Advanced Directives and Code Status Documentation in an Academic Practice

Elizabeth Wheatley, MD; Mark K. Huntington, MD, PhD

BACKGROUND AND OBJECTIVES: Although advance directives (AD) allow patients a voice during their end-of-life care, less than 20% of US individuals have one. We investigated how physicians, both attendings and residents, of the Sioux Falls Family Medicine Residency Program (SFFMRP) were addressing AD and code status with our geriatric population, which has an increased need for advance directive implementation secondary to declining health.

METHODS: We used a retrospective design, in which a random sampling of charts was performed. The setting was the SFFMRP and associated facilities. Participants included a chart review of 121 patients over age 65 seen by a SFFMRP physician within the past year. Percentages were calculated looking at overall outcomes, living situation, age, and resident versus attending involvement. Statistical significance was evaluated using Chi square analysis.

RESULTS: Overall, 44% of all individuals examined had an advanced directive (80.6% of nursing home (NH) patients, 76% of assisted living (AL) patients, and 21% of independent living patients). Evaluating code status, 55% of all individuals had a known code status (100% of NH patients, 92% of AL patients, and 25% of independent living patients). No significant difference was found when comparing attending versus resident physicians’ patient groups.

CONCLUSIONS: SFFMRP geriatric patients are more likely than the national population to have an AD, but more than half of patients still have no known documentation in place. The living situation of a patient significantly affects whether an AD or known code status is present, indicating that focus should be placed on independent living patients completing these documents.

(From the Sioux Falls Family Medicine Residency Program (Drs Wheatley and Huntington); and Department of Family Medicine, University of South Dakota (Dr Huntington).)
groups. Chi square was used for comparisons of our nonparametric data. Correlations were tested for significance by Spearman’s Rank Coefficient.

The study protocol was submitted to the University of South Dakota Institutional Review Board from which it received an exemption.

**Results**

**Advanced Directive**

Overall, 54 patients (44%) had an AD in their clinic chart or at their living facility. The proportion of patients with an AD differed between living arrangements ($P < .001$) (Figure 1).

Thirty-six nursing home charts were reviewed. Twenty-nine patients had ADs (80.6%). Twenty-three were noted in clinic paper charts (64%) with two also (6%) in electronic charts. Six residents had ADs in their nursing home charts (17%). Thirteen of these patients were seen by resident physicians, with nine having ADs (69%). Twenty-three saw attending physicians, with 20 having ADs (87%). Between physician groups, the proportion of patients with ADs did not differ ($P = .145$).

Thirteen assisted living charts were analyzed. Ten had ADs (77%), with seven (54%) found within clinic charts (two [15%] also in electronic charts) and three (23%) at the facility. One patient had a resident physician, and an AD was present (100%). The remainder saw attending physicians and nine had ADs (75%) with six in clinic charts (50%) and three at living facilities (25%).

Seventy-two independent living charts were assessed. Fifteen patients had ADs in their paper clinic charts (21%) but none within electronic charts. Twenty-nine saw resident physicians, with six having ADs (21%). Forty-three saw attending physicians, with nine having ADs (21%).

Twenty-two patients were ages 65–69 (18%), 15 ages 70–74 (12%), 19 ages 75–79 (16%), 24 ages 80–84 (20%), 22 ages 85–89 (18%), and 19 ≥90 (16%). ADs were found in five of those ages 65–69 (23%), four ages 70–74 (27%), 10 ages 75–79 (53%), 10 ages 80–84 (42%), 15 ages 85–89 (54%).

**Figure 1: Location of Advanced Directive Documentation and Percentage of Patients With Any Documentation, by Living Situation**

---

* Paper and electronic chart refer to documentation at the primary care physician’s office; living facility refers to documentation at the institution in which the patient resides.
(68%), and 10 ages ≥90 (53%) (Figure 2). Although the trend toward increased likelihood of an AD with advancing age was not significant ($P=0.067$), a comparison of the youngest age group to the others was significant ($P<0.001$).

**Code Status**

Sixty-six patients (55%) had known code status on their clinic charts: 59 in paper charts (89%) and 17 in electronic charts (26%). The proportion of patients with code status documented differed between living arrangements ($P<0.001$) (Figure 3).

Thirty-six nursing home charts were reviewed, and all had known code status. Resident physicians saw 13 patients, and attending physicians saw 23.

Twelve of 13 patients (92%) in assisted living facilities had known code status. One of these individuals saw a resident physician, and code status was known (100%). Eleven of the 12 seen by attending physicians had known code status (92%).

Four of the patients ages 65–69 (18%) had known code status, as did six of the ages 70–74 (40%), 10 ages 75–79 (53%), 11 ages 80–84 (46%), 18 ages 85–89 (82%), and 17 ages ≥90 (89%). As with ADs, this age-dependent trend was not statistically significant ($P=0.070$), though the younger group was significantly less likely to have documented code status ($P<0.001$) (Figure 2).

**Discussion**

Overall, geriatric patients at SFFM-RP were above the national average for having ADs (44% versus 20%), however, the majority had no AD, and only 55% had known code status. The percentages were similar between resident and faculty patients. Findings indicate that documentation of both ADs and code status could be improved, especially in younger age groups.

The majority of patients with known code status live in facilities that mandate code status documentation. Of our independent living population, only 25% had known code status, and only 21% had ADs. This could be due to different locations of documentation, patients being unaware of their options, or unwillingness to ponder this topic. Providers might not talk to their patients about ADs until their health...
has drastically declined or the patient moves to an institutional setting. When a sample of our patients was informally queried, most stated that they wanted to discuss each portion of the AD with their physician: they found the forms too complicated to complete independently. This may be especially true for individuals who speak English as a second language or do not have a high reading level, as the majority of ADs are written at an 11th to 18th grade reading level. Although the majority of the SFFMRP geriatric population is currently Caucasian and native English speaking, Sioux Falls has become a refugee relocation center, and the dynamics of our population is changing. Therefore, emphasis will need to be placed on making sure cultural differences and language barriers are appropriately addressed to ensure all individuals have the chance to express their wishes accurately.

The results of this study stimulated conversation within our residency program on how to initiate end-of-life conversations prior to the time that it is needed. Several noon conference presentations have been given regarding the results of this study, as well as the AD options available for our patients. Because of these conferences, modifications have been made to our Community Health/Behavioral Science Rotation in an attempt to ensure ongoing awareness about this issue. As our program has been attempting to initiate awareness, more questions have arisen. We have started discussing when it is most appropriate to discuss AD or code status with a patient—should it be addressed during acute visits as well as routine appointments? How often should the physician or staff be reviewing the AD or code status with the patient to ensure it continues to reflect the patient's desires for their end-of-life care? What are the specific barriers to our patients that prevent them from completing an AD or identifying a code status? These are questions for further research and quality initiatives as SFFMRP continues its investigations in an attempt to provide the best care for our patients and help our elderly population achieve autonomy and respect at all points of life.

ACKNOWLEDGMENTS: Dr Wheatley was involved in study concept and design, acquisition, analysis, and interpretation of data and preparation of the manuscript. Dr Huntington's role included analysis and interpretation of data and preparation of the manuscript. This study received no outside support, financial or otherwise.
CORRESPONDING AUTHOR: Address correspondence to Dr Huntington, Sioux Falls Family Medicine Residency Program, Center for Family Medicine, 1115 East Twentieth Street, Sioux Falls, SD 57105. 605-575-1643. Fax: 605-335-1006. mark.huntington@usd.edu.

References