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Using behavioral theory to adapt advance care planning for homeless-experienced older adults in permanent supportive housing

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Peer reviewed

1 **Title:** Using Behavioral Theory to Adapt Advance Care Planning for  
2 Homeless-Experienced Older Adults in Permanent Supportive Housing  
3 (124/125)

4 **Short Running Title:** Behavioral Determinants of ACP in PSH

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31 **Key Points**

- 32 • Older adults experiencing chronic homelessness have low rates of  
33 advance care planning (ACP) despite high rates of morbidity and  
34 mortality.
- 35 • Permanent supportive housing (PSH) is subsidized housing with  
36 voluntary supportive services for individuals (PSH residents)  
37 experiencing chronic homelessness (i.e., prolonged homelessness and  
38 a disabling health condition) and may provide an opportunity to  
39 introduce ACP.
- 40 • Using the Capability (C), Opportunity (O), Motivation (M), Behavior  
41 (COM-B) framework (COM-B) within the Behavior Change Wheel model,  
42 we elicited PSH residents and staff reported barriers to ACP including  
43 lack of PSH resident and staff ACP knowledge, variable relationships  
44 with family/peers and PSH staff, pessimism about ACP outcomes, and  
45 lack of staff resources and training.
- 46 • Facilitators to ACP in PSH include the belief that ACP is impactful, the  
47 potential for strong relationships with family/peers and PSH staff,  
48 stability of housing in PSH, and use of easy-to-use materials, including  
49 the PREPARE for Your Care ACP program and easy-to-read advance  
50 directives.
- 51 • Suggestions for implementation of ACP in PSH include continued use of  
52 easy-to-use PREPARE materials, capitalizing on trusted relationships,  
53 PSH staff trainings and conversation guides, and providing ACP in  
54 facilitated groups or one-on-one sessions.

55  
56 **Why Does This Paper Matter?**

57 Older adults experiencing chronic homelessness have high rates of morbidity  
58 and mortality, a high likelihood of being socially isolated, and of not having  
59 their wishes honored at the end of life. Permanent Supportive Housing  
60 represents an opportunity to introduce ACP to help honor the medical  
61 preferences of this marginalized population.

62  
63 **Impact Statement:** We certify that this work is novel and important to  
64 advance the discussion and implementation of advance care planning  
65 processes among marginalized and vulnerable populations.

66 **Word counts:** Abstract (249/250), Main text (3594/3500)

67 **Number of tables/figures:** 2 tables, 1 figure

68 **ABSTRACT (word count 249/250)**

69 **Background:** Older adults experiencing chronic homelessness (i.e.,  
70 prolonged homelessness and a disabling condition) have low rates of  
71 advance care planning (ACP) despite high rates of morbidity and mortality.  
72 Rehousing of homeless-experienced individuals into Permanent Supportive  
73 Housing (PSH) may present an opportunity to introduce ACP; but this is  
74 unknown. Therefore, we explored staff and resident perceptions of  
75 conducting ACP in PSH.

76 **Methods:** We conducted semi-structured interviews with PSH staff (n=13)  
77 and tenants (PSH residents) (n=26) in San Francisco. We used the Capability  
78 (C), Opportunity (O), Motivation (M), Behavior (COM-B) framework within the  
79 Behavior Change Wheel model and the Theoretical Domains Framework  
80 (TDF) to inform interviews, categorize themes, and guide qualitative  
81 thematic analysis.

82 **Results:** The mean age of PSH residents was 67 (SD = 6.1) years and 52%  
83 were women. Of staff, 69% were women. Important COM-B barriers included  
84 ACP complexity (C), complicated relationship dynamics (O), resource  
85 limitations (O), pessimism (M), variable staff confidence (M), and competing  
86 priorities (M). Facilitators included easy-to-use documents/videos, including  
87 the PREPARE for Your Care program (C), stability with housing (O), exposure  
88 to health crises (O), potential for strong relationships (O), and belief that ACP  
89 is impactful (M). Recommendations included adapting materials to the PSH

90 setting, providing staff trainings/scripts, and using optional one-on-one or  
91 group sessions.

