Published in final edited form as:
Am J Hosp Palliat Care. 2017 December ; 34(10): 918–924. doi:10.1177/1049909117693578.

Provider Perspectives on Advance Care Planning Documentation in the Electronic Health Record: The Experience of Primary Care Providers and Specialists Using Advance Health Care Directives and Physician Orders for Life-Sustaining Treatment

Ellis Dillon, PhD[1], **Ming Tai-Seale, PhD, MPH**[1], **Judith Chuang, MPH**[1], **Atul Gupta, MA, MBA, BS**[2], **Sharon Tapper, MD**[3], **Steve Lai, MD**[4], **Peter Yu, MD**[5], **Christine Ritchie, MD, MSPH**[6]

[1]Palo Alto Medical Foundation Research Institute, Mountain View, CA, USA.

[2]Department of Economics, Stanford University, Stanford, CA, USA.

[3]Palo Alto Medical Foundation, Department of Palliative Care, Santa Cruz, CA, USA.

[4]Palo Alto Medical Foundation, Department of Palliative Care, Palo Alto, CA, USA.

[5]Hartford Health Care Cancer Institute, Memorial Sloan Kettering Cancer Alliance, Hartford, CT, USA.

[6]Division of Geriatrics, Department of Medicine, University of California, San Francisco, CA, USA.

Abstract

Context—Advance care planning (ACP) is valued by patients and clinicians, yet documenting ACP in an accessible manner is problematic.

Objectives—In order to understand how providers incorporate electronic health record (EHR) ACP documentation into clinical practice we interviewed providers in primary care and specialty departments about ACP practices (n=13), and analyzed EHR data on 358 primary care providers (PCPs) and 79 specialists at a large multispecialty group practice.

Methods—Structured interviews were conducted with thirteen providers with high and low rates of ACP documentation in primary care, oncology, pulmonology, and cardiology departments. EHR problem list data on advance health care directives (AHCD) and physician orders for life-sustaining treatment (POLST) were used to calculate ACP documentation rates.

Results—Examining seriously ill patients ≥65 years with no pre-existing ACP documentation seen by providers during 2013–2014, 88.6% (AHCD) and 91.1% (POLST) out of 79 specialists had zero ACP documentations. Of 358 PCPs, 29.1% (AHCD) and 62.3% (POLST) had zero ACP documentations. Interviewed PCPs often believed ACP documentation was beneficial and accessible, while specialists more often did not. Specialists expressed more confusion about

---

Corresponding author: Dr. Ellis Dillon, Palo Alto Medical Foundation Research Institute, 2350 W. El Camino Real, 4th floor Mountain View, CA 94040, USA. dillone@pamfri.org, Phone: 650-625-3876, Fax: 650-934-3514.

Declaration of Conflicting Interests: The Authors declare that there is no conflict of interest.

documenting ACP, whereas PCPs reported standard clinic workflows. Problems with interoperability between outpatient and inpatient EHR systems and lack of consensus about who should document ACP were sources of variations in practices.

Conclusion—Results suggest providers desire standardized workflows for ACP discussion and documentation. New Medicare reimbursement for ACP and an increasing number of quality metrics for ACP are incentives for healthcare systems to address barriers to ACP documentation.

Keywords

advance care planning; advance health care directive (AHCD); physician orders for life sustaining treatment (POLST); documentation; electronic health record; qualitative

Introduction

The complex decisions patients face near the end of life, and the prevalence of patients receiving unnecessary or unwanted care are critical reasons for physicians to initiate advance care planning (ACP).[1–3] The electronic health record[4] (EHR) has provided new opportunities and posed new problems for accessing ACP documentation.[5] However, little research has qualitatively examined how providers incorporate ACP discussion and EHR documentation into everyday practice.

