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Preparing Older Adults with Serious Illness To Formulate Their Goals for Medical Care in the Emergency Department

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on behalf of the GEDI WISE Investigators

Abstract

Background: Emergency department (ED) clinicians often lack training and resources to conduct advance care planning (ACP) conversations. The use of technology for health education is increasing, yet little is known if it can be used to engage older ED patients in ACP.

Objective: To determine the feasibility of using tablets to provide ACP education (www.prepareforyourcare.org)(PREPARE) to older ED patients.

Design: A feasibility study conducted in late 2014 and early 2015.

Setting/Subjects: Subjects were recruited from a parent cohort of older adults enrolled in a survey about Geriatric ED care. Inclusion criteria were ≥ 65 years age and English speaking; exclusions were hearing or vision impairment or if clinically unstable.

Measurements: Primary outcome was completion of ≥ 1 of 5 PREPARE modules. Secondary outcomes were ease of use (10-point scale; 1 = very hard, 10 = very easy) and the reasons for refusal to participate.

Results: Sixty-one subjects were approached; 24 (39%) were interested in viewing PREPARE after the Geriatric ED survey. Mean age was 75 years (standard deviation [SD] 9); 67% were female and 54% were nonwhite. Seventy-one percent of participants completed ≥ 1 module. Participants rated the website as easy to use for themselves (mean 8.4, SD 2.39) and for others (mean 7.3, SD 2.31). Of the subjects who declined, top reasons cited were fatigue (26%), already feeling prepared (13%), and technology limitations (11%).

Conclusion: PREPARE has the potential to engage older adults who are not acutely ill in ACP during their ED visits. Further studies should explore optimal approaches for ED implementation.

Keywords: advance care planning; emergency department; educational tool; geriatrics

Introduction

ADVANCE CARE PLANNING (ACP) is the process of planning for future medical decisions¹ with the goal of aligning the care patients to receive their preferences.² ACP has been shown to be associated with increased patient and family satisfaction, reduced anxiety, depression,

stress among surrogate decisions makers, and healthcare utilization,¹⁻³ as well as care consistent with patients' wishes.^{4,5}

The framework of ACP has expanded beyond code status, specific treatments,⁶ and completion of statutory documents (i.e., living will) covering hypothetical situations (i.e., advance directive [AD])⁷ to communication-based programs

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facilitating discussion between patient and surrogate regarding goals, values, and preferences for medical care.⁸ To operationalize this expanded paradigm of ACP, PREPARE was developed (www.prepareforyourcare.org)⁹ and has been shown in a pilot study to engage a diverse set of older adults at senior centers in ACP.⁹ PREPARE has not been tested in other environments, such as the emergency department (ED).

The ED is an increasingly important setting to introduce ACP. ACP conversations occur infrequently in outpatient settings¹⁰ and many patients use the ED for primary care¹¹ often resulting in patients presenting to the ED who have not had the opportunity to identify and document their goals for care. Furthermore, 75% of older adults visit the ED in the last six months of their lives,¹² yet the majority (56%–99%) of older adults in the ED do not have documented goals for care available in the medical record.¹³ Such patients may benefit from revisiting ACP.¹⁴ Even if ACP occurred before ED arrival, it is rarely recorded in the medical records¹⁵ and patients' values and goals may change based on changing health states necessitating ED physicians revisiting patients' goals.¹⁶ Studies show that ED clinicians worry about providing value-concordant care,¹⁷ but also do not feel adequately trained to discuss goals of care with patients.^{17,18}

To help introduce ACP in the ED setting, a patient-centered multimedia ACP engagement tool, such as PREPARE, may be ideal. Patient-oriented decision aids have been used in the ED for a variety of conditions to facilitate shared decision making.¹⁹ However, a multimedia decision aid for ACP in the ED has never been studied. The aim of this feasibility study was to determine the proportion of adults ≥65 years in the ED who would be interested in using PREPARE on a tablet computer.

