

Original Research

Enhancing Advance Care Planning in a Geriatric Clinic

Catherine F. Xie, BS¹; James S. Powers, MD^{1,2*}

¹Vanderbilt University School of Medicine, Nashville, Tennessee, USA

²Tennessee Valley Healthcare System, Geriatric Research Education and Clinical Center, Nashville, Tennessee, USA

*Corresponding author

James S. Powers, MD

Clinical Associate Director, Tennessee Valley Geriatric Research, Education and Clinical Center, 7159 Vanderbilt Medical Center East, Nashville, TN 37232, USA

Tel. 615-936-3274; Fax: 615-936-3156; E-mail: james.powers@vanderbilt.edu

Article information

Received: February 14th, 2018; **Accepted:** February 21st, 2018; **Published:** February 22nd, 2018

Cite this article

Xie CF, Powers JS. Enhancing advance care planning in a geriatric clinic. *Palliat Med Hosp Care Open J*. 2018; 4(1): 1-6. doi: [10.17140/PMHCOJ-4-126](https://doi.org/10.17140/PMHCOJ-4-126)

ABSTRACT

Context

Academic primary care geriatric clinic.

Objective

We sought to increase advance care planning (ACP) discussions at an academic primary care geriatric clinic utilizing the electronic medical record (EMR). The measure was the number of documented ACP discussions.

Methods

Two plan-do-study-act (PDSA) quality improvement cycles. Phase 1: engagement of physicians and development of a patient information sheet with advanced directive forms for inclusion in the patient take-home clinic summary. Phase 2: engagement of clinic staff to screen for patient readiness for ACP discussions and to remind physicians.

Results

At baseline, 47.7% of patients had advanced directive documents in their EMR, and there was an 11.1% advance directive document completion following ACP discussions. Over a 3 month intervention, the rate of ACP discussions remain unchanged at 3.4% of patients during Phase 1 but increased to 7.63% (94.6% increase) during Phase 2.

Conclusions

A team-based approach targeting patients prepared for ACP discussions was able to double incident new ACP discussions. Physicians identified several barriers to ACP discussions including patient readiness, time constraints, EMR constraints, and regulatory factors.

Keywords

Advance care planning; Primary care; Electronic medical record (EMR).

Abbreviations

ACP: Advance Care Planning; EMR: Electronic Medical Record; PDSA: Plan-Do-Study-Act; POST: Physician Order for Scope of Treatment; POLST: Physician Order for Life-Sustaining Treatment; MOLST: Medical Order for Life-Sustaining Treatment; VUMC: Vanderbilt University Medical Center; POA: Power of Attorney; EoL: End-of-Life.

BACKGROUND

Advance care planning (ACP) documents the details of patient's wishes with respect to the choice of life-sustaining treatment and/or surrogate decision-maker, when they are unable to communicate on their own behalf. ACP documents include: 1) a living will which indicates care preferences, 2) appointment of healthcare

agent which includes the medical power of attorney for medical decisions when the patient is not able to, and 3) the portable directive or medical order which provides documentation to all healthcare providers and emergency personnel regarding the patient's wishes. The last document is signed by the physician, and in different states is called a physician order for scope of treatment (POST), physician order for life-sustaining treatment (POLST), or medical

order for life-sustaining treatment (MOIST). Many studies have advocated for the completion of advance directives as a method to protect patient autonomy.^{1,2} There have been many public education projects to promote engagement and discussion regarding end-of-life (EoL) care, both to promote community discourse on what matters most prior to individuals becoming seriously ill or being near the EoL, and to improve the patient and family experience.^{3,4} However, despite governmental and non-governmental initiatives, the overall rate of advance directive completion remains low in the United States (US).^{5,6} Indeed, a recent review published between 2011 and 2016 estimates that only 36.7% of Americans have completed an advance directive.⁷

Having an advance care plan alleviates anxiety among patients, and surviving family members report improved satisfaction with the quality of care received.^{8,9} Patients are also more likely to receive care according to their preferences, fewer hospitalizations, and less costly care.¹⁰⁻¹² Although, there is a popular notion of death denial in the US, surveys and focus groups of Americans have demonstrated that there is an overwhelming preference for opportunities to plan for the end-of-life.¹³ Patients have further pointed out that they prefer that their physicians initiate conversations about advance directives and that the physician should know them well.^{14,15} Furthermore, these conversations should also be conducted longitudinally for maximal effectiveness.¹⁶ All these points to the primary care physician as a provider in a unique position to engage patients in effective conversations about their wishes towards the EoL.

