2010

POLST

physician orders for life-sustaining treatment

Oregon POLST Registry Annual Report

Table of Contents

Foreword

The Oregon POLST Registry was created and funded by the Oregon legislature in 2009 and began statewide operations on December 3, 2009. Consistent with the Oregon Health Policy Board's "Triple Aim," the POLST Registry allows persons with advanced illness or frailty to make their wishes known and provides orders to guide their care, even in an emergency. The Registry is part of the Oregon Health Authority, operated through a contract with the Oregon Health & Sciences University (OHSU), Department of Emergency Medicine. We owe special thanks to Barney Speight and the Oregon Health Fund Board who recognized the importance of the Registry, making its creation a priority as part of health care reform.

Currently, the Registry is receiving and processing over 3,200 forms each month and entered 38,459 forms into the Registry in 2010. In addition, 4,272 were found to be incomplete or contain an error which made them not ready for Registry entry. Forms have been received from every Oregon county.

In 2010, there were 370 calls to the Registry and 84 matches to a POLST form for a match rate of 22%. Not surprisingly, this match rate has been increasing as the percentage of POLST forms in the Registry increased. To date, 40% of calls have come from EMS, 31% from emergency departments and 19% from acute care units.

I am pleased to provide this report of the first full year of Oregon POLST Registry operations.

Terri Schmidt MD, MS

Director, Oregon POLST Registry

Introduction

The POLST program originated as the Medical Treatment Coversheet [1] in the 1990s. Shortly thereafter, the name was changed to "Physician Orders for Life-Sustaining Treatment (POLST)" and pilot testing began in nursing homes in 1995[2].The primary purpose of the POLST form is to transform patient preferences about medical treatment into medical orders that can be honored across treatment settings including home, long term care, EMS and hospitals. The success of focus groups and pilot studies led to POLST being implemented throughout Oregon.

Continued research efforts have helped to show the efficacy and utility of the POLST program. In one early study, POLST orders were 100% effective in expressing patients Do Not Resuscitate (DNR) wishes and largely effective in preventing other unwanted life-extending treatments in nursing home patients[3].The degree to which medical treatment was received by patients in their last two weeks of life matched patient wishes as recorded on a POLST form was found to be higher than agreement previous research has shown with advance directives[4]. In a Washington state chart reviews of 21 patients with a POLST form found concordance with patient wishes and the written orders in 19 cases. When the patient also had an advance directive, orders on the POLST were found to match wishes expressed in that document[5]. POLST is widely used in the hospice setting (100% of hospices in Oregon offer POLST to their patients, 85% in Washington, and 6% (region specific) in Wisconsin) and attitudes towards POLST are overwhelmingly positive with 97% of hospice workers believing that it helps prevent unwanted CPR and 98% believing it plays a significant role in instigating end-of-life planning discussions[6]. Recent research continues to support the validity of the POLST program, finding that the form is effective in documenting orders beyond cardiopulmonary resuscitation and that treatment preferences are followed, reducing unwanted hospitalizations[7].

Oregon POLST Registry

Origins

In 1999, the POLST Task Force recognized that EMS and first responders would be instrumental in ensuring patient's wishes were honored in a crisis event. In order for emergency personnel to honor this document, a change in the Oregon Medical Board's scope of practice for EMTs/First Responders was made empowering and requiring EMTs to honor POLST orders.

In 2004, a random sample of Oregon emergency medical technicians was asked to complete an anonymous survey regarding their experiences and perceptions of POLST. Responses from 572 EMTs indicated that when present the POLST form changed the course of treatment in 45% of cases. Most EMTs (75%) indicated that the POLST form gave clear instructions on patients' wishes. The POLST was believed to be most useful when a patient was in cardiopulmonary arrest (93% of EMTs agreed) and less useful when the patient had a pulse and was breathing (63% of EMTs agreed). Overall, the POLST form is an effective tool in the pre-hospital setting for disseminating patient's wishes when it is available. However, that study found that when asked to consider the last time they expected a POLST form on a scene, EMS personnel were initially unable to locate a form 25% of the time, thus creating a potential barrier to the honoring of patients end of life wishes because the form could not be found[8]..

The concern over not finding patients' POLST forms sparked the initiative to create an electronic registry which would store copies of all POLST forms and be accessible to EMS and hospitals if the original form could not be located. Under the direction of Terri Schmidt, M.D. and funding from The Greenwall Foundation and other private philanthropy, a collaboration began between the Oregon POLST Task Force, the OHSU Center for Ethics in Health Care, and the OHSU Department of Emergency Medicine [2]. Design of the electronic registry was completed in December 2008. System training and testing began in early 2009. On May 26, 2009, a pilot-phase began in Clackamas County. On July 1, 2009, state legislation was passed that partnered the Registry with the Oregon Health Authority (OHA) facilitating statewide expansion of the new Oregon POLST Registry[9].

On December 3, 2009, The Oregon POLST Registry became available 24/7 for EMTs, emergency departments and acute care units throughout Oregon to access in a time of crisis. In addition to housing POLST

information in an easy to use database, the Registry also houses copies of each active POLST form that can be faxed to hospitals once a patient arrives. Unless a patient notes specifically on the POLST form that he or she do not want to be included in the Registry (by checking an "opt out box") signers are required to submit the form to the Registry. Completing the POLST form is voluntary and nothing in the legislation has changed that.

Education and Outreach

To be of maximum benefit, the Oregon POLST Registry needs to have received copies of the majority of POLST forms in use throughout our state. Having most POLST forms in the Registry increases the likelihood that an individual's POLST form will be in the Registry and available to EMS in a time of crisis. Statewide education plays a vital role in the success of the POLST Program. The Oregon POLST Registry was created as a public/private partnership. The OHSU Center for Ethics in Health Care, with funding from private philanthropy, continues to provide support for the Oregon POLST Program which includes staffing the Oregon POLST Task Force, raising funds for research about POLST and the Oregon POLST Registry and supporting the education of health care professionals statewide. The state of Oregon contracts with the OHSU Department of Emergency medicine to support the operations of the Oregon POLST Registry. The Center for Ethics in Health Care in partnership with The Kinsman Foundation has held conferences in cities all over Oregon as illustrated in the attached map (Appendix A). These day-long conferences include a range of educational sessions about end-of-life care including teaching about the POLST Program and the Oregon POLST Registry. In addition to holding conferences the Center has trained other health care professionals to teach. In 2009 the Center developed educational slide and video presentations about the Oregon POLST Registry with wide distribution to palliative care and ethics leaders in hospitals, hospice programs, and long term care facilities across the state. These tool kits were used by Oregon's health care professionals most committed to improving end-of-life care in each region to help train colleagues in their communities. This intensive statewide educational program reached cities in every corner of the state. Each dot on the attached map represents a training session organized by the Center and supported by The Kinsman Foundation. Those we trained led many other sessions in their communities.