ACP fosters person-centered care by providing education, and identifying and documenting patient preferences. Some randomized controlled trials have shown ACP improved communication, decreased unwanted hospitalizations, and increased care concordant with patient wishes.[6,7] A systematic review of communication about serious illness care goals by Bernacki and Block documented best practices.[8] Yet, implementing ACP can be challenging.[9] Kelley et al discovered recorded preferences for “comfort-focused care” were “poorly correlated with treatment delivered.”[10]

Physicians ask about ACP surprisingly infrequently,[11,12] and do not feel well trained to discuss prognosis and ACP with patients.[13,14] A 2015 Kaiser Family Foundation poll found that 66% of respondents 75 or older never discussed ACP with their physicians.[12] Obstacles include the fact that patient preferences change over time and with changes in health.[15,16] Much evidence about ACP is from oncology, raising questions about generalizability. Gott et al found that providers for patients with chronic obstructive pulmonary disease (COPD) indicated that ACP was rarely initiated, prognosis was rarely discussed, and uncertainty about which provider should initiate ACP.[17] The question of who is responsible for ACP also arose in examining care for patients with kidney disease.[18] Even palliative care nurses reported facing challenges to ACP: timing, and lack of training and education.[19]

Documentation of ACP

ACP information is often absent or inadequate in medical records.[20] Cox et al audited 65 palliative care medical records and found evidence of end-of-life care discussions in about half of them, however documentation lacked detail and in focus groups providers described keeping essential information “in their heads.”[21] Mack et al followed 2,155 patients with stage IV lung and colorectal cancer and found that the first documentation of end-of-life discussion took place a median of 33 days prior to death.[22]

EHRs are becoming ubiquitous and patients expect and demand care that is aligned with their preferences. The EHR has the potential to coordinate care across providers and care settings,[20] and remind clinicians to enter ACP information.[2] However, recorded ACP information may be “inaccurate,”[23] or not “actionable” as discovered by Wilson et al’s examination of an ambulatory care EHR data.[5] While 51% of patients 65 and older had ACP documentation, only 33.5% of these records included a scanned document, which includes the signature required to be legally valid. ACP information was often recorded in less accessible places (e.g. progress notes, scanned documents).[5]

Little research has examined why, when, and how physicians document ACP in the EHR. Healthcare organizations must understand how providers document ACP, and what barriers and facilitators to documentation exist. This study seeks to describe current clinical practices for ACP documentation in the EHR at a multi-specialty group practice and elucidate experiences with ACP by interviewing providers from a range of specialties.

Methods

EHR Analysis

An ACP documentation rate was calculated for all providers in primary care, pulmonology, cardiology, and oncology departments at a large, non-profit, multispecialty group practice in California. ACP documentation rates were based on a sample of all patients 65 or older with at least one serious illness, as defined by the National Committee for Quality Assurance Palliative and End of Life Care Physician Performance Measurement Set,[24] who had at least one office visit in a 24 month period. ACP rates were calculated as the share of patients for whom the provider had entered an AHCD (Advance Health Care Directive) or Physician Orders for Life Sustaining Treatment[25] (POLST) documentation into the Epic EHR problem list by December 31,2014, out of patients with no pre-existing ACP in the EHR on January 1,2013. Providers in this practice used the California Hospital Association version of the AHCD and the California POLST form. These ACP documentations were all matched to individual physicians who entered them into the EHR using a provider key. Geriatrics and palliative care physicians were excluded since they often have additional training and expertise related to ACP. EHR data was analyzed using summary statistics.

Provider Interview Recruitment

We used outlier sampling, a type of purposive sampling,[26] to identify and recruit providers who were outliers with either “high” or “low” rates of ACP documentation within their specialty, in order to better understand the spectrum of providers’ ACP practice patterns. We also used snowball sampling to identify any other healthcare team members involved in ACP discussion or documentation. To allow comparisons we recruited an even number of high and low ACP rate providers, and even numbers across specialties. Interviews were conducted between September 2014 and September 2015.