Our study focuses on a primary care geriatric clinic at Vanderbilt University Medical Center (VUMC), Nashville, TN, USA, consisting of 3 physicians and approximately 5000 patients. Many of these geriatric patients have multiple chronic illnesses and conditions, have been followed for a number of years, and are appropriate candidates for advance directive discussions. We studied the historical rates of advance directive completion and conversations on advance directives documented in clinic notes

and advance directive documents. We also carried out 2 plan-do-study-act (PDSA) quality improvement cycles to investigate potential techniques to improve the rate of documented conversations on advance directives in this primary care setting. We conducted our study at a time when VUMC was migrating to a new electronic medical record (EMR) system, which created a unique opportunity to study processes related to ACP.

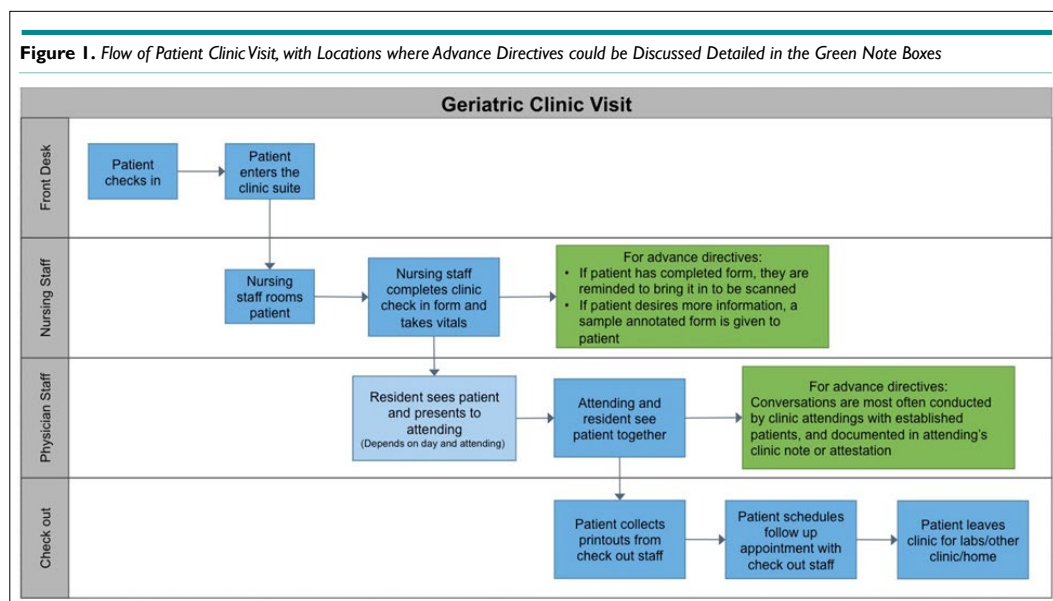
The Vanderbilt University's Institutional Review Board (IRB) acknowledged this project as a quality improvement initiative.

MEASURES

Pre-Intervention Clinic Setting

The Vanderbilt Geriatric Clinic sees an average 46 patients a week and has 3 attending physicians. The clinic is also staffed by residents, who work with 2 of the attending physicians on more than half of the clinic workweek, seeing patients independent of the attending before presenting to them. We evaluated the clinic flow and detailed a typical patient visit, which is presented in Figure 1.

Two focus groups were conducted with the practice to identify key interactions in a patient's clinic visit where the topic of advance directives could be discussed. The first interaction occurs during the clinic intake, where nurses have an option to inquire about advance directives on the intake flow sheet. If patients have previously completed the advance directive or medical power of attorney (POA), they are reminded to bring the forms in to be scanned into the EMR. Patients interested in more information are given a Vanderbilt model advance directive and medical POA form that is annotated in patient-level language. The second interaction occurs when the attending physicians conduct patient education and counseling, which is frequently documented in the attending physician clinic visit note or their attestation of the resident physician's note. We determined that these two interactions provided



intervention opportunities for quality improvement on advance directive conversations.

On Nov 1, 2017, VUMC migrated from its in-house built StarPanel EMR system to an EPIC EMR. Both electronic health records allow for documentation of advance care plans, verification of terminal illness, and documentation of code status, although they do so differently. We leveraged this move to introduce our quality improvement intervention within the clinic workflow, as the practice adapted to the new EMR.