Research

The first full year of the Oregon POLST Registry operations brought the opportunity for several externally funded and internally supported research projects . Three separate studies were initiated during this time: (1) *A New Electronic POLST Registry: Utilization, Impact on Care, and Dissemination*; (2)*Validating the POLST Algorithm*; (3) *Validating a Process to Assess Patient Preferences and Physician Orders for Life-Sustaining Treatment.*

A New Electronic POLST Registry: Utilization, Impact on Care, and Dissemination

This study had two distinct aims looking at active registrants with forms signed between 12/3/2009 and 12/2/2010. First, the study is analyzing patterns of POLST completion including demographics of those who complete forms and treatment choices. The second aim seeks to determine the impact on care of having POLST orders available at the time of a crisis. The study is interviewing emergency medical services (EMS) personnel that contacted the Registry to obtain POLST orders. In additions, the study interviews patients (or their family members) for whom the call was being made and reviews the EMS chart from the incident. This information is helping us understand how the Registry is being utilized, where education efforts are needed, what is working well, and what can be improved upon. Results are expected in the spring of 2011.

Validating the POLST Algorithm

The objectives of this study were (1) to determine if any patients did have orders in the Registry that were not released during a call; (2) explore the creation of an algorithmic model for matching patients; (3) to validate the current algorithm. Medical records for all patients believed to have a POLST (as determined by a call made to the POLST Registry) between 12/3/2009 and 7/31/2010 were compared to all POLST registrants who had an active form in the Registry through probabilistic linkage to determine if the patients truly did have a POLST form in the Registry at the time of the call. Classification and Regression Tree (CART) modeling was then performed to determine if an alternative to the algorithm would result in higher sensitivity and specificity. It found that the current algorithm is specific and highly sensitive. While 3 “missed matches” (i.e. the patient had a POLST in the Registry but that information was not released because not enough information or inaccurate information was available) were found, no “false matches” (i.e., the patient was not in the Registry, but information was

mistakenly released) were identified. Further standardization of search processes (i.e., initiating each search by asking for the 3 most important variables and POLST ID) may improve efficiency and better allow the Oregon POLST Registry to be replicated by other states. This project formed the basis of a thesis for a graduate student and is expected to be published this year.

Validating a Process to Assess Patient Preference and Physician Orders for Life-Sustaining Treatment

A grant proposal was submitted in October of 2010 to validate that the orders reflected on the POLST form are indicative of the patient's wishes. The study has three proposed aims: (1) To determine POLST users' treatment preferences, understanding of the POLST form, and feedback on POLST through in-depth interviews; (2) To test the feasibility and validity of two methods for eliciting patient/surrogate treatment preferences that can then be used to establish construct validity of POLST; and (3) To explore concordance and the factors associated with concordance between Oregon POLST form orders and patient or legal surrogate treatment preferences within one to two months after POLST completion, and 6 months later.

Operations and Workflow

Oregon POLST forms are either mailed or faxed to the Registry. While the mandate to submit forms rests with the health care professional signing the form, unless the patient chooses to opt out, forms come into the Registry from a variety of sources including patients, health care professionals, hospitals, nursing homes, hospices, and family members. The flow chart found in Appendix B illustrates Registry workflow.

Briefly, when a form arrives it is first reviewed to determine if it is valid for the Registry. During this step, "Validation", the 5 required form elements are reviewed: (1) full patient name, (2) complete date of birth, (3) complete and clear Section A order[1], (4) legible signature of the signer, and (5) legible date signed. Additionally, it is verified that the 'opt-out' box has not been selected. Next, forms are scanned into a computer to create an electronic copy.[2] An Oregon POLST Registry ID is assigned to each new registrant, all of the information on the form is then entered manually into the Registry, and the electronic copy of the form is attached to the patient's

[1] In late 2010, forms with an indication of "Attempt Resuscitation" in Section A and "Comfort Measures Only" in Section B were withheld from the Registry due to the conflicting nature of this selection and the inability for EMS to adhere to the orders.
[2] In March of 2010, the Registry went from receiving faxes in the traditional paper way to receiving all faxes and storing them electronically. Now only those forms sent through the mail need to be scanned in to the Registry.

record. At this point, forms are now in “pending status”. They are not able to be searched and released until another person has manually double checked all of the data entered from the form. After that “double-check” has been completed, the form is “activated” and ready to searched.

Once the form has been activated, confirmation letters are printed for those registrants who provided address information. Included in the confirmation packet is a letter to the registrant that: (1) provides him or her with an Oregon POLST Registry ID number, (2) confirms that the form received is the most current POLST form, (3) confirms that the demographic information on the form (i.e., spelling of name, DOB, last four SSN) was entered correctly, and (4) provides a number to call with questions or corrections. The packet also includes pink-POLST stickers and a magnet that include the registrants name and POLST ID number.

The Registry maintains a strict release of information policy. Registry workers staff the phones during business hours and are authorized to send copies of a POLST form to long-term care facilities, hospice programs, hospitals, and health care professionals who are able to provide documentation of currently treating the registrant or to registrants/surrogates who provide a HIPAA release of information form. In 2010, nearly 40 calls were received by the POLST Registry office requesting POLST information (Table 8). Urgent scene calls from first responders are handled by the Emergency Communication Specialists and are documented in detail later in the report. Registry workers are also permitted to update demographic information or void current POLST form orders per the request of the (1) registrant, (2) surrogate of registrant listed on the POLST form, or (3) healthcare providers involved n the patients’ care.

In addition to updating demographic information, registrants are able to update the orders on their POLST form by submitting a new form with a more recent date signed. These forms are validated, entered, and activated following the same processes outline above, but the registrant retains their same Oregon POLST ID number and instead of a confirmation packet, they received an update letter informing them what changes have been made to their form in the Registry.

The current staffing model of the POLST Registry includes 12 student workers (3.75-4.50 FTE), 2 Research Assistants (1.55 FTE), the Operations Coordinator (0.6 FTE), the Registry Research and Data Manager (0.275 FTE), and a Medical Director (0.13 FTE). The Emergency Communication Center is funded through a

subcontract of the POLST Registry with the OHSU Department of Emergency Medicine. Due to an increase in form volume and streamlining of processes, the Registry is currently undergoing restructuring, expected to be completed by July 2011.