Providers were recruited via a standardized email script explaining that the purpose of the study was to learn about ACP discussion and documentation in clinical practice and requesting volunteers. The interviewers were employed by a Research Institute affiliated with the delivery organization, but not known personally to the individual providers who were interviewed. Interviewers (ED and JC) were blinded to provider ACP rates during recruitment, interviewing, and data analysis. Analysis began during the interview time period which allowed us to identify when we reached thematic saturation and then confirmed identified themes, with a total of thirteen interviews.[27] This research was approved by the delivery organization's institutional review board.

Interviews

Providers gave written informed consent then were interviewed in person using a structured interview guide exploring clinical ACP practices. Interviews were audio recorded, transcribed verbatim, and de-identified.

Data Analysis

Two qualitative researchers (ED and JC) used an inductive approach to develop a coding structure.[28,29] They met weekly during data collection and analysis to develop a codebook and come to consensus by discussing and resolving disagreements about coding. They used open coding to develop a codebook focused on emerging themes identified in the transcripts (e.g. barriers and facilitators of ACP). They used Atlas.ti version 7.5.4 to organize and code data. After coding 4 transcripts by consensus, the rest were coded with a reliability check showing 77.8% agreement between coders. After coding was complete the researchers were un-blinded to each respondent's ACP documentation rate. Interviews were grouped by ACP rate and department then compared to establish differences between groups. Rigor in the qualitative design and analysis was assured by four steps: (1) having our healthcare system advisors providing guidance and feedback on study design and findings throughout the study, (2) conducting targeted sampling, (3) carrying out constant comparisons, iterating between recruitment and analysis until thematic saturation was reached and confirmed, and (4) triangulating with EHR data to confirm the presence of these trends beyond the interview respondents.[30]

Results

Electronic Health Record Findings

EHR data showed that primary care physicians (PCPs) had higher rates of documentation than specialists. Of 79 specialists, 88.6% had zero AHCD documentations and 91.1% had zero POLST documentations for patients 65 or older with serious illness and no pre-existing ACP. In comparison out of 358 PCPs, 29.1% had zero AHCD documentations and 62.3% had zero POLST documentations. The specialists with the highest rates had documented AHCD for 10.0% and POLST for 1.8% of patients, compared to 51.5% (AHCD) and 43.6% (POLST) among PCPs.

Interview Findings

Thirteen providers were interviewed: three PCPs, three pulmonologists, four oncologists, two cardiologists, and one nurse practitioner in cardiology who was identified through snowball sampling (Table 1). ACP rates were unavailable for the nurse practitioner who was hired after 2014, and was not legally authorized to sign POLST forms at the time the interviews were conducted. Of twelve physicians interviewed, 5 had "high" rates and 7 had "low" rates (Table 1).

Physicians with high and low ACP rates described similar practices regarding ACP, except physicians with low ACP rates expressed more reluctance and confusion about EHR documentation. Analysis revealed more striking differences between PCPs and specialists.

A Preference for the POLST—None of the specialists interviewed had entered Advance Health Care Directive (AHCD) information into the EHR problem list (Table 1), while PCPs reported it was common practice (Table 2). PCPs reported using POLST often, while most specialists reported using the POLST form rarely or in the inpatient setting. Only 3 of the 8 specialists had documented a POLST form in the EHR.

Providers reported using the AHCD with a wider variety of patients than the POLST. However, most providers mentioned that the POLST form was more helpful than the AHCD for with patients with serious illness.

> "Sometimes I use that [AHCD] as a lead-in of who is your durable power of attorney, but to me, that's by far not the most critical thing, it's that they have been able to express their intentions or their wishes on a POLST."" [Specialist-high rate]

Several physicians felt the AHCD form was too vague: "With the Advance Directives forms, they're very vague... It doesn't really give you, would you want tube feedings, when it comes down to that?" [Specialist-high rate] For capturing true preferences the AHCD was insufficient.

> "Advanced directives, those come from attorneys... And I find those completely useless. POLST is much more helpful, because they [AHCDs] always just say, "I don't want life support if I have an irreversible disease with no hope of recovering." It's never that clear-cut." [Specialist-low rate]

Specialists often described using the POLST form with a narrow subsample of patients (e.g. hospitalized or hospice patients) (Table 3).