Measures

The study consisted of a chart review of patients seen by all 3 attending physicians in the geriatric clinic from September 4, 2017 to January 5, 2018. Patient charts were pulled from the StarPanel EMR up until November 1, 2017, and the EPIC EMR after institutional migration on November 2, 2017. Our primary metric was the number of documented conversations related to goals of care or advance directives, recorded in the clinic note by attending geriatricians following patient encounters. We also located advance directive documents previously scanned into the record. Examples of documented conversations included phrases such as “*Advance directives were discussed with patient and handouts provided*”, “*Patient understands poor prognosis but wishes to continue with therapy*”, and “*Patient’s main goal is to receive all available care and to stay with the spouse in assisted living as long as possible*”.

INTERVENTIONS

We conducted 2 separate cycles of interventions, after baseline data collection from September 4, 2017 to November 1, 2017.

Phase 1

The first intervention ran from November 2, 2017 to December 8, 2017. A phase-in buffer from November 2 to 10, 2017 (approximately one clinic workweek) was provided for physicians and clinic staff during initial adjustment to the new EMR system. The data from the buffer was added to our baseline data. Our intervention focused on providing clinicians with readily available information to initiate and guide discussions on advance directives. We leveraged the wrap-up function of the EPIC EMR for outpatient encounters, which allowed providers to print out forms and educational materials attached to patient’s clinic visit summary printouts. We designed a detailed patient information sheet on advance care planning, with a glossary of terms, for the clinic. The information sheet was attached to Tennessee-specific advance directive (patient care preferences), POA, and POST forms and uploaded to the EPIC EMR for use at the discretion of clinicians. We then met with clinic attending physicians concerning their experiences with advance directive conversations in primary care and introduced the handout to them. The intervention was well-received by both clinic staff and attending.

Phase 2

A second PDSA cycle was performed after reviewing the new ad-

vance directive conversations which showed no change from baseline. A second intervention ran from December 11, 2017 to January 5, 2018, and focused on enabling physicians to direct advance discussion conversation to patients who were ready and willing for these discussions. We met with clinic nursing staff about utilizing the advance directive clinic intake flow sheet in the EPIC EMR. The flow sheet screens patients for completed advance directive forms and level of interest in discussions on end-of-life care. We encouraged nursing staff to complete the flow sheet during intake and to remind clinic providers to discuss advance directives with interested patients. Following the completion of both interventions, attending physicians were asked to identify barriers to ACP and to reflect on their experiences discussing advance directive discussions in the primary care setting.

RESULTS

Phase 1 and Phase 2 were completed over a 17-week period and included 824 patients, of which 2% (17) were new patients. We found that 47.7% (385) of existing patients had historical (dated before September 4, 2017) advance directive documents in their charts. These documents included historic-templated electronic code status forms, scanned POST forms, scanned living wills, scanned POA appointment documents and problem list code-status notations. Document dates ranged in age from several months to over 10 years prior to the review.

At baseline, from September 4 to November 10, 2017 (includes a buffer for EPIC transition during Phase 1), 457 returning and 13 new patients were seen. An average of 3.92% of patients had documented advance directives conversations during their clinic visits each week, with a total of 18 documented conversations. These conversations led to 1 uploaded Living Will, 1 uploaded POST form and 1 update of code status on the StarPanel EMR (11.1% advance directive document completion immediately following an advance care planning discussion). During Phase 1 (intervention period November 13 to December 8, 2017), there were visits from 186 returning and 1 new patient. The average percentage of patients with a documented advance directives discussion remained unchanged at 3.45% per week. These 6 conversations led to 1 update of code status on the EPIC EMR. For the 164 returning and 3 new patients seen in Phase 2 with clinic staff-facilitated advance directive messaging to physicians (intervention period December 11, 2017 to January 5, 2018), the weekly average of documented conversations increased to 7.63%, a 94.6% increase from baseline. Although 10 conversations were conducted, there were no completed advance directive documents uploaded or code status change on the EPIC EMR during these 4 weeks. Our results are summarized in the Figure 2.

Physician-identified barriers to ACP include patient acceptance, time commitment, competing primary care health maintenance obligations, regulatory factors, and difficulty locating advance directives scanned into the EMR. They noted that although it was easier to find documents in the new EPIC EMR, there was some distortion in documents migrated into the new system (Table 1).