Glossary of terms

Glossary	
Terms in this report	**Definition**
Registry Forms or Registry Registrants:	Forms or registrants recorded in the Registry only, not all those received by the Registry office.
Not Registry Ready (NRR):	Forms received that are missing information to make them eligible for the Registry.
Not Registry Ready (NRR) - REQUIRED ELEMENTS ONLY:	Forms received that are missing any one or more of the REQUIRED data elements: First or Last Name, DOB, Signature, Date signed, Section A orders
Not Registry Ready (NRR) - Registry Unusable Only:	Forms received that are unable to be entered into the Registry but are still valid POLST orders. Includes copies that are illegible, copies that are too dark or too light, etc.
Active Forms:	Forms in the Registry that are ready to be searched.
Archived Forms:	Forms in the Registry that are no longer valid. These have been removed from searches.
Pending Forms:	Valid forms in the Registry that have been entered but have not been "activated" (double-checked to ensure accuracy, the last step before a form becomes searchable).
Active Registrants:	Registrants with searchable, active forms who are not known to be deceased and have not opted out.
Archived Registrants:	Registrants known to be deceased or those who have opted out of the Registry. Forms from these registrants are not searchable for healthcare professionals.
Updated Forms:	An updated form is one received for a patient already in the Registry, but with a more recent date.
Forms Received:	All forms received by the Registry, including NRR but excluding duplicate submissions
Forms Created/Entered:	All forms entered into the Registry in a given timeframe but not necessarily searchable for healthcare professionals. This may include forms received in the previous month.

Registrant Profile

*Percentages are expressed for all registrants who had a form received by the Registry in 2010.

Table 1: New vs. Updated Registrants in 2010

Registrant	*Count*	*%**
Update	996	3.1%
New	30,640	96.9%

A *new* (above) registrant was a patient who had a POLST form submitted to the Registry for the first time in 2010, while *updates* are those who sent a form to the Registry before 2010.

Table 2: Current Status of Registrants (2/25/11).

Status	*Count*	*%**
Archived	985	3.1%
Active	30,651	96.9%

An *archived* (above) registrant is one whose information is no longer searchable in the Registry. This primarily happens when a patient passes away or opts out of the Registry. *Active* registrants are those whose information is searchable in the Registry.

Table 3: Registrants by Gender

Gender	*Count*	*%**
Unknown	3,193	10.1%
Male	10,980	34.7%
Female	17,463	55.2%

Gender (above) is not a required element on a POLST form, so gender is unknown for 3, 193 (10.1%) of these registrants.

Table 4: Registrants by Age

Age	*Frequency*	*Percent*
0-15	87	0.30%
16-49	911	2.90%
50-54	725	2.30%
55-59	1,078	3.40%
60-64	1,560	4.90%
65-69	2,489	7.90%
70-74	3,106	9.80%
75-79	4,586	14.50%
80-84	6,220	19.70%
85-89	6,173	19.50%
90-94	3,461	10.90%
95-99	1,093	3.40%
>=100	147	0.50%

Table 5: Registrants by County.

County	*Frequency*	*Percent*
Unknown	7,215	22.8%
Multnomah	5,048	16.0%
Clackamas	2,935	9.3%
Washington	2,600	8.2%
Lane	2,133	6.7%
Jackson	1,807	5.7%
Marion	1,534	4.9%
Josephine	1,324	4.2%
Yamhill	945	3.0%
Linn	894	2.8%
Douglas	656	2.1%
Deschutes	600	1.9%
Coos	447	1.4%
Lincoln	441	1.4%
Benton	428	1.4%
Klamath	393	1.2%
Polk	349	1.1%
Curry	312	1.0%
Columbia	233	0.7%
Clatsop	212	0.7%
Wasco	178	0.6%
Crook	157	0.5%
Umatilla	129	0.4%
Jefferson	118	0.4%
Hood River	98	0.3%
Tillamook	85	0.3%
Grant	64	0.2%
Union	64	0.2%
Wallowa	54	0.2%
Baker	43	0.1%
Morrow	35	0.1%
Lake	29	0.1%
Malheur	26	0.1%
Gilliam	23	0.1%
Harney	16	0.1%
Sherman	7	0.0%
Wheeler	4	0.0%

County (above) is determined by registrant zip code. Zip codes are not required by the Registry. *Age* (left) is the age of the registrant at the date their form was signed. This was calculated from date of birth and the date the form was signed, both required elements.

Workload Information

Table 6: 2010 Forms Received by Month

Month	*RR Forms*	*RR %*	*NRR Forms*	*NRR %*	*Total Forms/Month*
January	2,440	86.90%	368	13.10%	2,808
February	2,565	86.20%	412	13.80%	2,977
March	3,130	88.80%	396	11.20%	3,526
April	3,026	96.60%	107	3.40%	3,133
May	2,450	83.60%	481	16.40%	2,931
June	2,942	84.30%	546	15.70%	3,488
July	2,862	98.70%	39	1.30%	2,901
August †	3,023	90.80%	305	9.20%	3,328
September	2,966	89.00%	365	11.00%	3,331
October	2,888	86.80%	438	13.20%	3,326
November	2,823	86.90%	427	13.10%	3,250
December	3,072	88.80%	388	11.20%	3,460

†NRR recording procedures changed in August 2010

Total RR Forms	**34,187**
Total NRR Forms	**4,272**
2010 Total	**38,459**

Forms received by month for 2010 are illustrated above. *RR Forms* are those forms that are "Registry Ready", i.e., they are able to be entered into the Registry upon receipt. *NRR Forms* are those missing elements prohibiting them from being entered into the Registry, i.e., "Not Registry Ready." Registry workers follow-up on NRR forms with either a fax or phone call to inform the sender of the issue. Once the issue is resolved (i.e., the issue is corrected on the form), the form becomes "Registry Ready" and is able to be entered into the database. Over the course of 2010, 17.4% *NRR Forms* generated a *RR Form*. In 2010, a total of 38,459 forms were received, excluding duplicate submissions (which are not tracked). (Figure 1).

