitation attempted by EMS personnel. Of patients with a POLST form specifying "Attempt Resuscitation," (84%) had resuscitation attempted (Figure 2). Six of 50 (12%) patients with POLST-documented DNR orders were transported to the ED and three (6%) survived to hospital admission, representing smaller percentages than both other groups. By time of hospital admission, resuscitation had been either ceased or not attempted for 94% (95% CI 83%-99%) of patients with POLST DNR orders. Patients with POLST-documented DNR orders receiving EMS resuscitation had no significant age difference compared to those receiving no resuscitation (85 years vs. 82 years, $p>0.05$). Of the 6 POLST-documented DNR patients transferred to the ED, 3 were admitted to the hospital. Patients with POLST orders for DNR and comfort measures only ($n = 20$) had the lowest rates of resuscitation performed, with 2 (10%) receiving any

resuscitation, 1 of whom had resuscitation ceased in the ED and 1 who survived to hospital admission. Once resuscitation was started, no patients with a POLST-documented "Attempt Resuscitation" order had resuscitation ceased by EMS providers erroneously documenting a DNR order. Proportions of EMS resuscitation, ED transportation, and hospital admission from the ED were all significantly higher among patients with POLST forms specifying "Attempt Resuscitation" than patients with no POLST or DNR documentation, and those with DNR orders.

Prehospital resuscitation procedures are displayed in Figure 3. When compared to patients without DNR orders or POLST registry matches, patients with "Attempt Resuscitation" POLST orders received more frequent advanced airway placement (72% versus 51%; difference 21%, 95% CI 5%-37%), intravenous access (63% versus 42%; difference 21%, 95% CI 4%-38%), intraosseus access (50% versus 27%; difference 9%, 95% CI 6%-41%), and epinephrine administration (66% versus 46%; difference 19%, 95% CI 3%-36%).

Of 366 provider calls to the Oregon POLST registry during the study time period, 6 were for patients in the OHCA sample in these five counties. Four of these calls identified patients with DNR orders, all of whom subsequently had resuscitation ceased prior to transport to the ED. Two calls were linked to patients with "Attempt Resuscitation" POLST orders, one of whom had resuscitation ceased due to medical futility and one of whom had resuscitation ceased in the ED.

Sensitivity Analysis

Thirty-five patients without matched POLST forms had EMS documentation stating that resuscitation was ceased prior to ED arrival due to DNR status. These patients were excluded from the primary analysis. For sensitivity analysis, these 35 patients were included with the POLST-confirmed DNR group and the comparisons re-calculated. Statistical differences between the "Attempt Resuscitation" and the DNR group remained significant in proportions of field resuscitation (difference 20%; 95% CI 4%-36%), ED transfer (difference 23%; 95% CI 6%-40%), advanced airway placement (difference 21%; 95% CI 6%-37%), intravenous access (difference 21%; 95% CI 4%-38%), intraosseous access (difference 23%; 95% CI 6%-41%), and epinephrine (difference 20%; 95% CI 3%-37%).

Predictors of presence of a signed POLST form

Nine of the 951 patients receiving resuscitation had information including age missing and were excluded from our exploratory regression analysis. Nine hundred and forty-two patients receiving resuscitation for OHCA were included, of which 38 (4%) had a signed POLST form at the time of arrest. In this sample, presence of a POLST form was significantly associated with increasing age (OR 1.03, 95% CI 1.00-1.05 for each year increase, $p<0.05$) and residence in an assisted living or health care facility (OR 6.09, 95% CI 2.93-12.68, $p<0.001$) as compared to private residence. Female gender had a marginally significant association with presence of a signed POLST from (OR 1.97, 95% CI 0.99-3.93, $p<0.10$). Race and public location of arrest were included in this model, but not found to have significant association with presence of a POLST form. OHCA witnessed by bystander was not independently associated with presence of a POLST form when compared to unwitnessed arrest, however it served as a negative confounder for both race and location of arrest and was thus included in the regression model.

