ORIGINAL ARTICLE

Enhancing the Rates of Advance Directive Documentation to Improve the Quality of Patient Care

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ABSTRACT

INTRODUCTION: Advance Directives (AD) allow patients to maintain autonomy during incapacitation. Patients and their caregivers benefit from these documents in times of crisis. Overcoming barriers to AD completion and documentation can improve patient care quality.

METHODS: A retrospective chart review was performed initially, after consolidation of the electronic health record (EHR) and after alteration of the EHR, to evaluate the availability of a patient's medical power of attorney (MPOA), living will (LW), and code status.

RESULTS: Baseline documentation of MPOA (7.33%), LW (6.00%), and code status (5.33%) within the outpatient EHR was low. After 2 cycles, this improved to 13.10%, 13.10%, and 36.55%, respectively. Improvement in code status documentation was statistically significant (p=<0.00001).

CONCLUSION: Altering the EHR can improve the rates of AD documentation. Further interventions in the EHR should include easily accessible documents and address other barriers, including educating both patients and providers.

KEYWORDS
Advance care planning, advance directive, geriatrics, medical power of attorney, living will, quality improvement

INTRODUCTION

Advance directives (AD) are legal documents that allow the patient to maintain autonomy if incapacitated and/or at the end of life. These documents vary by state in completion requirements and format, but the goal remains the same. Medical power of attorney (MPOA) and living will (LW) documents are typically simple to complete and require a witness and/or a notary. It is recommended that within the MPOA and LW paperwork, the patient records specific information about their healthcare wishes to be followed in the event of incapacitation or end-of-life care. The discussion on end-of-life goals is called Advanced Care Planning (ACP).[1,2] Despite the many benefits, multiple barriers hinder ACP and documentation of ADs in the electronic health record (EHR). In 2012, 50% of Medicare beneficiaries documented having ADs completed; however, their availability within the EHR is lacking.[1]

The benefits of ACP include improved patient satisfaction, reduced medical costs, less aggressive medical care at the end of life, reduced caregiver stress, and improved caregiver bereavement.[2-5] The stress and anxiety accompanying decision-making at the end of life is often alleviated by having written knowledge of the individual's wishes.[3] Furthermore, individuals who engage in ACP are more likely to utilize their hospice benefit, which often provides much-needed resources and care that they would otherwise not have access to.[5]

There are barriers to obtaining ADs for physicians and patients. Physician barriers to completing ADs include lack of time, discomfort discussing end-of-

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life care, and lack of education regarding ACP.[6,7] In a survey conducted on physicians in California, despite 99% reporting knowledge of the importance of ACP, only 29% had been trained to do so.[7] On the other end, patients report a lack of knowledge, fear of burdening family, a desire to have the physician initiate the discussion, belief that decisions are known, and lack of a surrogate decision maker as common barriers.[2,8]

Physician barriers continued to include communication between healthcare organizations and inadequacies with the EHR.[6,9] Implementing these documents into a singular EHR has difficulties, including vague language and accessibility.[6,9-12] Overcoming these barriers requires a multifactorial approach, including EHR modifications, provider and patient education, and an interdisciplinary method of acquiring and recording documentation. Completing patient ADs is essential to improving safety and quality of care within our healthcare system. The documentation rates within the studied academic patient-centered medical home were well below the national average. The project aimed to improve the rate of AD documentation in the EHR for patients 65 and older to 40%. This would exceed the national average for advance directive completion for people of all ages, which is 37%.[13]

METHODS

A retrospective chart review was performed on patients 65 years and older seen within the previous 4 months and established with a primary care provider (attending or resident physician). The initial review was conducted within an outpatient EHR, which did not permit access to records of local inpatient hospitals. A review of scanned documents searched for MPOA, LW, and code status within the patient charts. The rates of documentation were calculated for a baseline.

The transition to a singular EHR was in process at the facility for a few years. Both inpatient and outpatient providers and staff utilized this EHR. Following the go-live date, another retrospective chart review was performed, searching again for documentation of MPOA, LW, and code status over the previous 4 months. These rates were calculated and compared

to the baseline.

Following this analysis, an additional change was made to the EHR by the IT department at the request of the providers. This change allowed for the patient's code status to reside semi-permanently in an easily accessible area of the chart. This information was captured by providers placing an order. Physicians were educated on the new feature. The patient's code status would subsequently be listed in the demographics with the date of order placement. A final analysis of the documentation of ADs was performed after 4 months. A test of correlation was performed on the data using Chi-squared analysis. The study was conducted by SQUIRE 2.0 method.[14] This project was approved by the Marshall University Institutional Review Board [2045458-1].