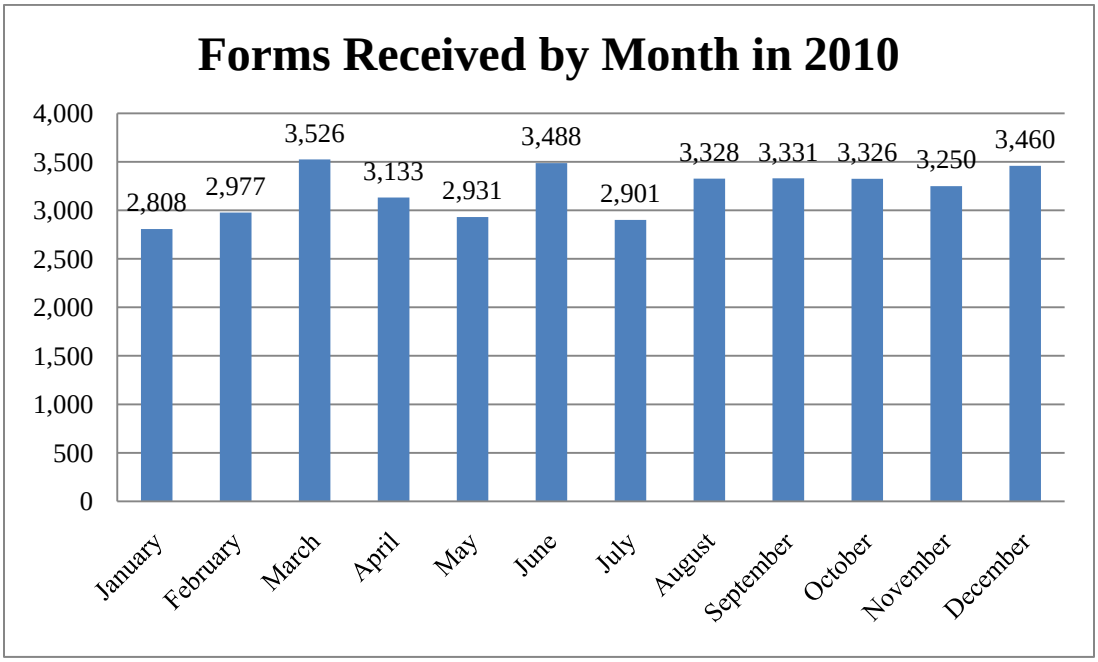


Figure 1: All forms (RR Forms and NRR Forms) received in 2010 by month.

Other Workload Information

While form processing makes up the bulk of Registry-related workload, the Registry staff also generate a confirmation packet for each Registrant, including a letter describing the Registrant's POLST form wishes, an explanation of the Registry, contact information should anyone wish to follow-up with the Registry office, and a magnet and stickers with the Registrant-specific POLST Registry ID (Figure 2).

Figure 2: Example POLST magnet/sticker

Sender Information

As of December 3, 2009, signers of POLST forms in Oregon were legislatively mandated to submit completed forms to the Oregon POLST Registry unless the patient wishes to opt out. The Registry collects information about senders when it is included in a fax or electronic coversheet. In 2010, more than 1070 individual senders were recorded, excluding individuals sending in their own forms. The senders with the largest recorded volumes included hospital medical records departments, clinics, and hospice programs. Nearly 11,000 forms were received (in total) in 2010 from the 20 senders with the highest volume.

In 2010, the Oregon POLST Registry received POLST forms from every Oregon county. Figure 3, below, demonstrates county-level information regarding forms signed on or after 12/3/09 that were received in 2010 for Registrants over the age of 65, expressed as a proportion of each county's population over the age of 65 (from the 2006 Census). Information like that provided can help guide education and outreach activities both for POLST form utilization and completion, as well as submission to the Registry.

The Registry continues to track sender information, which is shared monthly with key contacts throughout the State to maximize both receipt of forms and inclusion of sender contact information with form submissions.

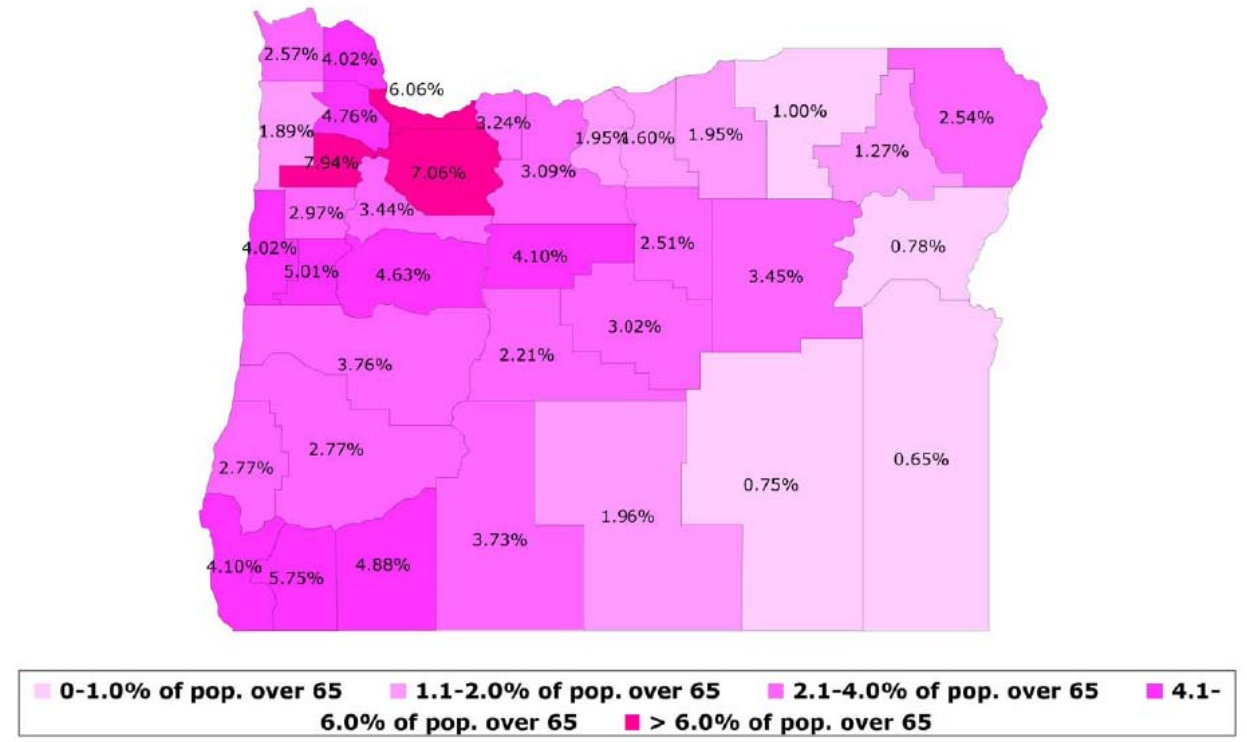


Figure 3: Active POLST Registry Registrants as a proportion of County population over the age of 65 - 2010 information as of 1/16/11

Utilization

In emergency situations, the Registry is searchable by Emergency Communication Specialists housed at the Emergency Communication Center (ECC) at OHSU. Treating health care professionals call into the Center, provide identifying patient information, and are then told whether or not the patient is in the Registry. For patients in the Registry, Sections A and B of the POLST form are released verbally and, upon request, the POLST form can be faxed to the treating or receiving medical facility (should transport by EMS be appropriate).