Model diagnostics by Hosmer and Lemeshow goodness-of-fit test showed good fit ($p>0.10$). Recoding age as a categorical variable in 5 year segments had a similar trend, however lost statistical significance with the exception of the oldest (>90) group (OR 2.80, 95% CI 0.94-8.30, $p<0.10$) which showed a moderate association with presence of a POLST form when compared with the youngest (<65) population.

Limitations

While we were comprehensive in identifying all patients with existing POLST forms prior to arrest, there were a small portion of patients without a matched POLST form with an EMS-charted DNR order. This scenario could have resulted from unmatched electronic POLST forms (e.g., if there was not enough identifying information in the EMS record to successfully match the form), patients who opted out of including their POLST form in the registry or from patients who had POLST forms prior to legislation mandating entry into the electronic registry. We attempted to minimize misclassification bias in POLST-specified DNR order by restricting our definition of end-of-life decisions to patients with a matched POLST record. We excluded those unmatched but EMS-documented DNR patients from the primary analysis to avoid biased estimates and used a sensitivity analysis to ensure significance. However, it is likely that a further portion of additional patients receiving no resuscitation in the field had an existing DNR order that was not registered and not documented by EMS. This would potentially bias the "No POLST, No DNR" group towards less aggressive interventions, underestimating differences with the DNR group and overestimating differences with the Attempt Resuscitation group. Additionally, the 5 counties included in our sample include two counties in Washington bordering Oregon. While these counties are well-represented in the Oregon POLST Registry, it is possible that the lack of state-mandated reporting of forms to the registry may add to the

homogeneity of the unmatched group. However, excluding all Washington-based EMS agencies had minimal impact on the primary outcome variables (38% vs 40% field resuscitation, 19% vs 20% pre-ED cessation of resuscitation, 22% vs 23% ED cessation of resuscitation) so these patients were retained in the sample for completeness.

Limited data exists for patients receiving no resuscitation in the field. Provision of resuscitation may be biased by demographic factors unmeasured in our study. We presume these patients were most often not resuscitated due to medical futility, however the rationale for these decisions remains undocumented and unclear. Family decisions overruling POLST documentation were also not captured by our study design. Our regression model only includes those patients who received resuscitation by EMS providers; while we find significant predictors of the presence of a POLST form in this population, limited data makes it unclear whether similar trends are seen in those patients not receiving resuscitation.

Additionally, this study does not take into account those patients who had a DNR order in the POLST registry, suffered OHCA, and never had EMS called—this outcome would be in accordance with the patient's wishes and presumably a common occurrence. It is important to interpret the results of this study within the context of OHCA patients for whom EMS was activated.

Discussion

In this study, we demonstrate that patients with a DNR order placed in a statewide POLST database who suffer OHCA with EMS evaluation generally have care given in accordance with their POLST orders. We also show that patients with a POLST form specifying "Attempt

Resuscitation" generally received resuscitation, with no incidences of misinterpretation of the POLST form documented between initiation of resuscitation and ED arrival.

There are many reasons that a patient with an existing DNR order receives resuscitation and no "gold standard" for the "correct" rate. Patients may have an unanticipated change in health status, desire temporizing measures to be taken, simply change their mind or have family that overrides the specified POLST form in the midst of an acute medical event. Furthermore, families for certain patients without a POLST form may request that resuscitation be ceased. Direct communication with families and patients appropriately supersedes POLST orders. The 94% concordance rate of patients with DNR orders having resuscitation ceased prior to hospital admission speaks to the success of this program. A retrospective Oregon chart review limited to hospice patients found 98% concordance of resuscitation delivery with prior POLST documentation, however 98% of patients in this sample had a documented DNR order as compared to 72% in the Oregon POLST population.[19,20] Our study demonstrates the effectiveness of the POLST program in a more independent and varied population. The individual reasons for discordance from POLST orders remain unclear from our registry-level analysis and warrants further exploration.