Methods

Subjects and setting

We conducted a pilot feasibility study at an academic ED in New York City as part of an innovative geriatric emergency care model called GEDI WISE (Geriatric Emergency Department Innovations in Care through Workforce, Informatics, and Structural Enhancements).²⁰ Participants eligible for this substudy were a convenience sample of the prospective GEDI WISE study. The GEDI WISE study was a convenience sample of English speakers, ≥65 years in age, who were cared for in the ED. Subjects were excluded if judged by the research assistant (RA) to have hearing or vision impairment or by the treating clinician to be clinically unstable (e.g., acute MI). After completing the GEDI WISE survey (median duration of 48 minutes), the RA subsequently invited subjects to participate in the ED PREPARE substudy. Data were collected for 2 one-month periods (October to November 2014 and January to February 2015) (Fig. 1). These surveys were approved by the institutional review boards and all subjects provided written informed consent.

Baseline assessment

Baseline demographic data included age, gender, race/ethnicity, emergency severity index (ESI),²¹ and level of education.

Procedures

Once the GEDI WISE study was completed, our study team approached a subset of individuals to view PREPARE and the study was described using a scripted text. If subjects expressed interest, the RA presented PREPARE on a tablet

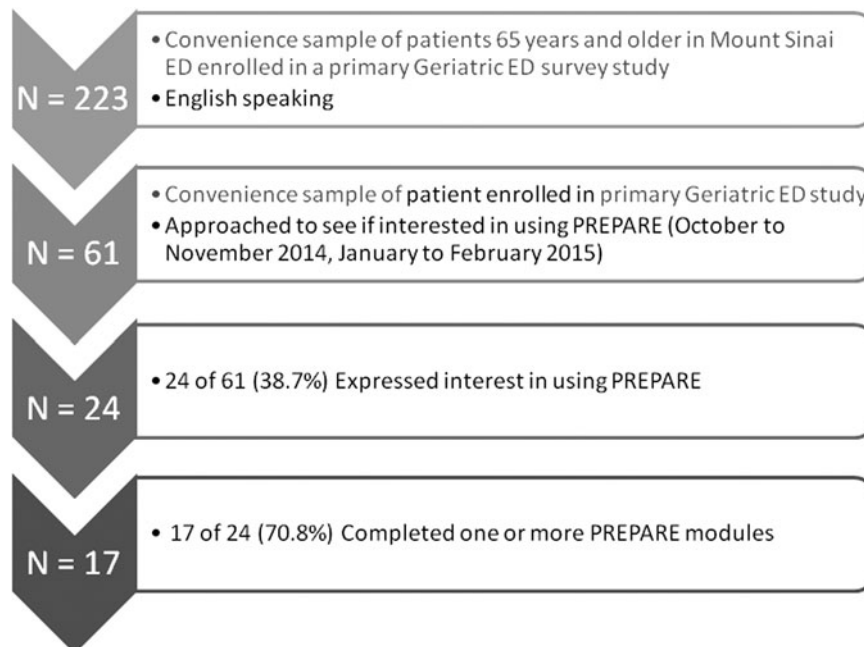


FIG. 1. Study enrollment process.

computer. The RA instructed subjects to choose a module most pertinent to their situation and encouraged them to view as many modules as desired. Subjects then viewed modules independently. The RA returned in 20-minute intervals to ascertain module completion or if patients required further assistance. Subjects who declined to participate were asked about reason(s) for declining.

PREPARE

PREPARE consists of five interactive modules with videos that model ACP behaviors: (1) choosing a medical decision maker, (2) deciding what matters most in life, (3) deciding on leeway for surrogate decision makers, (4) communicating wishes with others, and (5) asking doctors questions to make informed decisions.⁹ PREPARE is designed to be easy to use with large font, text written at a fifth grade reading level, and closed captioning of all videos. Prior study showed a mean of 57 ± 16 minutes to complete all five modules or ~ 10 minutes for each module.⁹

Measures and analysis

Primary outcomes included the proportions of subjects who expressed interest in PREPARE and the proportion able to complete ≥ 1 modules. Secondary outcomes were ease of use on a 10 point scale, number of modules completed, and reasons for refusal to participate. For analysis, ANOVA and *t*-test were completed for continuous outcomes and chi-square for binary outcomes. A *p*-value of <0.05 was used as the threshold for statistical significance.

Results

During the study period, a total of 223 subjects were enrolled in the primary GEDI WISE study. Of these subjects, 61 were approached about PREPARE (Fig. 1). The mean age of the participants was 75 years (standard deviation [SD] 9), 67% were female, 54% were nonwhite, and 79% reported having more than high school education. There were no statistical differences between groups interested and not interested in PREPARE (Table 1).