One PCP noted an institutional push to use the POLST form too broadly.

> "I feel that the POLST has lost its value because there's been so much emphasis on getting POLST forms signed for patients who are not appropriate, and so they'll [physicians will] just check "do everything", "do everything," and scan it in the chart." [PCP-high rate]

Some physicians developed rubrics for using the forms: AHCD for anyone who they defined as "dying" and POLST for anyone likely to call 911 or who is living alone.

Variation in Beliefs About Responsibility for Documenting ACP—PCPs believed that ACP was part of their care coordination responsibilities, and some specialists agreed that PCPs should be "quarterbacks" for ACP.

> "You need a physician quarterback. Ideally it is the primary care physician who knows the patients and has a long relationship with them." [Specialist-low rate]

Other specialists said ACP was their responsibility. One specialist explained that the specialist sees patients more frequently and has greater expertise to lead ACP.

> "The [specialist] gets it all... And the primary care doctors don't really know enough to be confident. In fact that's what happens a lot of times. A patient asks their primary care doctor a question. And they can't answer it with that confidence... And also we see the patient many more times." [Specialist-low rate]

The Benefit of Standard Workflows for EHR Documentation—PCPs reported standardized department workflows for documenting ACP: "The workflow we use today is pretty much the same one that we've been teaching for 15 years." [PCP-high rate] Specialists expressed more confusion, frustration, and skepticism. One specialist described her lack of familiarity with how to document.

> "I think I've done a POLST form with a patient maybe twice. We don't even have POLST forms in our office. I have to send my nurse over to internal medicine to go get one. And by that time, I'm way over [time]. Because, to be honest, I don't even know what to do with the form if I got it. I think the last time I filled out the POLST, I walked it over to the internal medicine doctor. I'm sure they scanned it in." [Specialist-low rate]

Specialists noted grave concerns about the interoperability of outpatient and inpatient EHR systems.

> "One of my pet peeves is that I have had not once, not twice, but recurrently, monthly almost, patients that we've had the conversation, you fill out the POLST form, and then the patient winds up in the ICU having all the things done because they either couldn't find the form, they didn't know, or it's documented in the [outpatient delivery system] Epic side, but nobody at the hospital can see that... our doctor workflows have been so focused on using the record electronically, that if you want to hide something from us, the best way to do it is put it on paper." [Specialist-low rate]

Barriers to ACP Documentation—Prominent barriers included EHR design and lack of interoperability. Even the "Care Everywhere" feature of the Epic EHR, designed to enhance interoperability, was described as too slow.

> "I think they need to make it easier for the hospitals to see our charts, because by the time they activate that Care Everywhere button - the emergency room doctors can't wait for that. It is literally much simpler for me to page that oncologist." [Specialist-low rate]

The paper format of the POLST and AHCD was also criticized as being incompatible with the EHR, creating a need to scan documents.

> "Maybe I'm not looking in the right place. I think I click on problem list, and then the PCPs generally will have advanced care planning or advanced care discussion, and I'll be, "Oh, great, they discussed it," and I click on it. It says, "Durable power, husband." That's all it says. And I'm like, how does that help me?... And then, if they put in POLST, I don't know where they go... Probably the media tab. But it's very difficult to find something in the media tab if it's not labeled." [Specialist-low rate]

All physicians noted a lack of time for ACP discussions.

> "We have appointments that are 20 and 40 minutes long and you can't win - you can't figure out before they [patients] get here, how much time they need. So [we need] more time with them that's not pressured by your schedule of people waiting for you. That would be helpful." [PCP-high rate]

The nurse practitioner, who dealt exclusively with seriously ill patients and had one hour visits, felt time was less of a barrier, although even she remarked, "I need resources," to educate patients. Specialists also noted a lack of material resources (e.g. no POLST forms).