92 **Conclusions:** We identified behavioral determinants related to ACP for  
93 formerly chronically homeless older adults in PSH. Future interventions  
94 should include using easy-to-use ACP materials and developing resources to  
95 educate PSH residents, train staff, and model ACP in groups or one-on-one  
96 sessions.

97 **Keywords:** advance care planning, permanent supportive housing, older  
98 adults, homelessness, implementation science

99 **INTRODUCTION (3594/3500)**

100 Over half a million people experience homelessness in the United States,  
101 with a growing percentage of older adults.<sup>1,2</sup> Older adults who are currently  
102 or recently homeless (homeless-experienced), have worse health status,  
103 earlier onset of geriatric conditions at younger ages (i.e., 50 years and older)  
104 and increased rates of mortality compared to the general population.<sup>3,4</sup>  
105 Geriatric conditions, such as functional impairment, falls, and urinary  
106 incontinence, typically first occur in housed adults aged 75 and older.<sup>5</sup>  
107 Despite high rates of morbidity and mortality, homeless-experienced older  
108 adults have low rates of advance care planning (ACP) – a process designed to  
109 prepare people for serious illness communication with family, friends, and  
110 clinicians, and medical decision making.<sup>6,7</sup> Although there has been recent  
111 discussion about the utility of ACP in relation to healthcare utilization, there  
112 is consistent evidence that ACP positively effects other meaningful  
113 outcomes, such as improved patient/surrogate satisfaction with medical care  
114 and communication and decreased surrogate/clinician distress.<sup>8-11</sup> Only 20%  
115 of older adults experiencing homelessness report discussing their wishes for  
116 medical care and fewer than 10% report documenting their wishes.<sup>6,7</sup>  
117 Interventions to increase completion of advance directives in homeless  
118 shelters have had some success, but had limited retention of participants.<sup>12</sup>  
119 People experiencing homelessness have reported that, given competing  
120 priorities, they prefer to engage with ACP after they have regained housing.<sup>13</sup>

121 Permanent supportive housing (PSH) is subsidized housing with voluntary  
122 supportive services for individuals experiencing chronic homelessness (i.e.,  
123 prolonged homelessness and a disabling condition).<sup>14,15</sup> PSH is the evidence-  
124 based means to achieve and maintain housing stability for individuals  
125 experiencing chronic homelessness with moderate and high levels of  
126 need.<sup>14,16,17</sup> Individuals living in PSH (PSH residents) still have high mortality  
127 rates; however, with improved stability, they have fewer competing life  
128 demands and additional support and resources, which may help facilitate  
129 ACP.<sup>13,16</sup> However, no prior work has examined the factors influencing ACP  
130 engagement in PSH. An easy-to-use, person-directed ACP program (i.e.,  
131 PREPARE for Your Care program with video stories and easy-to-read advance  
132 directives) has been shown to be efficacious in safety net settings; however,  
133 it is unclear if it is appropriate for use in PSH.<sup>18,19</sup> Therefore, we aimed to  
134 explore barriers and opportunities to introducing ACP in PSH.

## 135 **METHODS**

136 We conducted a cross sectional study using a convenience sample of PSH  
137 residents and staff from 6 PSH buildings in the San Francisco Bay Area. The  
138 University of California, San Francisco Institutional Review Board granted IRB  
139 approval. The IRB waived written consent, and we obtained verbal consent  
140 from all participants. A Community Advisory Board (CAB) comprised of PSH  
141 residents and staff guided our recruitment efforts.