Twenty-four subjects (39%) expressed interest in PREPARE. All interested participants engaged in at least some PREPARE content while in the ED, and 17 (71%) participants completed ≥ 1 module. The breakdown of modules watched were as follows: module 1 (41%), module 2 (41%), module 3 (18%), module 4 (18%), and module 5 (29%). The users found the website easy to use for themselves (mean score 8.4 out of 10, SD 2.39) and thought to be so for others (mean score 7.3, SD 2.31).

Thirty-seven (61%) participants declined to view PREPARE. The reported reasons included feeling fatigued after the 45-minute GEDI WISE survey (26%); already feeling prepared about ACP (13%); having technology limitations, such as difficulty using tablets in general (11%); and their current clinical situation (11%), such as experiencing anxiety while awaiting test results (e.g., a cancer patient awaiting CT scan results).

Discussion

Findings from this study indicate that it is feasible to engage older ED patients in ACP with a tablet-based version of

TABLE 1. DEMOGRAPHICS

Characteristics	Parent geriatric ED study (n=223)	PREPARE (n=24)	Refused (n=37)	p
Age, mean (SD), years	76 (± 8.5)	74 (± 9)	77 (± 10)	0.42
No. of women (%)	125 (54.8)	16 (67)	20 (53)	0.78
Race/ethnicity (%)				
White	47	46	47	0.98
Black	30	28	32	0.97
Hispanic/Latino	10	11	11	0.94
Missing/other	11	11	11	0.98
ESI, mean (SD) (1 = acute, 5 = nonacute)	2.7 (0.6)	2.6 (0.5)	2.6 (0.5)	0.49
\geq High school education	79	75	81	0.97

ESI, emergency severity index; SD, standard deviation.

PREPARE.⁹ Even after completing a lengthy Geriatric ED survey for another study, nearly 40% of 61 older adults were interested and willing to view PREPARE. This rate is similar to AD completion rates (18–36%) in the outpatient settings.²² Subjects also rated PREPARE as easy to use for themselves and for other patients.

Our findings are complimentary to prior studies and may help shape future strategies to engage older adults in ACP and health education technology in the ED. First, it is important to identify appropriate ED patients to engage in ACP. Participation may be challenging for patients who are fatigued from clinical and research activities while in the ED. Recruitment may have been higher if this were not a substudy conducted after the lengthy parent study. Second, older adults found a technology-based intervention in the ED easy to use. The result was consistent with recent findings of increasing internet use among older adults,²³ familiarity with tablet computers,²⁴ and high prevalence of mobile technology in the ED.²⁵ Third, the participation rate was higher than expected despite the fatigue from the primary GEDI WISE survey without clinician involvement. Well-established ED interventions for alcohol abuse suggest the importance of, at minimum, some clinician involvement (≤ 10 minutes) and motivational interviewing techniques, which may improve participation rate.²⁶ Such interventions may serve as a model to make it easier for busy EM clinicians to introduce ACP at the important time for the patient's illness trajectory, which may improve prognostic awareness and prepare patients for ACP conversation after leaving the ED. Fourth, prior studies suggest that an algorithm to tailor the intervention for specific stages of patient readiness²⁷ may optimally target the intervention to the most appropriate population. Finally, after engagement with PREPARE, it is important to consider ways to encourage patients to document their wishes and to discuss ACP with their primary outpatient providers. With increasing informational technologies for ACP,²⁸ seamless communication and documentation may be possible when patients are prepared to discuss ACP.

Limitations

Our study had several important limitations. First, our subjects were participants of an already lengthy geriatric ED survey. Because subjects completed the primary survey immediately before our study, it is likely that this added to fatigue and unwillingness to participate in our substudy. Second, the convenience sampling with only English speakers limits the generalizability of our findings. Third, we did not ask whether our participants had prior AD or pre-existing serious illness. Some patients declined participating in our study (13%) as they already felt prepared about ACP, and prior AD or absence of preexisting serious illness may have been one such reason. Targeted subject selection, based on prior engagement in ACP and preexisting serious illness, may be critical factors to achieve targeted participation for future studies. Finally, we did not record the time participants spent using PREPARE or why not all modules were completed in participants who completed ≥1 module, which are important considerations for feasibility.

Conclusion

With appropriate implementation, PREPARE has the potential to engage older adults who are not acutely ill in ACP during their ED visits. Further studies should explore optimal approaches for ED implementation.

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Author Disclosure Statement

No competing financial interests exist.

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