Figure 2. Percentage of Patients per Week who have Documented Advance Directives Conversations during their Clinic Visits from September 4, 2017 to January 5, 2018. The Percentage of Patients with Historical Advance Directive Templated Electronic Code Status Forms, Scanned Living Wills, Scanned Power of Attorney (POA) Forms, Scanned Physician Orders for Scope of Treatment (POST) Forms, and Provider Advance Directive Notations on Patient Summaries are Included

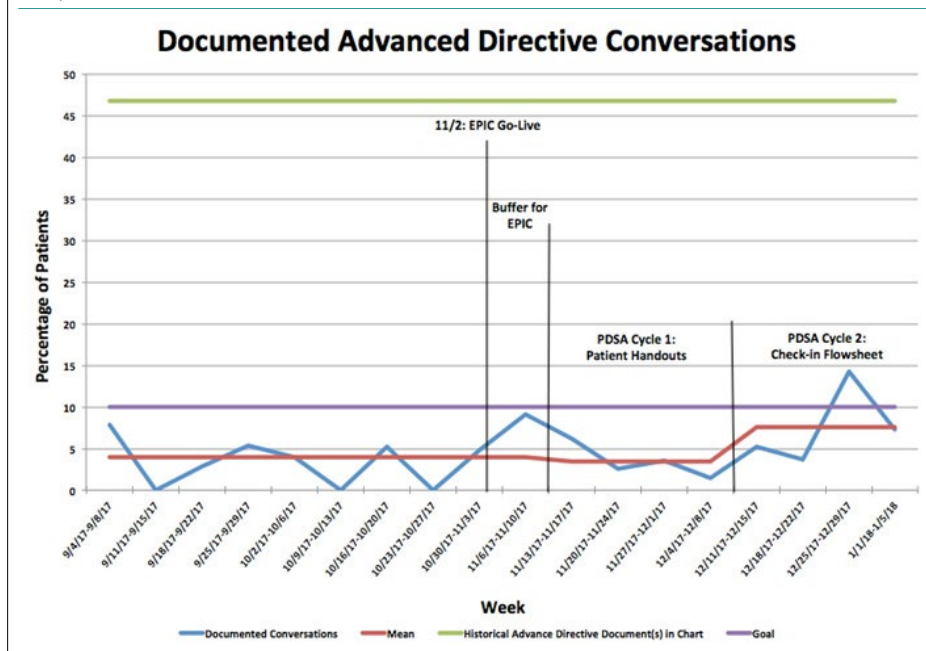


Table 1. Physician-Identified Barriers to and Considerations on Advance Directive Conversations in Primary Care

Category	Barrier
Patient factors	<ul style="list-style-type: none"> Type of visit: difficult to discuss advance directives at initial visits or short follow-ups <ul style="list-style-type: none"> Prefer discussions during annual checkups or with change in condition Varying levels of patient desire and acceptance of discussions <ul style="list-style-type: none"> Some patients may see initiation of advance care discussions as the physician “giving up on them”
Clinic factors	<ul style="list-style-type: none"> Lack of time: advance directive conversations can be time-consuming <ul style="list-style-type: none"> It can be difficult to fit a 30-45 minute discussion into a 20-40 minute clinic slot
EMR factors	<ul style="list-style-type: none"> Advance directive documents are located different areas of the chart <ul style="list-style-type: none"> StarPanel EMR: patient summary (“Facesheet”), advance directives documents tab, historical provider notes EPIC EMR: code status link on patient dashboard, StarPanel viewer for migrated documents, historical provider notes Forms need to be scanned into EMR <ul style="list-style-type: none"> Requires patients to remember to bring in documents to appointment No available electronic templates for forms in EPIC EMR
Regulatory Factors	<ul style="list-style-type: none"> State statute requirements for advance directive documents <ul style="list-style-type: none"> Needs to contain standard elements including signatures Most, but not all, states permit reciprocal documents from other states with no time limitation EMR template forms only aid documentation of advance directive conversations <ul style="list-style-type: none"> EMR forms do not substitute for official state documents

DISCUSSION

The prevalence of advance directive completion by time of death may be as high as 70.8%, depending on the location of death.¹² Our study demonstrates that in an outpatient geriatric primary care practice of an academic medical center, the baseline prevalence

of patients who have their preferences towards end-of-life care documented in the EMR was 47.7%. Although some of the documents date back many years, we can infer that patients appear to be significantly engaged in advance directive discussions and goals of care planning with their primary care physicians, corroborating other findings that patients prefer to discuss advance directives

over time with a physician who knows them well.^{1,2,17,18}

Our Phase I intervention which consisted of provider engagement and providing patient information handouts did not significantly change the rate at which geriatric physicians discussed advance directives with their patients. During the three-month timeframe of the quality improvement project, many physicians noted that while patient educational information can be helpful, the complexities of EoL care require time-consuming personalized conversations. Faced with the time constraints of busy clinical schedules, physicians may opt for giving patients the handouts without an accompanying discussion. However, patient education without the opportunity to ask questions has been shown to be an ineffective method of increasing advance directive completion rates.¹⁹ In another academic medical center that also recently changed EMR systems, while clinicians responded to reminders to conduct ACP approximately 6% of the time, 32% of patients completed advanced care documents following a discussion of ACP.²⁰