Call Classification

Incoming calls to the ECC can be from three different sources: (1) Emergency Medical Services; (2) emergency departments; or (3) hospital acute care units. Initially, the Registry was envisioned as providing information to EMS and emergency departments but acute care units were added at their request when it become clear that they also needed access to treat patients admitted to them. The Emergency Communication Specialists recorded the source of the call for all matched calls since the inception of the Registry, and the recording of this information became required for unmatched calls during the Spring of 2010.

Number of Calls and Type

POLST form orders and copies of active POLST forms can be accessed through one of two routes – by calling the Emergency Communications Center during a health care crisis (available 24 hours/day, 7 days/week), or in non-urgent situations by calling the Oregon POLST Registry office (M-F, 8-5). Data below describes calls received through both routes from 1/1/2010-12/31/2010.

Table 7a: ECC Call Log Information

Total Calls to the ECC*	Successful Matches	% with match
370	84	22.7%

Table 7b: ECC calls with no match
*Includes only calls that were not canceled.

Reason no match was found (ECC)	Calls*	%
No match to name	228	79.7%
Too few identifiers available	20	7.0%
No match to DOB	2	0.7%
No match to SSN last 4	3	1.0%
Other or Not recorded	33	11.5%
OVERALL	**286**	**100.0%**

*Includes only calls that were not canceled where no registrant was found.

Table 7c: ECC Caller types

Caller type: 1/1/10-12/31/10 (ECC)	Matches	Not Matches	Total Calls*	% of calls from caller type
EMS	38	110	148	40.0%
Emergency Department	28	88	116	31.1%
Hospital Acute Care Unit	18	53	71	19.2%
Other or Not Classified**	0	35	35	9.7%
Total	**84**	**286**	**370**	**100%**

*Includes only calls not canceled;
**All calls now classified, but was not standardized for early call tracking

Table 8a: POLST Registry Office Call Information, POLST form requests. **All Calls to the Registry Office in 2010**	**# of POLST Form Requests**	**% of all calls**
1040	38*	3.7%

*Of these 38 calls, we were able to classify caller types and match information for 34 (see below)

Table 8b: POLST Registry Office Caller type

Registry Office Caller type: 1/1/10-12/31/10	Matches	Not Matches	Total Calls able to be classified	% of calls from caller type
Hospice	3	2	5	14.7%
Facility	3	2	5*	14.7%
Hospital	8	3	11	32.4%
Clinic	8	1	9**	26.5%
Registrant/Surrogate	4	0	4	11.8%
Total	**26**	**8**	**34**	**100%**

*For three calls from a facility requesting a POLST, no information regarding search results was recorded (total Facility n=8).

**For one call from a clinic requesting a POLST, no information regarding search results was recorded (total Clinic n=10).

The Registry as Quality Assurance for the POLST Program

One of the unexpected benefits of the Registry has been a new ability to monitor the overall POLST program. Prior to the Registry there has not been a comprehensive statewide mechanism for determining the number of types of patients who have a POLST form in Oregon. The Registry is providing that information. It is also allowing the ability to quantify the types of different treatment choices Oregonians are making.

The Registry also means that we are able to assure consistency in form completion so that we know how many forms are incomplete and signatures, dates or other information in order to make them valid, usable forms. This information can be used to help with ongoing health care professional education.

Road Map for the Future

The upcoming years include exciting changes for the Registry. The initial year of Registry operation produced a larger than expected volume of forms. The Registry is continuously evaluating workflow and needs in an ongoing effort to maximize efficiency and productivity to maintain the success achieved in the first year of operation. The Registry is now operating at maximum capacity and continues to process forms as quickly as possible, but we acknowledge that further increases in volume and work will be difficult to manage with existing resources and within the current goal timeframe for form validation, entry, and preparation for searchability. New staffing and organizational changes have been proposed for the Registry, with the goal of further streamlining processes to maintain the time between when a form is received by the Registry and when it becomes available for search.

January 2011 also marked the beginning of a pilot project incorporating electronic-POLST form submission to the Registry. Providence Clinics spent the later months of 2010 building an electronic POLST form into their electronic medical record. In January, a new electronic form submission process was tested and compared to the current form submission process. The first phase of the pilot helped identify unanticipated problems. Changes to the process are in the works and phase II of the pilot is

expected to begin in Spring 2011. This pilot has been approved by the POLST Taskforce. Providence Clinics will began producing and printing an electronic version of the form which then can be printed on white paper, signed by the health care professional, placed in a pink envelop and sent with the patient. The form will then be electronically transmitted to the Registry. Electronic submission is expected to decrease data entry time. This pilot will be monitored closely and if successful expanded to other health care systems.

Along with the development of electronic POLST form submission, the POLST form itself is the process of being revised. Changes to the form are made every two years by the Oregon POLST Task Force, and 2011 form changes continue to address the operation of the Registry as a mechanism for POLST order storage and release. Dissemination of the new POLST form is expected to occur in Summer 2011.

Finally, a major focus of the Registry in 2011 is on program evaluation and sustainability, including education to increase both submission and call volume. Having a higher percentage of active POLST forms in the Registry increases the likelihood of a "match". The research efforts described earlier are designed to look at some of the broader issues of POLST and overarching goals of the Registry. Preliminary data from these projects suggest that the Registry is effective and of value to Oregon. In addition to these efforts, the Registry is planning on designing and implementing a system of ongoing process evaluation metrics. The goal is to better track the form and call volume the Registry experiences so that influxes and changes can be quickly and easily noted and adjusted for. This system will also serve as a basis for providing feedback to speak to the effectiveness of new policies, staffing, and organizational structures.

In conclusion, we are happy to report that the Oregon electronic POLST Registry has been rapidly implemented and is already successful in providing a valuable service to the people of the State of Oregon. Since statewide implementation of the program in December of 2009, the Registry has seen a massive influx in forms and a growing number of calls made by health care professionals. The upcoming

biennium will be focused on incorporating new processes, improving old ones, and implementing a plan for sustainability.