142 ***Setting and Participants***

143 We used snowball sampling from PSH management, staff, and PSH residents.  
144 Staff were eligible if they were English-speaking and employed at a PSH site.  
145 PSH residents were eligible if they were age 50 and older, English-speaking,  
146 and living in PSH. We excluded PSH residents who scored in the moderate-to-  
147 severe cognitive impairment range on the short portable mental status  
148 questionnaire, or if they self-reported deafness, severe vision impairment, or  
149 a diagnosis of dementia.<sup>20</sup> We gave participants a \$25 gift card for  
150 participation.

151 ***Procedures***

152 We recruited and conducted one-on-one interviews by video, telephone call,  
153 or in person, based on participant preference and COVID-19 guidelines, in  
154 two waves from April 2020-June 2021. Interviews were audio-recorded and  
155 transcribed by an independent transcriptionist. All interviews lasted 60-90  
156 minutes.

157 We provided the first wave (10 PSH staff and 10 PSH residents) with the  
158 easy-to-read advance directive (5<sup>th</sup> grade reading level) from  
159 PREPAREforyourcare.org (PREPARE).<sup>21</sup> We showed the second wave (3 PSH  
160 staff and 13 PSH residents) videos from the PREPARE online video guide and  
161 provided a corresponding workbook.<sup>18,19</sup> Three PSH residents participated in  
162 both waves. Video examples showed brief clips with individuals engaging in  
163 ACP (choosing a surrogate, communicating future wishes). We asked

164 participants to explore perceived barriers and facilitators to ACP and use of  
165 the PREPARE video and advance directives (ADs) in PSH. We asked about  
166 appropriate timing and effectiveness of ACP in facilitated group and one-on-  
167 one sessions.

168 We used the Behavior Change Wheel (BCW) and the Theoretical Domains  
169 Framework (TDF) to develop a semi-structured interview guide which probed  
170 for barriers, facilitators, and behavioral determinants to ACP in PSH.<sup>22-24</sup> The  
171 BCW is an implementation framework centered around the understanding of  
172 behavior as an outcome related to Capability (C) (i.e., physical or intellectual  
173 ability to perform the task), Opportunity (O) (i.e., factors in the physical and  
174 social environment that make a behavior possible), and Motivation (M) (i.e.,  
175 reflective processes or automatic impulses or feelings that drive actions).  
176 The TDF is a classification of 14 domains identified through expert synthesis  
177 of behavioral theory which maps directly to COM-B and can help identify  
178 targets for future interventions (Table 1).<sup>22,24,25</sup>

## 179 ***Analysis***

180 We used the BCW and TDF frameworks to describe and categorize themes  
181 and guide recommendations for intervention strategies.<sup>22-24,26</sup> We took an  
182 iterative and inductive approach to analysis.<sup>27</sup> We developed and refined a  
183 codebook to standardize thematic content analysis and trained study staff  
184 through two virtual live training sessions. Trained study staff independently  
185 reviewed and coded interview transcripts. We reviewed and compared coded

186 transcripts during team meetings of at least three study staff to derive  
187 themes. We resolved rare disagreements by consensus between study staff  
188 and expert review (author MH) and kept a record of changes. We identified  
189 barriers, facilitators, and potential behavioral determinants and mapped  
190 each to the COM-B system within the BCW.<sup>22-24,28</sup> We refined themes by  
191 classifying them into TDF domains related to each COM-B category (Table 1,  
192 Figure 1).<sup>22,24,29,30</sup> We then identified BCW strategies for the TDF domains  
193 identified.<sup>23-26,28</sup> The CAB met twice during the study period to discuss  
194 prominent themes and provide feedback. We continued interviews until we  
195 reached thematic saturation.

