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Development of a program promoting person-centered care of older adults with sleep apnea

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Constance H. Fung, MD, MSHS declares that she has no financial or personal conflict of interest.
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To the Editor:

Person-centered care is needed for the one-fifth of older adults in the United States with obstructive sleep apnea (OSA).(1, 2) At first glance, OSA treatment decisions appear straightforward, with positive airway pressure (PAP) considered by many as the optimal strategy. But the challenges of PAP adherence are well-known. Personalization of OSA care entails placing OSA treatment decisions in the context of individual priorities and other health and social issues.(3) Asking older adults what matters most to them is a critical step to achieving personalized care, yet elicitation of health priorities in healthcare settings is uncommon.(4)

Patient decision aids are one strategy for helping older adults make informed decisions.(5) Although inquiring about health priorities is not a core component of most decision aids, incorporating health priority elicitation enhances decision aid effectiveness and is important if the goal is to promote personalized decision making.(6) Our aim was to test a patient decision aid (Decide2Rest) prototype for personalizing treatment decisions among older adults with newly-diagnosed OSA.

Decide2Rest is a voice-narrated, web-based program. Users record responses to questions posed on the webpages on a paper workbook.(7) The clinical sequelae of untreated OSA and the benefits and risks of treatment options (as well as no treatment) are presented qualitatively. The user rates the importance of eight long-term health goals, and the relationships between OSA treatment and the different health priorities are described. Users record their preferred treatment and identify the treatment aspects that matter most. They self-assess their level of OSA knowledge, support for making decisions, and involvement of others in their lives in OSA decisions. It concludes with resources and advises clinic follow-up to discuss treatment options.

Participants were patients referred to a sleep center for OSA testing. Inclusion criteria were: 1) age ≥ 60 years, 2) apnea-hypopnea index (AHI) ≥ 5 and newly-diagnosed with OSA, and 3) agreed to sleep clinic appointment. Exclusion criteria were: 1) OSA treatment ≥ 30 days, 2) advanced bilevel device required, 3) unstable medical/psychiatric illness, 4) Mini-Mental State Examination total score < 24, or 5) unable to use an English-language decision aid. All study procedures were approved (PCC #2013–081086). Research staff administered the program within one month of therapy initiation and 14 days of the scheduled sleep clinic appointment. A staff sleep physician called patients to deliver OSA testing results prior to an initial in-person consultation (usual care).

Demographics, comorbidity (8), usability (9), and acceptability (10) were collected. The Decide2Rest workbook included eight questions assessing health priorities. Session start and end times were collected. The Decisional Conflict Scale (DCS; 16 items, 5 *strongly agree* to *strongly disagree* response options) was administered after the program and sleep clinic appointment.(11) DCS scores exceeding 37.5 are associated with decision delay or feeling unsure about moving forward with a decision.(11) Descriptive statistics were computed using SAS, version 9.4.

Eighteen individuals completed the Decide2Rest program (mean age 68 years [range 61–78]; 94% male; 56% non-Hispanic white). The mean Comorbidity Index score was 6.4 (2.0–14.0). The mean pre-treatment AHI was 18.5 events per hour (7.0–63.2). Mean health priority ratings (1=Not at all important, 4=Extremely important) were: driving more safely and responsibly (3.3 ± 0.9), taking care of financial affairs (3.1 ± 0.9), engaging in more physical activity (3.0 ± 0.8), working more on hobbies (2.8 ± 0.9), doing more work in the home (2.8 ± 0.9), fulfilling more responsibilities for family, friends, or coworkers (2.7 ± 0.8), doing more work outside the home (2.5 ± 0.8), and participating more in social activities (2.4 ± 0.7). Mean completion time was 10 minutes (range 5–20). Acceptability and usability are summarized in Table 1. Most participants (89%) would recommend the program. The mean DCS score was 25.5 ± 19.1 (lower is better).

The Decide2Rest program elicited health priorities and contextualized the OSA treatment decision. It provided information about treatment features that might currently be omitted during clinic visit discussions. The DCS score was favorable and comparable to those observed in an osteoarthritis web-based decision aid study.(12)

Decide2Rest provides support to patients who prefer more involvement in treatment selection. Our finding that the program helped patients feel more informed suggests that it could promote shared decision-making. Because of the high reliance on self-management with OSA therapy, OSA treatment decisions in older adults should be personalized and patients should be involved and informed when making treatment decisions. The Decide2Rest program is a promising approach to promoting person-centered care.

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Table 1.

Acceptability and Usability of Decide2Rest Intervention (N=18)

Usability Survey Items (1=strongly disagree; 4=strongly agree):	**Mean (SD; range)**
I would like using the educational package as a tool for learning about sleep	3.1 (0.7; 1.0, 4.0)
I found the educational package unnecessarily complex	1.9 (0.5; 1.0, 3.0)
I thought the educational package was easy to use	3.2 (0.5; 2.0, 4.0)
I think I would need the support of a technical person to be able to use the educational package	2.1 (0.9; 1.0, 4.0)
I found there was too much inconsistency between the design and navigation of the educational package	1.9 (0.6; 1.0, 3.0)
…Most patients would learn to use the educational package very quickly	3.0 (0.3; 2.0, 4.0)
I found the educational package very cumbersome to use	1.9 (0.5; 1.0, 3.0)
I would be very confident using the educational package	3.2 (0.6; 2.0, 4.0)
I would need to learn a lot of things about using computers before I could get going with the educational package	1.7 (0.8; 1.0, 4.0)
Acceptability Survey Items:	
The length of the presentation was….	
1. Too Long	3 (17)
2. Too short	0
3. Just right	15 (83)
The amount of information was ….	
1. Too Long	1 (6)
2. Too short	2 (11)
3. Just right	15 (83)
The personal workbook….	
1. No impact on the decision	4 (22)
2. Made the decision difficult	0
3. Made the decision easy	14 (78)
What did you think of the personal workbook? Did it make the decision about sleep apnea treatment…	
1. More difficult	1 (6)
2. Easy	16 (94)
3. Just right	0
I found the presentation…….	
1. Slanted towards surgical option	0
2. Slanted towards dental appliance option	2 (11)
3. Slanted towards positive airway pressure option	2 (11)
4. Slanted towards no treatment	0
5. Balanced	14 (78)
The number of topics that were presented clearly	
1. Some	1 (6)
2. Most	11 (61)
3. Everything	6 (33)
The educational package was useful in making a decision about sleep apnea treatment (% yes)	17 (94)

Usability Survey Items (1=strongly disagree; 4=strongly agree):	**Mean (SD; range)**
Would recommend the educational package to others (% yes)	16 (89)
There was enough information to decide among the options (% yes)	14 (78)
Program included enough information to help you decide on therapy for sleep apnea (% yes)	17 (94)