Those patients that request resuscitation measures to be attempted appear to receive interventions more extensively than the general population, although some of this effect may be related to the heterogeneity of the background group. Clinical assessment of medical futility and family wishes supersede the "Attempt Resuscitation" order as well, and the 84% concordance rate of at-scene CPR suggests that the POLST is used to guide treatment but does not serve as an absolute

indicator of intervention. Our results suggest that the simple presence of a POLST order to attempt CPR does not erroneously lead providers to withhold resuscitation, but rather provide more aggressive measures in concordance with their wishes. This is reassuring to older patients who have had thoughtful discussions with their providers and have decided to have thorough resuscitation attempted in the event of cardiac arrest. This speaks to POLST's utility as a more nuanced approach than a simple DNR order.

Oregon's POLST program was designed to empower patients to choose their goals of medical care at the end of life, and to clearly communicate these wishes to medical providers they may encounter when emergency situations arise. As of July of 2012, the statewide registry had documentation of end-of-life wishes for over 88,000 Oregonians.[21] Calls to the central database continue to increase, with over 2,200 calls statewide since initiation.[22] The 6 calls matched to our sample represent a very small proportion of these calls but suggest the impact of communication in the prehospital or ED setting; our 2010 5-county sample was collected very early after initiation of the phone-in registry and more calls can be anticipated over the subsequent years. Our findings support the utility of POLST forms for guiding early care during critical illness and emphasize the importance of expeditious access to documentation for prehospital and emergency providers.

In OHCA events, EMS providers are challenged to make emergent treatment decisions mindful of patient wishes. Ideally, EMS would not be activated in the event of OHCA in a patient with a DNR order; however, this is known to happen for many reasons even with clear knowledge of patient wishes.[23] Between 50% and 90% of patients in the general population express a wish to

die at home on surveys; in reality, only 10-35% of deaths occur at home nationwide.[24] Part of this gap lies in the complicated logistics and emotional situations involved with home death, however good communication with primary care providers decrease this incongruence.[24] Communication with providers in the prehospital and ED setting in these situations is crucial to honor the wishes of patients and families, and our findings support the effectiveness of the POLST system in improving this communication. This system has the potential to improve patient autonomy and comfort, and decrease potentially distressing and unwanted hospitalizations.[25] Calls to the Oregon POLST registry changed patient management 44% of the time in a review of 2011 phone records.[26] Other states currently increasing participation in the POLST program include California, New York, Utah, Washington, and West Virginia; we recommend that the experience of EMS coordination in Oregon will help inform similar registries in these states. A Wisconsin chart review of decedents in 2007 had found older, nursing home residing, and chronically ill patients to be more likely to have an active POLST form; our findings confirm the age and living associations in the subset for whom EMS is called and also suggest an association with female gender.[27] Given our findings of associations of older age, health care facility, and female gender in Oregon with presence of a POLST form, we would encourage prehospital providers to call the Oregon POLST registry for any patients in doubt but especially those with any of these demographic factors.

Our exploration of the role of POLST orders in the OHCA setting represents only the most medically emergent scenarios. The relatively high rate of on-scene EMS CPR for patients with DNR orders demonstrates the potential for discordance when EMS is called to the scene of a patient in OHCA. This represents the target scenario for registry access: patients clinically

requiring aggressive intervention for whom goals of care are unclear. Patients with other emergent presentations (ie trauma, stroke, confusion) may have different barriers to communication of goals of care warranting further investigation.

In summary, we found good concordance of prehospital and ED patient care with previously documented POLST orders for patients in OHCA. POLST forms and the statewide registry are an effective means of communicating goals of care in this scenario. Presence of a POLST form is more likely to be positive in older patients, patients not living in a private residence, and non-white patients. Further implementation of this tool should take into account potential barriers to access and continue to assess the utility of the POLST system in varied acute care situations.