## 196 **RESULTS**

197 We recruited 13 staff and 23 PSH residents from 6 PSH buildings. Staff  
198 included 5 managers/directors, 5 resident services leaders and case  
199 managers, 1 behavioral health specialist, and 2 registered nurses. Sixty-nine  
200 percent of staff were female with median length of PSH employment of 1.9  
201 years (IQR = 0.8-9.8). Fifty-two percent of PSH residents were female, with a  
202 median of 67 years of age (SD = 6.1) and a median 4.3 years (IQR = 2.8-6.3)  
203 in PSH. Sixty-five percent of PSH residents were non-white (48%  
204 Black/African American, 4% Latinx, 13% Mixed Ethnicity). We described the  
205 barriers (Table 2) and facilitators (Table 3) to ACP based on the COM-B  
206 system and TDF framework (see Figure 1). We identified themes in 5 of 6  
207 COM-B subcategories and 10 of 14 TDF domains. All themes were mapped

208 onto the COM-B model, TDF domains, and BCW strategies. A few selected  
209 TDF domains, themes and quotes from the tables are presented below.

## 210 **Barriers**

### 211 Capability

212 ***Psychological Capability:*** *Lack of ACP knowledge or experience, length*  
213 *and complexity of the ACP process*

214 Both staff and PSH residents reported a lack of knowledge about ACP. Staff  
215 stated that they did not know how to begin ACP conversations or answer  
216 medical questions. Many PSH residents reported poor understanding of the  
217 process, said that they didn't know who or which questions to ask, or  
218 questioned the legality and permanence of ADs. Two PSH residents  
219 described hospital visits where they were given a standard AD and were  
220 unable to engage because they did not understand the language or  
221 implications.

222 Many PSH residents appreciated the self-guided PREPARE videos and easy-  
223 to-read ADs. However, both staff and PSH residents remarked upon  
224 difficulties with resident memory, attention, and mental health disorders  
225 which might restrict engagement with complex documents independently or  
226 in long facilitated sessions. One PSH resident noted that if he was given too  
227 much information at once, "remembering the first part, it goes out the  
228 window sometimes."

229

### 230 Opportunity

231 **Social Opportunity:** *Complex resident-staff relationships, interpersonal*  
232 *relationships, and group dynamics*  
233 Participants described variable and dynamic PSH staff/resident relationships.  
234 Staff said PSH residents “maybe trust one person in the building one day and  
235 the next day they might not.” PSH residents said they did not “feel  
236 comfortable” or “close” to case managers and others cited turnover, lack of  
237 PSH staff experience, or lack of trust as potential barriers to ACP discussions.  
238 PSH staff and residents described complex and variable inter-resident  
239 relationships, which could hinder group introduction or discussion of ACP.  
240 Some PSH residents described close connections with peers, while others  
241 preferred to keep to themselves. PSH residents said that peer relationship  
242 dynamics were complicated by lack of trust because information “can  
243 become a tool they use to manipulate the other person.” Participants listed  
244 challenges with conflicting personalities, difficulty staying on task, and  
245 frequent interruptions, particularly with large group activities. These  
246 dynamics could negatively impact motivation for PSH residents to participate  
247 in large groups or engage in conversations they suspect might put them at  
248 risk.

249

250 **Physical Opportunity:** *Lack of standardized processes for ACP, limited*  
251 *resources*

252 Staff reported that there were no standardized processes, prompts, or guides  
253 to facilitate ACP conversations or completion of detailed ADs. Even when

254 they did discuss ACP with PSH residents, one staff member said, “It’s very  
255 infrequent that a conversation would result in me saying, ‘Hold on a second,  
256 I’m going to reach into this filing cabinet and pull an advanced directive.”  
257 Other staff mentioned that if ACP occurred, it was initiated through individual  
258 rather than institutional efforts. Staff noted that while prompts exist to  
259 update emergency contacts at specific intervals, similar reminders for ACP  
260 do not exist in their workflow. In addition, while some PSH residents were  
261 willing to share their ACP wishes and documents, others expressed concerns  
262 about privacy, safe storage, and the forwarding of sensitive information in  
263 the event of a health crisis. Participants listed concerns that regular staff  
264 turnover and limited resources exacerbate the demands on staff and restrict  
265 availability for lengthy conversations, saying, “people are feeling really  
266 under-resourced” and ACP could be seen as “one more thing”. PSH residents  
267 described not having “any place to sit down” to write and lack of computers  
268 to access the online video guide.