Facilitators and Recommendations for Improvement—Existing facilitators included trusting patient-physician relationships, standard clinic workflows in primary care, and an involved PCP.

> "Some PCPs sort of shed their patients when they get sick and just let the specialists take care of them... I get referrals all the time from specialists who say this person really needs a PCP. They've got 17 specialists and nobody is coordinating their care." [PCP-high rate]

Providers also recommended patient education, policy changes (e.g. a statewide POLST registry[31]), appointing a "quarterback," provider training, and standardization.

> "I think everybody should know how to do it and it should be used in the same way for everyone. And in a very easily accessible way. Problem lists, even those, they get so bogged down with so much, so it has to be in its own spot or easily searchable." [Specialist-high rate]

Normalizing the practice of ACP for patients was seen as equally important as developing provider workflows.

> "To have it in a checkbox type of thing...One thing that I could see is telling all of our patients, with anyone who walks through the door, this [ACP] is part of the care – the coordinated care that we provide." [Specialist-low rate]

Physicians mentioned that ACP information could be treated like allergies. One specialist noted, "it should be the sort of thing where it's right next to their allergies. Because, again, the actions that are taken on it are rapid." [Specialist-low rate] Time and money to do this important work were also important, as one specialist said, "In twenty minutes you can't do that. Under our productivity system we need an allowance to do this work without being penalized" [Specialist-low rate].

Discussion

Our goal was to identify current ACP practices, barriers, and facilitators at a large multi-specialty group practice. Our findings suggest PCPs documented ACP more than specialists. Physicians described problems entering and retrieving ACP documentation and uncertainty about who should lead ACP. Physicians reported the POLST form was more useful than the AHCD, and they desired standardization. Specialists expressed frustration about lack of interoperability, perhaps due to their familiarity with inpatient systems. Unexpectedly, physicians with high and low rates of ACP documentation described similar practices, but this finding may be attributed to some physicians documenting in less accessible areas of the EHR. It is unknown if a correlation exists between high quality or frequent ACP discussion and accessible ACP documentation. Based on prior literature it is unclear whether PCPs truly document more ACP, or if specialists merely document in less accessible places (e.g. progress notes or the inpatient EHR). Some physicians do not use the EHR problem list, as discovered by Wright et al.[32]

The facilitators of ACP noted here mirror some of the findings of Bernacki and Block with respect to best practices (e.g. appointing a "quarterback").[8] Studies show wording heavily influences AHCD completion[33], so modifying AHCD language may help. Since nurse practitioners are now legally able to sign a POLST,[34] and social workers often coordinate ACP as part of the health care team,[35] training and responsibility for ACP may be more widely dispersed.[36] Shifting payment models, including new Medicare reimbursement for ACP,[37] and a trend toward population health may support allocating more visit time to ACP. Multi-pronged quality improvement initiatives may be necessary to institute changes in ACP practice.[38] EHR redesign and national or statewide POLST registries may ease interoperability problems. Patient preferences may fluctuate over time and recording their preferences in an accessible format may require innovation and collaboration both within and across healthcare delivery organizations.

Limitations include the fact that we studied one delivery organization, with one electronic health record system, and interviewed a small number of respondents who were outliers. The size of our sample does not allow us to generalize, but it exposes considerable variability in practice. All respondents agreed to be interviewed, perhaps indicating they care about this topic. Our measurement of ACP documentation relied on EHR problem list entry, although we know ACP can be documented in less accessible areas.[5] Future research might use chart reviews to explore whether problem list documentation is a good indicator. The new current procedural terminology codes for ACP reimbursement provide another indicator researchers may analyze.

In conclusion, at the site being studied our findings imply the need for improved interoperability between hospital and outpatient EHR systems, consensus about which providers should document ACP, and widespread standardized clinic workflows for ACP. A recent Hartford Foundation poll of 736 physicians found ACP was a "conversation stopper";

only 29% of physicians were trained in ACP communication, 46% frequently or sometimes felt unsure what to say, and only 29% said their healthcare system had a formal system for ACP.[39] The providers we interviewed were not unsure what to say in these conversations, although they may be unaware of communication problems. However, they desired standardized workflows so that all providers have the same expectations about *who* should lead ACP conversations and *when*, and *where* and *how* to document ACP to ensure patients wishes are honored.