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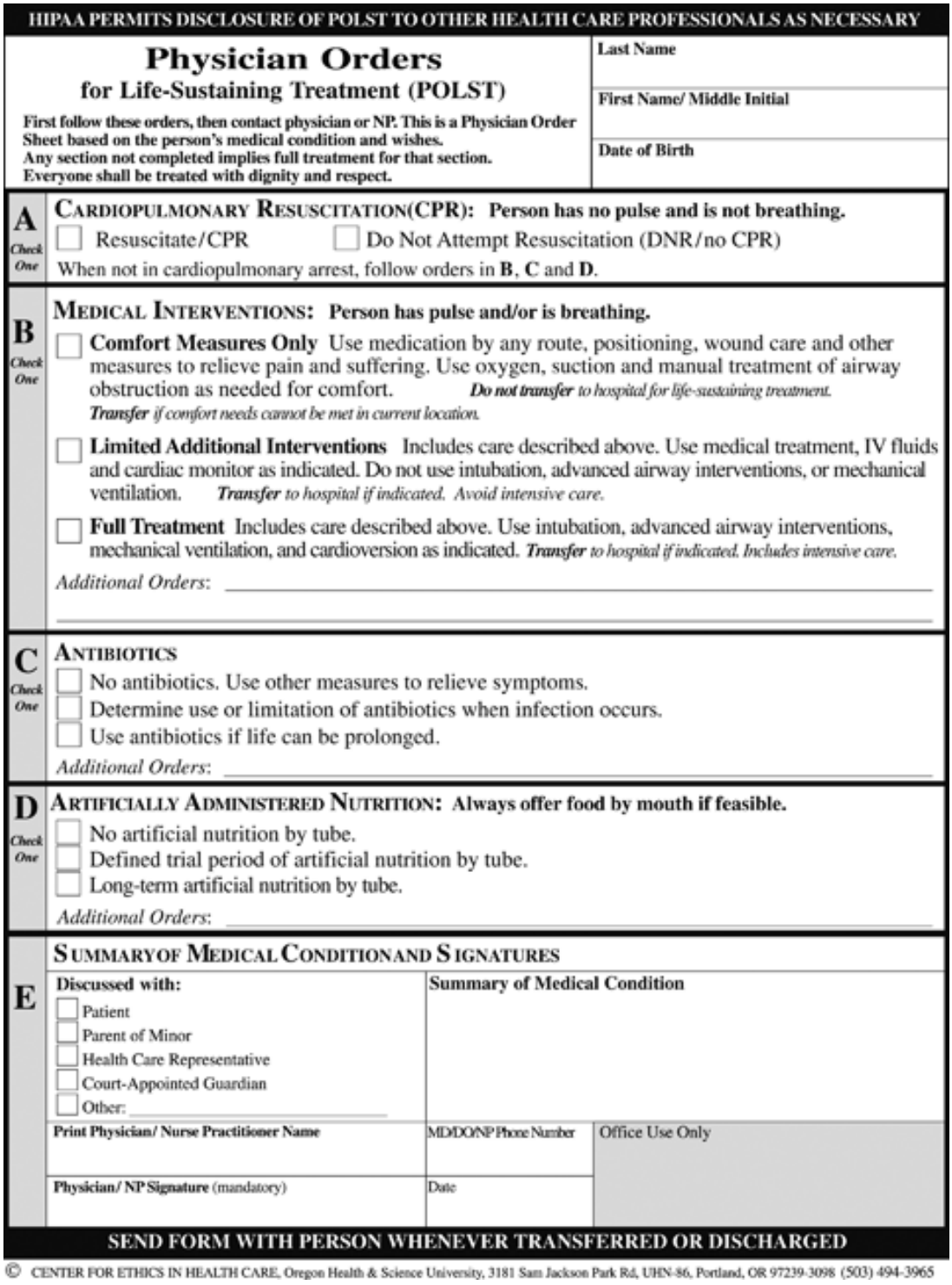
Table 1: Patient Demographics of Patients Receiving Resuscitation, by POLST orders