269

270 Motivation

271 **Reflective Motivation:** *Competing priorities for PSH residents, beliefs*  
272 *about capabilities and lack of a medical decision maker*

273 Staff and residents voiced concerns that PSH residents’ social isolation might  
274 “make it difficult to plan any of this,” citing resident estrangement, lack of  
275 strong support networks, and difficulty naming even one emergency contact.  
276 PSH residents said that the medical decision maker (MDM) section was “the

277 hardest part” of the AD and staff believed that residents did not think it  
278 possible to complete the form without naming someone. PSH residents and  
279 staff also noted that the MDM conversation might serve as an emotional  
280 reminder of social isolation, further limiting motivation. In addition, PSH staff  
281 and residents described competing priorities for residents including  
282 attending medical appointments, financial concerns, and substance use.  
283 Some PSH residents didn’t see ACP as a priority because they doubted their  
284 wishes would be respected, “[if] I said I don’t want no extenuating  
285 circumstances... I feel a doctor...[wouldn’t] let me die....” Others said they  
286 were “just looking to the next couple of hours” and hadn’t thought about the  
287 future or death.

288

289 **Reflective Motivation:** *Competing priorities for PSH staff, beliefs about*  
290 *capabilities and variable confidence*

291 PSH staff said that the ACP conversation is “incredibly challenging” and cited  
292 their lack of familiarity with medical jargon, lack of confidence navigating  
293 conversations about death, and lack of training in ACP. Some PSH staff  
294 suspected that others might avoid engaging due to concerns they might  
295 “trigger” PSH residents or make them feel “afraid,” and others said they  
296 preferred trained facilitators take on the responsibility. Additionally, staff  
297 said that competing professional responsibilities such as managing acute  
298 crises and assisting PSH residents with financial, social, and other needs  
299 takes priority and that there likely “wouldn’t be much interest” in ACP. As

300 one staff member said, “even if the client is willing to sit down and go over  
301 the form...clients will just tell us, “I don’t care, when I die, I die, you figure it  
302 out, like you make the decisions.”

303

304 ***Automatic Motivation: Emotion, fear of death***

305 While some PSH residents were able to discuss their own attitudes and  
306 experiences, many felt their peers might resist talking about death because  
307 “a lot of people die here.” PSH residents and staff primarily believed that  
308 others, such as family and peers, were uncomfortable with end-of-life  
309 conversation, even if they themselves were not.

310

311 **Facilitators**

312 Capability

313 ***Psychological Capability: Easy-to-read advance directive and video guides***  
314 *are accessible*

315 PSH staff and residents described the easy-to-read PREPARE AD as “inviting”  
316 and “self-explanatory.” During interviews, PSH residents were able to read  
317 and describe the meaning of each page to the interviewer, demonstrating an  
318 appropriate level of understanding. In addition, PSH residents liked the  
319 PREPARE videos, saying they “brought to mind a lot of questions” and helped  
320 them “write down directly what [they] wanted to say.”

321

322 Opportunity

323 **Physical Opportunity:** *Physical context, PSH provides stability, PSH*

324 *residents exposed to health crises*

325 Several PSH residents described a “shift” after “going from a system that

326 does everything within its power to undermine you [shelters] to a place that

327 does everything they can to help you [PSH].” Some cited a new ability to

328 look toward the future, make long-term goals, and move past a mindset of

329 daily survival, with a new desire to “live my life to the fullest.” Participants

330 said PSH provides a unique opportunity for ACP discussion “on a good day,”

331 when both PSH staff and residents have time, energy, and attention to

332 address the topic, so residents can “go through it at their own pace.” CAB

333 members suggested staff give PSH residents six months to one year to

334 establish themselves in PSH before asking to discuss ACP. Additionally, while