RESULTS

On initial retrospective review, documentation rates within the EHR were 7.33% for MPOA, 6.00% for LW, and 5.33% for code status (Figure 1). After merging the outpatient and inpatient EHR, a slight increase in MPOA (9.49%), LW (7.59%), and code status (5.79%) was observed. This is represented as "Cycle 1" in Figure 1. As shown in Table 1, these results were not significant with MPOA ($X2=0.67$, $p=0.41$), LW ($X2=0.46$, $p=0.50$), and code status ($X2=0.06$, $p=0.80$).

Cycle 2 resulted in a greater increase in documentation, with increased code status documentation from 5.79% to 36.55%. MPOA and living will documentation increased to 13.10% (Figure 1). Despite continued improvement, rates of MPOA ($X2=0.66$, $p=0.42$) and LW ($X2=1.98$, $p=0.16$) showed no significant correlation, but code status documentation rates ($X2=69.68$, $p<0.00001$) were statistically significant (Table 1).

DISCUSSION

Documentation within the EHR was unacceptable. The baseline rate for MPOA, LW, and code status (7.33%, 6.00%, and 5.33%, respectively) was less than reported by other health systems (13-36%).[10,11,13,15]
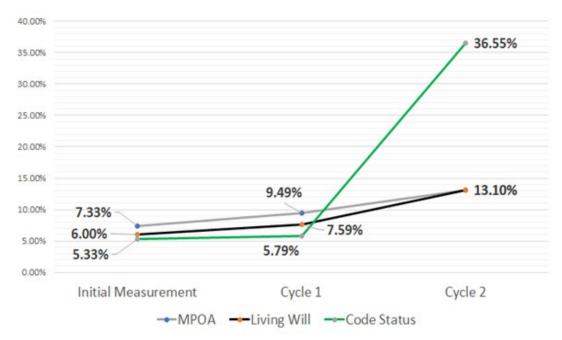
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FIGURE 1: Change in documentation of advance directive information with each intervention.

	MPOA				Living Will				Code Status			
	Yes	No	X²	p-value	Yes	No	X²	p-value	Yes	No	X²	p-value
Baseline	11	139			9	141			8	142		
Cycle 1	15	135	0.67	0.41	12	138	0.46	0.50	9	141	0.06	0.80
Cycle 2	19	127	0.66	0.42	19	127	1.98	0.16	53	93	41.03	**<0.00001**

TABLE 1: Chi-squared analysis of the change in advance directive documentation rates with each intervention.

The benefits and barriers to completing ACP and documenting ADs are well known.[2-8] The Centers for Medicare and Medicaid Services have attempted to address the time and reimbursement barrier by implementing ACP billing in 2016.[16] Barriers within the EHR remain and have been documented as early as 2013.[9,10,12] While the issues are identified by many, interventions are limited in publication. A promising study out of California utilizes a multi-layered technique to improve ACP by manipulating their EHR to allow ease of access and provide reminders to patients and physicians.[17] Results of their intervention are pending. Addressing the utility of the EHR was the first step to improving documentation in this academic patient-centered medical home.

It is evident that alterations to the EHR can be performed, benefiting providers and patients. The EHR is often reported as a source of stress and burnout for physicians, so manipulating it to allow ease of providing quality care is a notable strength. Changing the EHR resulted in a high-impact, low-maintenance improvement, showing a statistically significant change in code status documentation (p=<0.00001). Continuing to improve EHR utilization should provide benefits to both patients and providers.

Despite the final intervention only pertaining to recording code status, an increase was measured in both LW and MPOA documentation. Neither were statistically significant (LW p=0.095, MPOA p=0.27) but were still notable as a continued improvement. This could be related to the visibility of the code status within the EHR, alerting providers to the need for ACP.

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Difficulty in reviewing MPOA and LW documents in the EHR remains. To discover the documents, the user requires knowledge first of their location in scanned documents and second of the possibility that they have been sorted into any of 3 labeled folders (advance directives, MPOA, or legal documents). Lastly, the user would need to change the search date range to the year that the documents would have been scanned into the chart. This requires time and knowledge of a multi-step process not well known within the institution.