Demographics	**No POLST, No DNR, N(%) n=1448**	**Attempt CPR, N(%) n=32**	**DNR , (%) n=50**
Interventions and Disposition			
No CPR Attempted	582(40%)	5 (16%)	39 (78%)
CPR Started, Ceased Prior to ED	284(20%)	7 (22%)	5 (10%)
-Due to DNR Order	0(0%)	0 (0%)	5 (10%)
-Due to Futility	284(20%)	7 (22%)	0 (0%)
-After call to POLST Registry	Unknown	1 (3%)	4 (8%)
CPR Ceased in the ED	289(20%)	8 (25%)	3 (6%)
Admitted to Hospital	248(17%)	12 (38%)	3 (6%)
Survived to Discharge	120(8%)	5 (16%)	0 (0%)
Advanced Airway Placed	737(51%)	23 (72%)	6 (12%)
IV Placement	607 (42%)	20 (63%)	7 (14%)
IO Placement	390 (27%)	16 (50%)	3 (6%)
Epinephrine Given	669 (46%)	21 (66%)	5 (10%)
Cardioversion/Defibrillation	321 (22%)	7 (22%)	4 (8%)
Demographics (missing values excluded)			
Age (Mean)	60	69	85
Female Sex	298 (34%)	15 (56%)	6 (55%)
Male Sex	569 (66%)	12 (44%)	5 (45%)
Initial Rhythm: VF/VT	235 (28%)	5 (19%)	2 (18%)
Initial Rhythm: PEA	161 (19%)	6 (22%)	1 (9%)
Initial Rhythm: Asystole	447 (53%)	16 (59%)	8 (73%)
Witnessed Arrest by Bystander	349 (46%)	14 (56%)	5 (50%)
Witnessed Arrest by EMS	109 (13%)	2 (7%)	1 (9%)
Received Bystander CPR	390 (45%)	13 (48%)	5 (45%)
Place of Arrest: Home	633 (73%)	10 (37%)	6 (55%)
Place of Arrest: Street	32 (4%)	2 (7%)	1 (9%)
Place of Arrest: Healthcare Facility	27 (3%)	6 (22%)	1 (9%)
Place of Arrest: Residential Institution	56 (6%)	9 (33%)	3 (27%)
Median Call-to-Arrival Time (min:sec)	4:40	3:39	4:25
POLST Order: Comfort Measures Only	n/a	1	21
POLST Order: Limited Interventions	n/a	6	27
POLST Order: Full Treatment	n/a	24	2
Total	**1448**	**32**	**50**

Missing values in patient demographics indicate patients who received no resuscitation. Patients with non-POLST DNR documentation were excluded.

Figure 1: Oregon POLST Form



HIPAA PERMITS DISCLOSURE OF POLST TO OTHER HEALTH CARE PROFESSIONALS AS NECESSARY

Physician Orders
for Life-Sustaining Treatment (POLST)

First follow these orders, then contact physician or NP. This is a Physician Order Sheet based on the person's medical condition and wishes.
Any section not completed implies full treatment for that section.
Everyone shall be treated with dignity and respect.

Last Name

First Name/ Middle Initial

Date of Birth

A *Check One*

CARDIOPULMONARY RESUSCITATION(CPR): Person has no pulse and is not breathing.

☐ Resuscitate/CPR ☐ Do Not Attempt Resuscitation (DNR/no CPR)

When not in cardiopulmonary arrest, follow orders in **B**, **C** and **D**.

B *Check One*

MEDICAL INTERVENTIONS: Person has pulse and/or is breathing.

☐ **Comfort Measures Only** Use medication by any route, positioning, wound care and other measures to relieve pain and suffering. Use oxygen, suction and manual treatment of airway obstruction as needed for comfort. ***Do not transfer*** *to hospital for life-sustaining treatment.* ***Transfer*** *if comfort needs cannot be met in current location.*

☐ **Limited Additional Interventions** Includes care described above. Use medical treatment, IV fluids and cardiac monitor as indicated. Do not use intubation, advanced airway interventions, or mechanical ventilation. ***Transfer*** *to hospital if indicated. Avoid intensive care.*

☐ **Full Treatment** Includes care described above. Use intubation, advanced airway interventions, mechanical ventilation, and cardioversion as indicated. ***Transfer*** *to hospital if indicated. Includes intensive care.*

Additional Orders: _____

C *Check One*

ANTIBIOTICS

☐ No antibiotics. Use other measures to relieve symptoms.
☐ Determine use or limitation of antibiotics when infection occurs.
☐ Use antibiotics if life can be prolonged.