References:

1. Dunn, P. M., Schmidt, T. A., Carley, M. M., Donius, M., Weinstein, M. A., & Dull, V. T. (1996). A method to communicate patient preferences about medically indicated life-sustaining treatment in the out-of-hospital setting. Journal of the American Geriatrics Society, 44(7), 785-91. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/8675925.

2. Center for Ethics in Health Care, Oregon Health & Science University (2008). History of the Oregon POLST Registry. Retrieved June 15, 2010, from http://www.ohsu.edu/polst/programs/OrRegistryHistory.htm.

3. Tolle, S. W., Tilden, V. P., Nelson, C. A., & Dunn, Patrick M. (1998). A prospective study of the efficacy of the physician order form for life-sustaining treatment. Journal of the American Geriatrics Society, 46(9), 1097. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9736102.

4.Lee, M. A., Brummel-Smith, K., Meyer, J., Drew, N., & London, M. R. (2000). Physician Orders for Life-Sustaining Treatment (POLST): Outcomes in a PACE Program Journal of the American Geriatrics Society. Journal of the American Geriatrics Society, 48(10).

5. Meyers, J. L., Moore, C., McGrory, A., Sparr, J., & Ahern, M. (2004). Physician orders for life-sustaining treatment form: honoring end-of-life directives for nursing home residents. Journal of gerontological nursing, 30(9), 37-46. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/15471062.

6. Hickman, S. E., Nelson, C. A., Moss, A. H., Hammes, B. J., Terwilliger, A., Jackson, A., et al. (2009). Use of the Physician Orders for Life-Sustaining Treatment (POLST) Paradigm Program in the Hospice Setting. Journal of Palliative Medicine, 12(2), 133-141. doi: 10.1089/jpm.2008.0196.

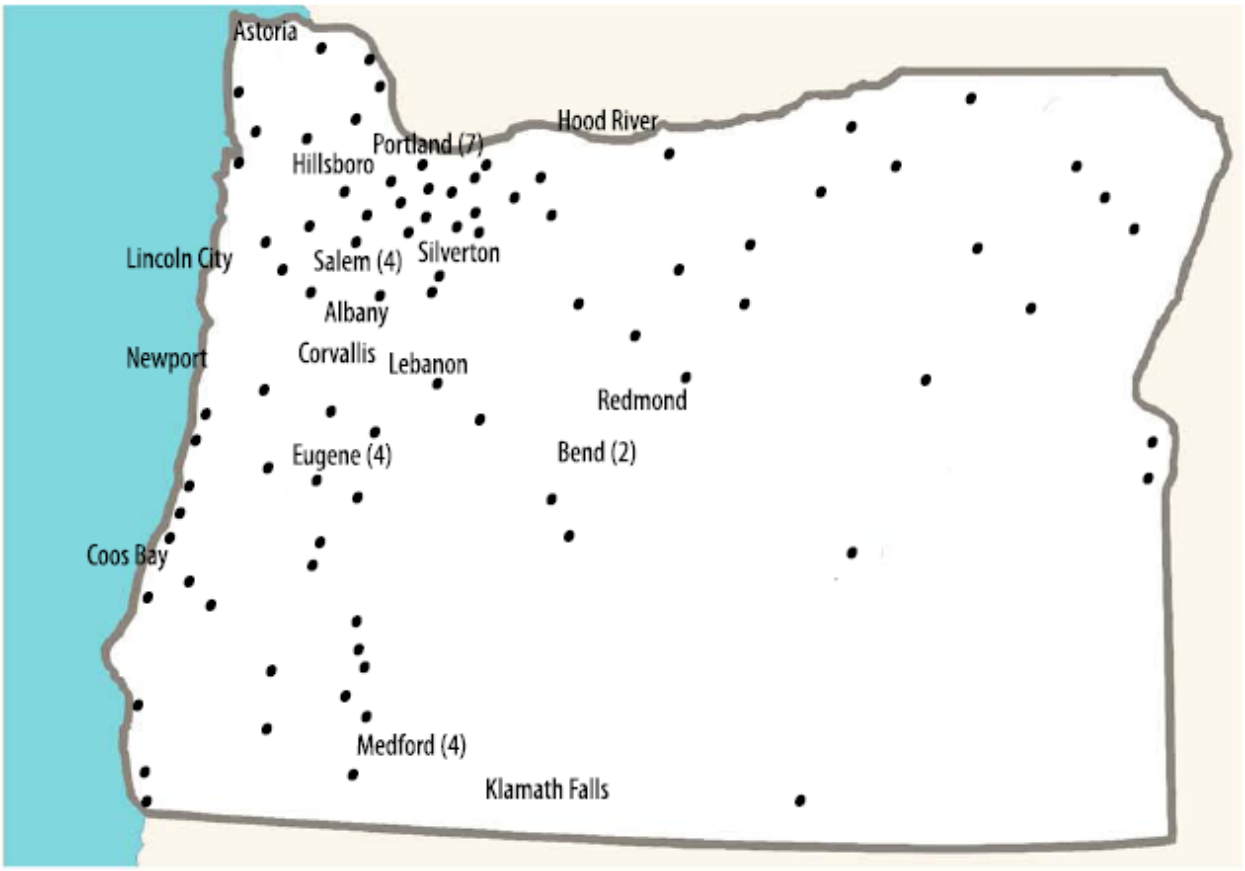
7.Hickman, S. E., Nelson, C. a, Perrin, N. a, Moss, A. H., Hammes, B. J., & Tolle, S. W. (2010). A comparison of methods to communicate treatment preferences in nursing facilities: traditional practices versus the physician orders for life-sustaining treatment program. Journal of the American Geriatrics Society, 58(7), 1241-8. doi: 10.1111/j.1532-5415.2010.02955.x.

8. Schmidt, Terri A, Hickman, S. E., Tolle, S. W., & Brooks, H. S. (2004). The Physician Orders for Life-Sustaining Treatment Program : and Attitudes. Journal of the American Geriatrics Society, 52, 1430-1434.

