Lessons learned Oregon
POLST Registry Research

Terri Schmidt MD, MS
Amy Vandenbroucke, JD
Center for Ethics in Health Care
Department of Emergency Medicine
Oregon Health & Science University
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Terri Schmidt receives salary support as the Director of the Oregon POLST Registry
Oregon POLST Registry

- Created by the Oregon legislature in 2009
- Mandates that health professionals who signs a POLST form submit it to the Registry
- Produced a unique research tool because it provides a database of POLST forms completed in the state of Oregon
Current Registry

- 100,000 active forms
- 73,000 archived forms
- 4000 new forms/month
Validating the POLST Algorithm

Objective: To study potential algorithms used to match information provided by health care professionals to the patient’s form in the Registry.

Findings:
- Of patients not matched at the time of the call, many had a form submitted within 2 weeks.
- The current algorithm was found to be both highly sensitive and highly specific.
- No algorithmic model was able to match the current algorithm in either sensitivity or specificity.
- Insight for potential increases in efficiency and accuracy based on the order of information requested during calls.

EMS Utilization Study

- A telephone-survey based study asking EMS providers and patients/surrogates about POLST Registry utilization
  - Determining utility of Registry for Emergency Providers
  - Determining concordance of care provided with documented orders
  - Recording patient and/or family feedback regarding the Registry

Findings

- Small sample including 23 EMS interviews
- In 44% of cases the POLST form changed treatment
- In 6 cases it changed the transport decision
- For 10 cases where surrogates or patients were interviewed the care matched the patient wishes. (In one case the surrogate did not think EMS should have been called)
2011 Oregon POLST Form
Patterns of POLST Completion

- 25,142 POLST forms from first year of Registry
  - Population: Mean age of 77.6 years (85.9% were 65 or older), 61% female
  - Over 40% residing in rural areas

- Documented preferences
  - **Section A**: 72.1% of registrants had a DNR order
  - **Section B**:
    - 37.6% had orders for Limited Additional Interventions
    - 36.3% had Comfort Measures Only
    - 25.5% had Full Treatment
  - **Artificial Nutrition**: 7.3% had documented preference for long-term artificial nutrition by tube, with 56.8% requesting no artificial nutrition by tube.

Analysis of 2012 forms in OPR

- 31,294 forms
- Mean age 76.7 years

Treatment Combinations

- 34% DNR/Comfort Measures Only
- 30% DNR/Limited Interventions
- 24% CPR/Full Treatment
- 7% CPR/Limited Interventions
- 4% DNR/Full Treatment

Significance

- Only 1/3 of people who had DNR orders had orders for comfort only. DNR does not mean do not treat.
- 7% had CPR/Limited interventions. What did they mean?
Objective: To merge the POLST Registry with a local cardiac arrest database to assess treatment provided and POLST orders

- 83/1577 patients in cardiac arrest database had a POLST
- Patients with POLST DNR orders for whom EMS was called had resuscitation withheld or ceased before hospital admission in 94% of cases (95% confidence interval [CI] 83% to 99%)
- Compared with patients with no POLST or known DNR orders, more patients with attempt resuscitation POLST orders had resuscitation attempted (84% versus 60%) and were admitted to hospital (38% versus 17%)
- No patients with “Attempt Resuscitation” orders had resuscitation terminated inappropriately

Matching POLST forms and Death Certificates
OPR and people who died of natural causes in 2011-2012

- 58,000 decedents; 31% had POLST forms

- Odds of dying in the hospital of those with an order for limited interventions was 4 times as great (95% CI = 3.59–4.39) as of those with a CMO order, and for those with an order for full treatment was 9.7 times as great (95% CI = 8.4–11.1).

Proximity to Death Study

- Using the same decedent sample, registered decedents were identified and any forms received in a two-year window before their death were reviewed.
  - Changes in forms as death approaches
  - Consideration of cause of death/trajectory to death

- Manuscript under review.
2010 and 2011 natural deaths (Oregon only) N=58,000

Oregon POLST Registry (All Registrants)

Decedents with at least one POLST form in 2 yrs preceding death n=18,285

Registrants with 1 form in the two years before death n=16,281

Primary Sample for this study

Registrants with more than 1 registered POLST form in the two years before death n=2,004
Planned Studies

- ePOLST evaluation and implementation studies

- Multi-site decedent study
  - 2010-2013 data
  - Oregon and West Virginia

- POLST Utilization in Trauma Patients

- Pediatric POLST Registrants
  - A joint project with Johns Hopkins
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Oregon POLST Registry

Thank you!

Any Questions?