Limitations to this project include extrinsic reproducibility. The area of practice shares an EHR between outpatient and inpatient care, which is not typical. This was also conducted in an academic setting where the family medicine providers care for their own patients in the hospital, allowing them to better share this information across settings. Another limitation was in the intervention. Code status was easier to identify, but a central location for MPOA and LW was not designated.

CONCLUSION

Technical changes within the EHR can lead to increased recording of code status. Similar changes must be made to make the MPOA and LW documents more readily available. Proposed upcoming changes include a hyperlink to the documents within the EHR for easy access to providers. This, along with education, improved time constraints, and billable ACP, should continue to increase the completion of these documents. Analyzing this stepwise approach can provide other institutions with clear priorities when enhancing their ACP documentation. This is a worthy objective to improve the quality of care for geriatric patients.

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REFERENCES

1. Harrison K, Adrion E, Ritchie C, Sudore R, Smith A. Low completion and disparities in advance care planning activities among older Medicare beneficiaries. JAMA Intern Med. 2016;176(12):18721875.
2. Lum H, Sudore R, Bekelman D. Advance Care Planning in the Edlerly. Med Clin North Am. 2015;99(2):391-403.
3. Detering K, Hancock A, Reade M, Silvester W. The impact of advance care planning on end of life care in elderly patients: randomized controlled trial. BMJ. 2010.
4. Wright A, Zhang B, Ray A, et al. Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. JAMA. 2008;300(14):1665-1673.
5. Bischoff K, Sudore R, Miao Y, Boscardin W, Smith A. Advance Care Planning and the Quality of End-of-Life Care in Older Adults. J Am Geriatr Soc. 2013;61(2):209-214.
6. Howard M, Bernard C, Klein D, et al. Barriers to and enablers of advance care planning with patients in primary care. Survey of health care providers. Can Fam Physician. 2018;64(4):e190-e198.
7. Fulmer T, Escobedo M, Berman A, Koren M. Physicians' Views on Advance Care Planning and End-of-Life Care Conversations. J Am Geriatr Soc. 2018;66(6):1201-1205.
8. Bernard C, Tan A, Slaven M, Elston D, Heyland D, M H. Exploring patient-reported barriers to advance care planning in family practice. BMC Fam Pract. 2020;21(1).
9. Lamas D, Panariello N, Henric N, et al. Advance Care Planning Documentation in Electronic Health Records: current Challenges and Recommendations for Change. J Palliat Med. 2018;21(4).
10. Walker E, McMahan R, Barnes D, Katen M, Lamas D, Sudore R. Advance Care Planning Documentation Practices and Accessibility in the Electronic Health Record: Implications for Patient Safety. J Pain Symptom Manage. 2018;55(2):256-264.

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11. Kantor MA, Scott BS, Abe-Jones Y, Raffel KE, Thombley R, Mourad M. Ask About What Matters: An Intervention to Improve Accessible Advance Care Planning Documentation. J Pain Symptom Manage. 2021;62(5):893-901.

12. Wilson C, Newman J, Tapper S, Lai S, Cheng P, Wu F T-SM. Multiple Locations of Advance Care Planning Documentation in an Electronic Health Record: Are They Easy to Find? J Palliat Med. 2013;16(9):1089-1094.

13. Yadav K, Gabler N, Cooney E, et al. Approximately One In Three US Adults Completes Any Type of Advanced Directive for End-of-Life Care. Health Aff. 2017;36(7):1244-1251.

14. Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. SQUIRE 2.0 (Standards for QUality Improvement Reporting Excellence): revised publication guidelines from a detailed consensus process. BMJ Qual Saf. 2016;25(12):986-992.

15. Platts-Mills TF, Richmond NL, LeFebvre EM, et al. Availability fo Advance Care Planning Documentation for Older Emergency Deparement Patients: A Cross-Sectional Study. J Palliat Med. 2017;20(1):74-78.

16. Center for Medicare and Medicaid Services. Frequently Asked Questions about Billing the Physician Fee Schedule for Advance Care Planning Services. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Downloads/FAQ-Advance-Care-Planning.pdf. Published 2016. Updated July 14, 2016. Accessed April 27, 2023.

17. Sudore RL, Walling AM, Gibss L, Rahimi M, NS W. Implementation Challenges for a Multisite Advance Care Planning Pragmatic Trial: Lessons Learned. J Pain Symptom Manage. 2023;66(2):e265-e273.

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