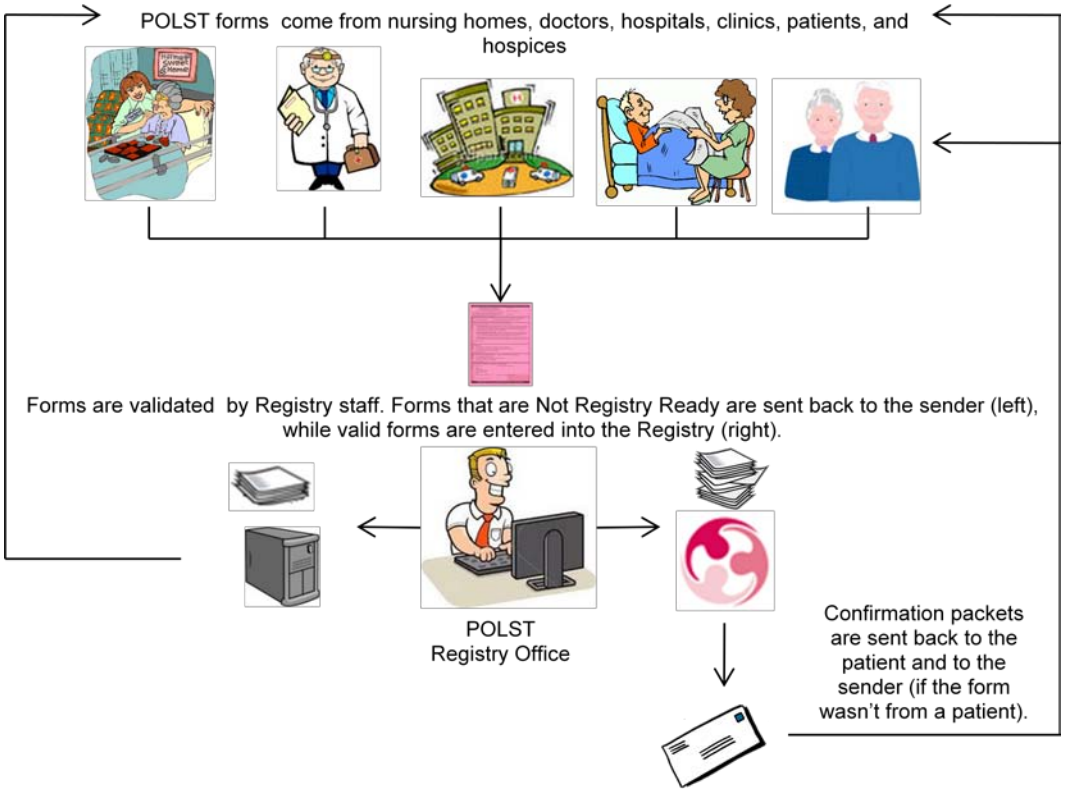
9. Oregon Administrative Rules ch. 595, Sec. 1184. Oregon POLST Registry Act. House Bill 2009. 3 December 2009.

Appendices:

A. Statewide POLST Registry Education



B. POLST Registry Overview



C. POLST Registry Advisory Committee (PRAC)

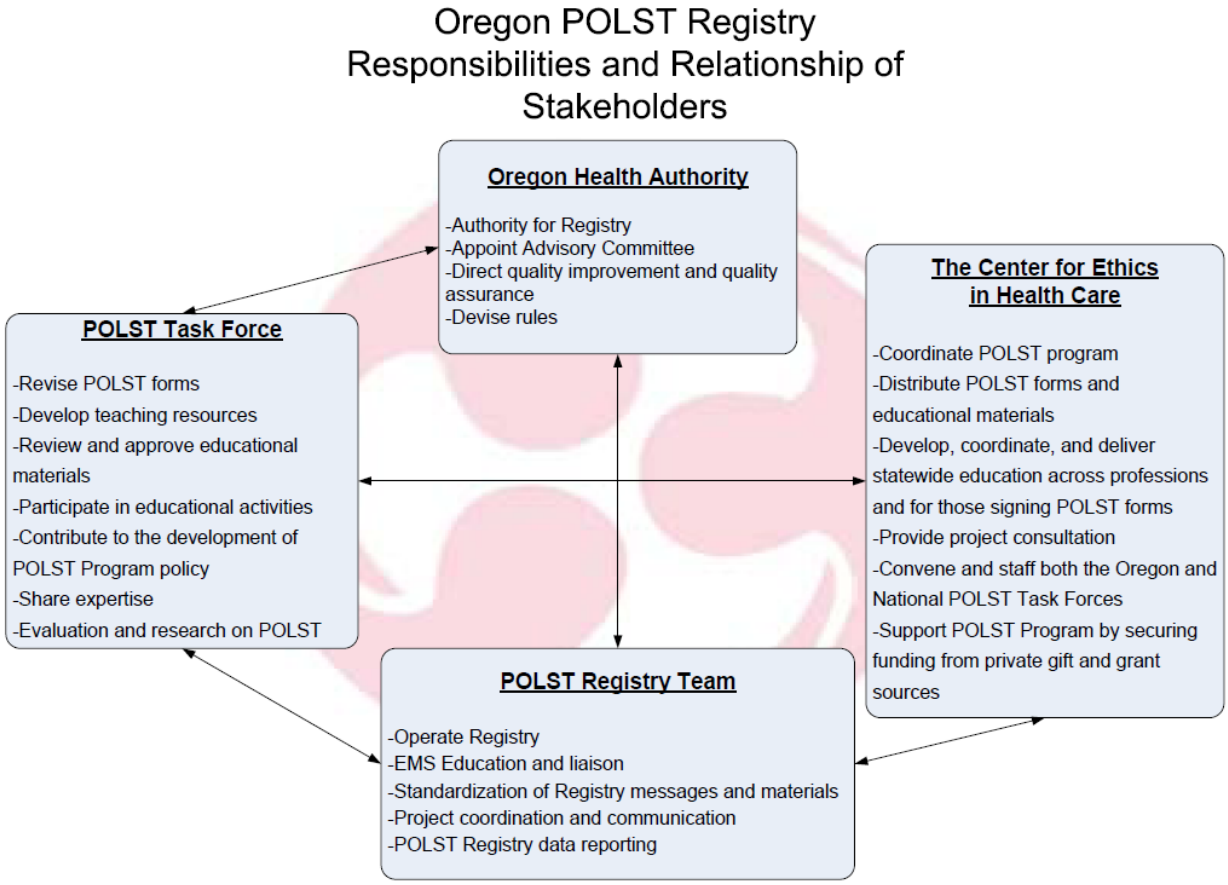
The POLST Registry Advisory Committee (PRAC) was created by HB 2009. The committee is responsible for advising the Oregon Health Authority (OHA) regarding the implementation, evaluation, and operation of the Registry. The adoption of the Oregon POLST Registry as a statewide Registry was made possible by committed individuals from both the public and private sectors. This public/private partnership has been a remarkable success. The committee also reviews research proposals seeking permission to utilize Registry data and advises the OHA on whether or not access should be granted.