Acknowledgments

The authors wish to thank the Health Care Systems Research Network (HCSRN) – Claude D. Pepper Older Americans Independence Centers (OAIC) AGING Initiative, the National Institute on Aging (Grant 1R24AG045050-01A1), Palo Alto Medical Foundation, and the Richard and Susan Levy Family Trust for funding and support.

Funding Acknowledgments:

We received funding support from the Health Care Systems Research Network (HCSRN) – Claude D. Pepper Older Americans Independence Centers (OAIC) AGING Initiative, the National Institute on Aging (Grant 1R24AG045050-01A1), Palo Alto Medical Foundation, and the Richard and Susan Levy Family Trust for funding and support.

References

1. Cassel CK, Guest JA. Choosing wisely: Helping physicians and patients make smart decisions about their care. JAMA. 2012;307(17):1801–1802. [PubMed: 22492759]
2. IOM (Institute of Medicine). Dying in America: improving quality and honoring individual preferences near the end of life. Washington, DC: The National Academies Press;2014.
3. White DB, Braddock CH, Bereknyei S, Curtis JR. Toward shared decision making at the end of life in intensive care units: opportunities for improvement. Ann Intern Med. 2007;167(5):461–467.
4. Blumenthal D, Tavenner M. The "meaningful use" regulation for electronic health records. N Engl J Med. 2010;363(6):501–504. [PubMed: 20647183]
5. Wilson CJ, Newman J, Tapper S, et al. Multiple locations of advance care planning documentation in an electronic health record: are they easy to find? Journal of Palliative Medicine. 2013;16(9): 1089–1094. [PubMed: 23742686]
6. Detering KM, Hancock AD, Reade MC, Silvester W. The impact of advance care planning on end of life care in elderly patients: randomised controlled trial. BMJ. 2010;340:c1345. [PubMed: 20332506]
7. Teno JM, Gruneir A, Schwartz Z, et al. Association between advance directives and quality of end-of-life care: a national study. J Am Geriatr Soc. 2007;55(2):- 194.
8. Bernacki RE, Block SD, American College of Physicians High Value Care Task F. Communication about serious illness care goals: a review and synthesis of best practices. JAMA Intern Med. 2014;174(12):1994–2003. [PubMed: 25330167]
9. Connors AF, Dawson NV, Desbiens NA, et al. A controlled trial to improve care for seriously ill hospitalized patients: The study to understand prognoses and preferences for outcomes and risks of treatments (SUPPORT). Journal of the American Medical Association. 1995;274(20):1591–1598. [PubMed: 7474243]
10. Kelley AS, Ettner SL, Morrison RS, Du Q, Wenger NS, Sarkisian CA. Determinants of medical expenditures in the last 6 months of life. Ann Intern Med. 2011; 154(4):235–242. [PubMed: 21320939]
11. California HealthCare Foundation. Final Chapter: Californians' Attitudes and Experiences with Death and Dying. 2012.
12. DiJulio B, Firth J, Brodie M. Kaiser Health Tracking Poll: September 2015. 2015; http://kff.org/health-costs/poll-finding/kaiser-health-tracking-poll-september-2015/. Accessed 11/25/2015, 2015.