We turned our focus to better fostering advance directive conversations in the second PDSA cycle. Our physicians pointed out that although they believe that patients expect advance directive conversations from their providers and it is an important part of a physician-patient relationship, determining the timing of this conversation requires clinical judgment. Advance directives remain a sensitive topic for many patients, and patient acceptance and desire for these conversations must be respected. While official advance directive documents have no time limit of their validity, clinically, these discussions evolve over time. The review of patient wishes and goals of care is an ongoing process in a continuous primary care relationship and is influenced by the patient's preferences and clinical condition. We found that a targeted nurse-driven initiative integrating screening for patient interest to discuss advance directives as part of the clinic intake led to a doubling of the rate of newly documented conversations from baseline. It is unknown what the rate of new discussions of advance directives should be for new and return patients. Similar to other studies, we found that a team-based, multidisciplinary approach is crucial to the success of our intervention.²⁰

LIMITATIONS

Our study faced some limitations. First, our study was limited to a single geriatric primary care clinic at a tertiary referral center and thus may not reflect the demographics of community primary care clinics. Second, our interventions occurred at a time when the entire institution switched over to a new EMR, which may have produced distractions during clinical encounters as providers learned to practice with a different system. The new EMR has advance directives documented in different locations compared to the previous system, possibly adding to provider confusion. Standardization would assist the process of locating advance directive documents and serve as a dashboard for busy clinicians. While we found an 11.1% completion rate of the advance directive document at the time of the ACP discussion, it is unknown how many patients take documents home to discuss with family and later returned them to their physicians. We studied a stable clinic population with few new

patients included, and differences in the timing of ACP discussions with new and return patients may have influenced our findings. Given the time frame of our interventions, we were also not able to evaluate rates of advance directive document completion after a documented discussion.

The optimal strategy to sustain staff involvement in advance directives screening remains unclear. Further studies could focus on improving integration of the intake advance directive flow sheet into the patient intake process, such as periodic reminders set for nursing staff on busy clinic days. Best practices to alert providers that patients are interested in advance directive conversations could also be studied. Finally, as improving and disseminating primary care education and training is an important principle of high-value palliative care,²¹ this project could also be expanded to other clinics with large numbers of patients who would benefit from ACP, such as specialty chronic disease management clinics.

CONCLUSIONS

We conducted a quality improvement study on enhancing advance directive discussions in a primary care geriatric clinic. We found that the prevalence of completed advanced care planning documents uploaded onto the EMR was 47.7% in this established academic geriatric practice. The medical center's migration to a new EMR provided an opportunity to increase ACP information and documentation in the primary care setting. A team-based approach where nurses target patients contemplating these conversations were able to double incident new advance directive discussions.

DISCLOSURES AND ACKNOWLEDGMENTS

The authors would like to thank all the clinic providers and staff at the Vanderbilt University Medical Center MCE Internal Medicine Suite IV Clinic for their participation in this quality improvement project. The authors declare no conflicts of interest.

REFERENCES

1. O'Sullivan R, Mailo K, Angeles R, Agarwal G. Advance directives: Survey of primary care patients. *Can Fam Physician*. 2015; 61(4): 353-356.
2. Wissow LS, Belote A, Kramer W, Compton-Phillips A, Kritzer R, Weiner JP. Promoting advance directives among elderly primary care patients. *J Gen Intern Med*. 2004; 19(9): 944-951. doi: 10.1111/j.1525-1497.2004.30117.x
3. Institute of Healthcare Improvement. The Conversation Project. The Conversation Project. Web site. <https://theconversation-project.org/>. Accessed January 21, 2018.
4. Aging with Dignity, Aging with Dignity. Web site. <https://www.agingwithdignity.org/>. Accessed January 21, 2018.
5. Kelley K. The patient self-determination act. A matter of life and death. *Physician Assist*. 1995; 19(3): 49, 53-56, 59-60 passim.