Term Ends	Position	Member
January 1, 2012	Public (3)	Jane Baumgarten
January 1, 2012	Public (1)	Ella Booth
January 1, 2013	Public (2)	Patty Brost
January 1, 2013	Public (4)	Jan Campbell
January 1, 2012	Long-term Care	Margaret Murphy Carley, JD, RN
January 1, 2012	EMT	Doug Kelly, EMT-P
January 1, 2013	Hospital	Laura Matthews, RN
	EMS and Trauma Systems and Program Designee	Ritu, Sahni, MD, MPH
January 1, 2012	Supervising MD for EMTs	Terri Schmidt, MD, MS
January 1, 2013	Hospice	Sheila Sund, MD
January 1, 2013	Health Professional	Susan Tolle, MD

D. Oregon POLST Task Force

Name, Title	Organization
Margaret Murphy Carley, Oregon POLST Task Force Chair, Retired Legal Council & Deputy Director	OHSU
Sarah Papp, POLST Coordinator, Center for Ethics in Health Care	Center for Ethics in Healthcare, OHSU
Senior and Healthcare Services	
Patra Behary, MD, Hospitalist, NWP Regional Ethics Director	KSMC - Hospitalist Department
Ruth Gulyas , Executive Director	Oregon Alliance of Senior & Health Services
Linda Kirschbaum**,** Director of Assisted Living, Residential Care & Quality	Oregon Health Care Association
Tina Kitchin, MD, Medical Director	Department of Human Services, Seniors and People with Disabilities
Patricia Newton, MD, Director of Geriatric Education and Medical Ethics	Legacy Health Systems
Jim Patterson, MD	Providence
Gary M. Plant, MD	Madras Medical Group
Mayda Ramos, MD	Silverton Hospital, Oregon Medical Association
Nurse Practitioners	
Diane Voeller, MN, FNP-BC	OHSU
Home Care/Hospice	
Deborah Whiting Jaques, Executive Director/CEO	Oregon Hospice Association
EMS	
Ritu Sahni, MD, MPH, Oregon EMS and Trauma Medical Director	Oregon DHS, Office of Public Health Services, EMS/Trauma
Terri Schmidt, MD, Professor, Emergency Services Medical Director	OHSU
Legal/Policy	
Gwen Dayton, JD, General Council	Oregon Medical Association
Diane Waldo, Director of Quality and Clinical Services	OAHHS
Donna Routh, RN, MN	Oregon Nurses Association
Amy Veatch, Program Director	Oregon Health Decisions
Research/Evaluation	
Susan Tolle, MD, Director	Center for Ethics in Health Care
VA	
Molly Osborne, MD, PhD, VA Integrated Ethics Program Officer	VA/OHSU
Community	
Joyce DeMonnin, MPH, Public Outreach Director	AARP Oregon
Consultants	
David Clarke, MD Retired, Gastroenterology and Ethics	Kaiser Permanente
Ann Jackson, MBA *Retired Executive Director*	Oregon Hospice Association
Dan McFarling *Retired*: EMS & SDSD	Oregon Dept. of Human Services
Jennifer Cook, Sr. Research Assistant & Registry Coordinator	OHSU Department of Emergency Medicine

E. Visual of relationship between State, OHSU, and CFE/POLST



F. Acknowledgements: Individual Involvement with the POLST Registry

Oregon Health Authority/State of Oregon:

- Bruce Goldberg, MD (Director, OHA)
- Grant Higginson, MD (DHS Community Health Planning Manager)
- Jeanene Smith, MD, MPH (Administrator, Oregon Health Policy and Research)
- Ritu Sahni, MD, MPH (Oregon State EMS Medical Director)
- Tina Edlund (Chief of Policy)
- Sean Kolmer, MPH (Research & Data Manager, Oregon Health Policy and Research)
- Jeremy Vandehey (Community Engagement Coordinator)
- Suzanne Hoffman (Chief Opperating Officer)
- Tracy Hulett (Assistant to the Chief Operating Officer)
- Rocky King (Director of Health Care Purchasing)
- John Swanson (Chief Financial Officer)
- Amy Fauver (Director of State and Federal Affairs)
- John Britton (Director of Health Data and Performance Management)
- Patty Wentz (Communications Director)
- Alissa Robbins (Oregon Health Authority Communications Officer)
- Evonne Alderete (Operations and Policy Analyst)

Oregon POLST Task Force:

- See Appendix D for members

National POLST Task Force (Executive Committee):

- Bernard Hammes, PhD (Chair)
- Margaret Carley, JD, RN (Vice Chair & Executive Director)
- Sarah Papp (Secretary)
- Susan Tolle, MD (Treasurer)
- Patricia A. Bomba, MD (Member at Large)
- Alvin H. Moss, MD (Member at Large)
- Terri Schmidt, MD, MS (EMS Consultant)
- Charles Sabatino, JD (Legal Consultant)

The Center for Ethics in Health Care:

- Susan W. Tolle, MD, FACP (Director)
- Lynn A. Jansen, RN, PhD (Chair in Ethics Education)
- Patrick M. Dunn, MD (Associate Director)
- Robert M. Shook, MA (Associate Director)
- Margaret Carley, RN, JD (Executive Director National POLST Paradigm and Chari Oregon POLST Task Force)
- Margaret Jeppesen (Palliative Care Education Coordinator)
- Sarah Papp (POLST Coordinator)
- Joel Nava (Fiscal and Ethics Fellowship)
- Jane Applegate (Interprofessional Ethics Education Coordinator)

POLST Registry Team:

- Terri Schmidt, MD, MS (Medical Director)
- Dana Zive, MPH (Research Manager)
- Jenny Cook (OPR Manager)
- Brittany Tagliaferro-Lucas (OPR Operations Coordinator)
- Elizabeth Olszewski (OPR Research and Data Assistant)
- April Iman (Student Worker)
- Donna Shenk-Miller (Student Worker)
- Erin Watson (Student Worker)
- Galit Zwirner (Student Worker)
- John Trinh (Student Worker)
- Kaidden Kelly (Student Worker)
- Kaitlin Gath (Student Worker)
- Katelynd Orolin (Student Worker)
- Michael Tran (Student Worker)
- Nancy Le (Student Worker)
- Natalia Smiley (Student Worker)
- Noah Axe (Student Worker)
- Stefan Alexander (Student Worker)

OHSU:

- John Ma, MD (Professor and Chair, Department of Emergency Medicine)
- Alan Lines (Department Administrator, Department of Emergency Medicine)
- Judi Workman (Division Director, Critical Care)
- Sherrie Forsloff (Supervisor, Emergency Communications Center)
- Emergency Communications Center Staff