13. Christakis NA. Death foretold: prophecy and prognosis in medical care. Chicago: University of Chicago; 1999.
14. Broom A, Kirby E, Good P, Wootton J, Adams J. The art of letting go: referral to palliative care and its discontents. Social Science and Medicine. 2013;78:9–16. [PubMed: 23219848]
15. Auriemma CL, Nguyen CA, Bronheim R, et al. Stability of end-of-life pa systematic review of the evidence. JAMA Internal Medicine. 2014;174(7):1085–1092. [PubMed: 24861560]
16. Ditto PH, Jacobson JA, Smucker WD, Danks JH, Fagerlin A. Context changes choices: a prospective study of the effects of hospitalization on life-sustaining treatment preferences. Med Decis Making. 2006;26(4):313–322. [PubMed: 16855121]
17. Gott M, Gardiner C, Small N, et al. Barriers to advance care planning in chronic obstructive pulmonary disease. Palliat Med. 2009;23(7):642–648. [PubMed: 19648222]
18. O'Hare AM, Szarka J, McFarland LV, et al. Provider Perspectives on Advance Care Planning for Patients with Kidney Disease: Whose Job Is It Anyway? Clin J Am Soc Nephrol. 2016; 11(5):855–866. [PubMed: 27084877]
19. Seymour J, Almack K, Kennedy S. Implementing advance care planning: a qualitative study of community nurses' views and experiences. BMC Palliat Care. 2010;9(4):4. [PubMed: 20377876]
20. Yung VY, Walling AM, Min L, Wenger NS, Ganz DA. Documentation of advance care planning for community-dwelling elders. J Palliat Med. 2010;13(7):861–867. [PubMed: 20618087]
21. Cox K, Moghaddam N, Almack K, Pollock K, Seymour J. Is it recorded in the notes? Documentation of end-of-life care and preferred place to die discussions in the final weeks of life. BMC Palliat Care. 2011; 10(1): 18. [PubMed: 22053810]
22. Mack JW, Cronin A, Taback N, et al. End-of-life care discussions among patients with advanced cancer: a cohort study. Ann Intern Med. 2012;156(3):204–210. [PubMed: 22312140]
23. Bose-Brill S, Pressler TR. Commentary: opportunities for innovation and improvement in advance care planning using a tethered patient portal in the electronic health record. J Prim Care Community Health. 2012;3(4):285–288. [PubMed: 23804174]
24. National Committee for Quality Assurance/The Physician Consortium for Performance Improvement. Palliative and End of Life Care: Physician Performance Measurement Set. 2008.
25. Hickman SE, Sabatino CP, Moss AH, Nester JW. The POLST (Physician Orders for Life-Sustaining Treatment) paradigm to improve end-of-life care: potential state legal barriers to implementation. J Law Med Ethics. 2008;36(1):40, 44.
26. Teddlie C, Yu F. Mixed methods sampling a typology with examples. Journal of mixed methods research. 2007;1 (1):77–100.
27. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. Field methods. 2006;18(1):59–82.
28. Glaser BG, Strauss AL. The discovery of grounded theory: strategies for qualitative research. Chicago: Aldine Pub. Co.; 1967.
29. Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. Health Serv Res. 2007;42(4): 1758–1772. [PubMed: 17286625]
30. Krefting L Rigor in qualitative research: the assessment of trustworthiness. Am J Occup Ther. 1991;45(3):214–222. [PubMed: 2031523]
31. Morgan S, Hanley G, Cunningham C, Quan H. Ethnic differences in the use of prescription drugs: a cross-sectional analysis of linked survey and administrative data. Open Med. 2011;5(2):e87–93. [PubMed: 21915239]
32. Wright A, Maloney FL, Feblowitz JC. Clinician attitudes toward and use of electronic problem lists: a thematic analysis. BMC Med Inform Decis Mak. 2011;11(1):36. [PubMed: 21612639]
33. Halpern SD, Loewenstein G, Volpp KG, et al. Default options in advance directives influence how patients set goals for end-of-life care. Health Affairs. 2013;32(2):408–417. [PubMed: 23381535]
34. Nurse Practitioners, Physician Assistants able to sign medical orders for life-sustaining treatment preferences starting January 2016 [press release]. 8 17, 2015 2015.