Additional Orders: _____

D *Check One*

ARTIFICIALLY ADMINISTERED NUTRITION: Always offer food by mouth if feasible.

☐ No artificial nutrition by tube.
☐ Defined trial period of artificial nutrition by tube.
☐ Long-term artificial nutrition by tube.

Additional Orders: _____

E

SUMMARY OF MEDICAL CONDITION AND SIGNATURES

Discussed with:
☐ Patient
☐ Parent of Minor
☐ Health Care Representative
☐ Court-Appointed Guardian
☐ Other: _____

Summary of Medical Condition

Print Physician/ Nurse Practitioner Name	MD/DO/NP Phone Number	Office Use Only
Physician/ NP Signature (mandatory)	Date	

SEND FORM WITH PERSON WHENEVER TRANSFERRED OR DISCHARGED

Figure 2: Resuscitation and Disposition of OHCA Patients evaluated by EMS by POLST Orders

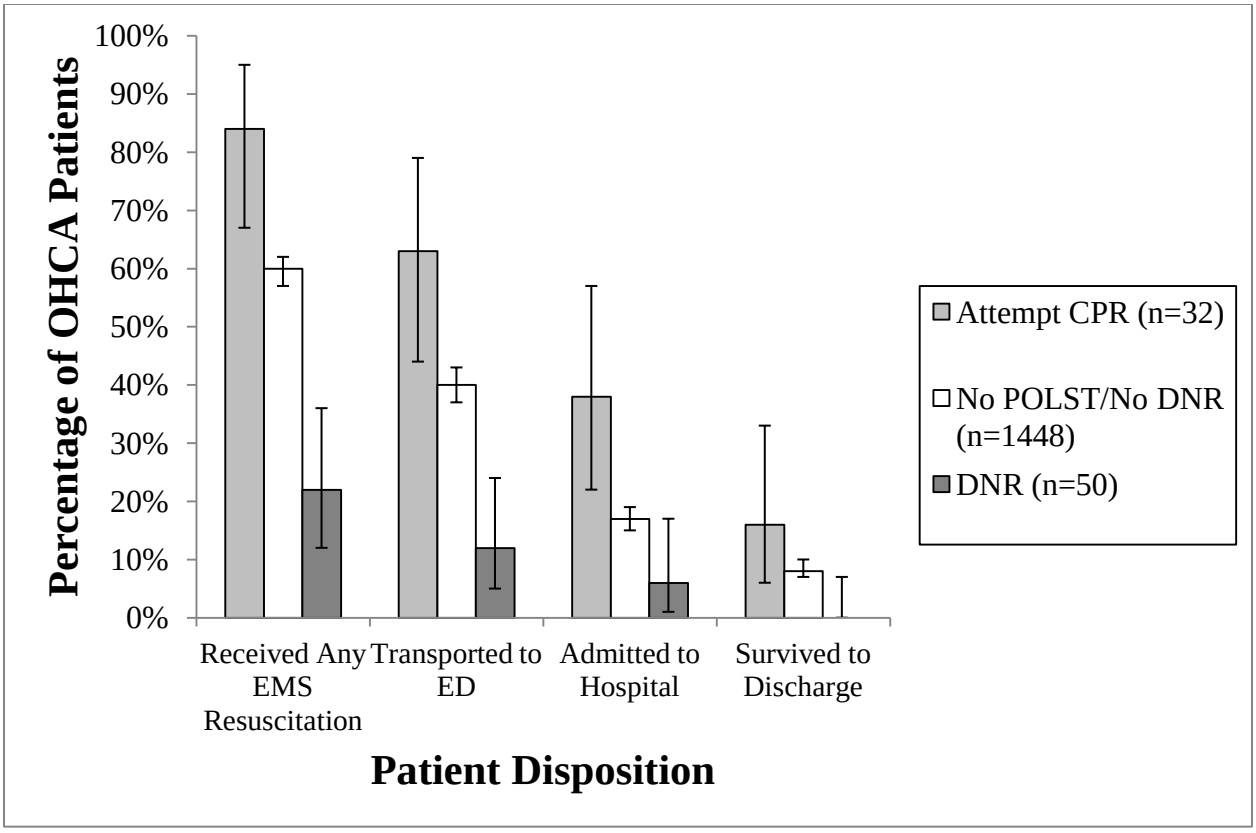
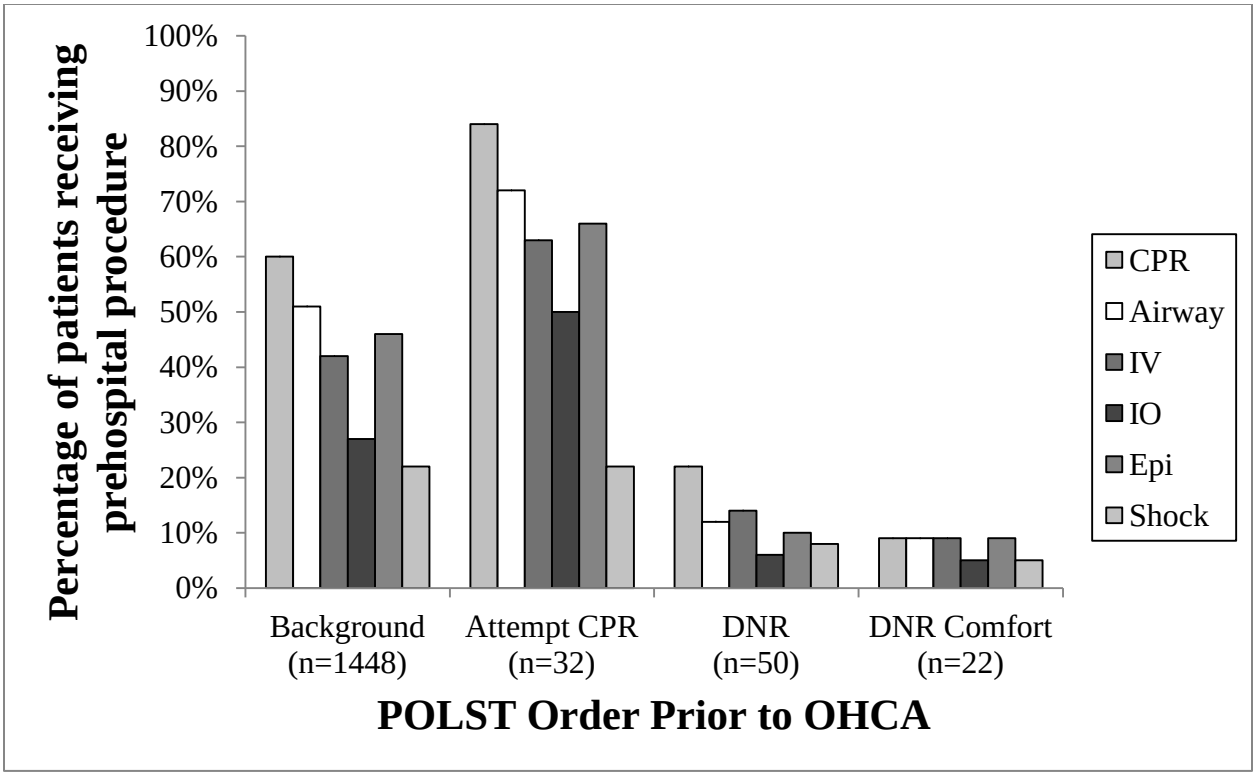


Figure 3: Percentage of patients receiving pre-hospital procedures, by POLST Status



Background group includes patients not in the Oregon POLST registry with no documented DNR order; DNR Comfort group is the subset of DNR patients with a POLST Comfort Measures Only order