6. Tennessee Medical Association. New Statewide Organization Is Launched to Prepare Tennesseans with a ‘Voice,’” . Web site. https://www.tnmed.org/TMA/News_and_Media/News/New_Statewide_Organization_is_Launched_to_Prepare_Tennesseans_with_a_Voice.aspx. Accessed January 14, 2018.
7. Yadav KN, Gabler NB, Cooney E, et al. Approximately one in three US adults completes any type of advance directive for end-of-life care. *Health Affairs*. 2017; 36(7): 1244-1251. doi: [10.1377/hlthaff.2017.0175](https://doi.org/10.1377/hlthaff.2017.0175)
8. Curtis JR, Patrick DL, Caldwell E, Greenlee H, Collier AC. The quality of patient-doctor communication about end-of-life care: A study of patients with advanced aids and their primary care clinicians. *AIDS*. 13(9): 1123-1131.
9. 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. doi: [10.1136/bmj.c1345](https://doi.org/10.1136/bmj.c1345)
10. Silveira MJ, Kim SYH, Langa KM. Advance directives and outcomes of surrogate decision making before death. *N Engl J Med*. 2010; 362(13): 1211-1218. doi: [10.1056/NEJMsa0907901](https://doi.org/10.1056/NEJMsa0907901)
11. Molloy DW, Guyatt GH, Russo R, et al. Systematic implementation of an advance directive program in nursing homes: A randomized controlled trial. *JAMA*. 2000; 283(11): 1437-1444. doi: [10.1001/jama.283.11.1437](https://doi.org/10.1001/jama.283.11.1437)
12. Teno JM, Gruneir A, Schwartz Z, Nanda A, Wetle T. Association between advance directives and quality of end-of-life care: A national study. *J Am Geriatr Soc*. 2007; 55(2): 189-194. doi: [10.1111/j.1532-5415.2007.01045.x](https://doi.org/10.1111/j.1532-5415.2007.01045.x)
13. Steinhauser KE, Christakis NA, Clipp EC, et al. Preparing for the end of life: Preferences of patients, families, physicians, and other care providers. *J Pain Symptom Manage*. 2001; 22(3): 727-737. doi: [10.1016/S0885-3924\(01\)00334-7](https://doi.org/10.1016/S0885-3924(01)00334-7)
14. Wissow LS, Belote A, Kramer W, Compton-Phillips A, Kritzer R, Weiner JP. Promoting advance directives among elderly primary care patients. *J Gen Intern Med*. 2004; 19(9): 944-951. doi: [10.1111/j.1525-1497.2004.30117.x](https://doi.org/10.1111/j.1525-1497.2004.30117.x)
15. Gesme DH, Wiseman M. Advance care planning with your patients. *J Oncol Pract*. 2011; 7(6): e42-e44. doi: [10.1200/JOP.2011.000442](https://doi.org/10.1200/JOP.2011.000442)
16. Spoelhof GD, Elliott B. Implementing advance directives in office practice. *Am Fam Physician*. 2012; 85(5): 461-466.
17. Myers JM, Duthie E Jr, Denson K, Denson S, Simpson D. What can a primary care physician discuss with older patients to improve advance directive completion rates? A clinic IQ. *J Patient Cent Res Rev*. 2017; 4(1): 42-45. doi: [10.17294/2330-0698.1412](https://doi.org/10.17294/2330-0698.1412)
18. Ramsaroop SD, Reid MC, Adelman RD. Completing an advance directive in the primary care setting: What do we need for success? *J Am Geriatr Soc*. 2007; 55(2): 277-283. doi: [10.1111/j.1532-5415.2007.01065.x](https://doi.org/10.1111/j.1532-5415.2007.01065.x)
19. Jezewski MA, Meeker MA, Sessanna L, Finnell DS. The effectiveness of interventions to increase advance directive completion rates. *J Aging Health*. 2007; 19(3): 519-536. doi: [10.1177/0898264307300198](https://doi.org/10.1177/0898264307300198)
20. Luu NP, Nigrin C, Peairs K, et al. Increasing advance care planning completion at an academic internal medicine outpatient clinic. *J Pain Symptom Manage*. 2017; 54(3): 383-386. doi: [10.1016/j.jpain-symman.2017.05.006](https://doi.org/10.1016/j.jpain-symman.2017.05.006)
21. Courtright KR, Cassel JB, Halpern SC. A research agenda for high-value palliative care. *Ann Intern Med*. 2018; 168(1): 71. doi: [10.7326/M17-2164](https://doi.org/10.7326/M17-2164)