35. Morrison RS, Chichin E, Carter J, Burack O, Lantz M, Meier DE. The effect of a social work intervention to enhance advance care planning documentation in the nursing home. Journal of the American Geriatrics Society. 2005;53(2):290–294. [PubMed: 15673354]

36. Black K Advance directive communication: nurses' and social workers' perceptions of roles. Am J Hosp Palliat Care. 2006;23(3):175–184. [PubMed: 17060276]

37. Centers for Medicare & Medicaid Services. Proposed policy, payment, and quality provisions changes to the Medicare Physician Fee Schedule for Calendar Year 2016. 2015; https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2015-Fact-sheets-items/2015-10-30-2.html. Accessed 12/15/2015.

38. Lakin JR, Le E, Mourad M, Hollander H, Anderson WG. Incentivizing residents to document inpatient advance care planning. JAMA Internal Medicine. 2013; 173(17):1652–1654. [PubMed: 23857414]

39. John A Hartford Foundation. Poll—"Conversation Stopper: What's Preventing Physicians from Talking with Patients About End-of-Life and Advance Care Planning?". 2016; http://www.ihartfound.org/news-events/news/advance-care-planning-poll.

Table 1.

Advance care planning documentation rates from 2013–2014 for patients with serious illness 65 or older, for interviewed providers.

Providers Interviewed		**Primary Care** [A]	**Specialists** [B]
Providers	Number of providers interviewed	3	10
AHCD Documentation	Providers with zero AHCD documentations	1 (33%)	10 (100%)
	Range of number of AHCD documentations among physicians	0, 11	0, 0
	Highest rate AHCD documentation by a physician	69.00% (11/16)	0.00% (0/98)
POLST Documentation	Providers with zero POLST documentations	0 (0%)	6 (60%)
	Range of number of POLST documentations among physicians	2, 3	0, 2
	Highest rate POLST documentation by a physician	18.8% (3/16)	8.30% (2/24)

[A] Combined Internal Medicine and Family Medicine into Primary Care category.

[B] Specialists included physicians from cardiology, oncology and pulmonology departments. Reported sample excludes 1 Cardiology department nurse practitioner was interviewed but whose rates of ACP documentation were not available in the EHR.

Note: The rate of ACP documented is for *new* documentations of ACP in the EHR problem list by December 31, 2014 for patients who had no pre-existing ACP documentation on January 1, 2013. These ACP documentations were all matched to individual physicians who entered them into the EHR using a provider key. The sample included patients 65 or older with at least one serious illness as defined by National Committee for Quality Assurance/The Physician Consortium for Performance Improvement: Palliative and End of Life Care: Physician Performance Measurement Set 2008. Patients also must have had at least one office visit in a 24 month period.

Table 2.

Comparison of two physicians with high versus low rates of ACP documentation

	Physician A. PCP with high ACP rate	Physician B. Specialist with low ACP rate
AHCD rate	50% AHCD	0% AHCD
POLST rate	17% POLST	0% POLST
Denominator	18 patients	16 patients
Illustrative quote	“One of the reasons why it’s so important that we put it on the problem list is because the problems do flow as we do health information exchange, even between non-Epic and Epic systems so that’s why that’s important work flow.” [PCP-high rate]	“I’ll call the oncologist. It’s not worth crawling through the chart. I can’t find it [ACP documentation] in the chart.” [Specialist-low rate]

Note: The rate presented is the number of patients with AHCD or POLST documented in the problem list, divided by the denominator. The denominator presented here is the number of patients seen by each physician during the two year period (2013–2014) with serious illness and no pre-existing ACP documentation.

Table 3.

PCP and Specialist perspectives on POLST

PCP perspective	Specialist perspective
“I think it’s [POLST is] really beneficial when... somebody has an identified terminal illness and there is a possibility that a crisis is going to come up and an ambulance would be called, or, somebody’s going to react, and you really want to be clear about this person’s goals of care.” [PCP-high rate]	“Actually, the POLST is really an inpatient thing. So we don’t do it until you’re in the hospital. But, you know most of the time, you just go straight to hospice or comfort care.” [Specialist-low rate]