335 fear of death might be a barrier to some, to others it can be a facilitator. PSH

336 staff and residents described unique exposure to health crises, chronic

337 illness, and death, due to their prevalence in this setting. They described

338 leaving the building “in an ambulance on a stretcher” or witnessing as a

339 deceased resident was “wrapped in a plastic bag” and taken away. Others

340 listed the prevalence of substance use and the COVID-19 pandemic in the

341 PSH setting as “reminders” about the end of life.

342

343 **Social Opportunity:** *Potential for close relationships in PSH*

344 While relationship dynamics were a barrier for some, for others they were an

345 important facilitator. Some participants listed examples of strong personal

346 relationships in PSH, calling PSH staff and residents “family.” Some said that  
347 PSH staff were the best people to engage PSH residents in ACP because they  
348 “become your friend” and could bring “feeling in it” that a primary care  
349 clinician could not. Although some strongly preferred one-on-one  
350 conversations, others were hopeful about groups, saying “we have a good  
351 group and people don’t go blabbing.” Some PSH residents also believed that  
352 listening to peers with shared experiences might “break the ice” and  
353 encourage deeper engagement.

354

355 Motivation

356 ***Reflective Motivation:*** *Belief that ACP is important and impactful*

357 PSH residents said it means “a whole lot” to have their wishes respected and  
358 many believed ACP could help them “die with respect and peace and  
359 dignity.” Some PSH residents stated that ACP could benefit family members  
360 who would otherwise be left to make difficult decisions without guidance.

361 Others felt that ACP documentation was most important for isolated  
362 individuals because “if I have no one...the document will state what I want.”

363 Additionally, PSH residents described the importance of naming preferences  
364 for pets and belongings and suggested we add these topics to the AD. Staff  
365 members agreed that ACP was important for resident autonomy and  
366 empowerment.

367

368 ***Automatic Motivation:*** *Emotion: Videos provide relatable examples*

369 PSH residents approved of the PREPARE ACP videos and several confirmed  
370 that they could identify with the narratives. One story showing a single man  
371 who described himself as a “loner” resonated with many PSH residents.  
372 Some said they appreciated that the videos showed options for those without  
373 family or close contacts. By delivering emotionally relatable stories, the  
374 video guides modelled the importance of ACP and appeared to provide  
375 reassurance that residents have the ability to engage and ask the necessary  
376 questions. One PSH resident said the PREPARE program “touches base with  
377 how they're feeling...sometimes people don't know how to ask questions so  
378 this kind of like spells it out for them.”

379

## 380 ***Implementation Recommendations for Behavior Intervention***

### 381 ***Techniques***

382 In Figure 1, we mapped themes and listed recommendations for behavioral  
383 interventions based on the TDF, COM-B model, and BCW.

384 To address *capability* barriers of staff knowledge and skills, potential  
385 solutions suggested by PSH participants include educating PSH staff and  
386 residents about the key components and “impact” of ACP, “training staff  
387 members” to initiate and document these conversations, and modeling  
388 conversations with “simple” scripts for ACP conversations, such as those in  
389 the PREPARE for Your Care program. Such training could also address  
390 barriers to staff motivation and confidence. To address PSH resident  
391 *capability* barriers related to lack of knowledge and attention/memory for

392 lengthy conversations or documents, potential solutions suggested by PSH  
393 participants include restructuring the context of ACP educational activities by  
394 “breaking it down” into smaller segments and leveraging participant  
395 preferences for learning. *Opportunity* barriers related to limited resources  
396 and environmental context may be managed with efficient use of short  
397 “group sessions”, “self-guided” programs like PREPARE, and creation of  
398 institutional prompts/procedures to standardize and simplify organizational  
399 processes. The use of outside facilitators may be an alternative  
400 consideration. *Social opportunity* barriers could be mitigated by restricting  
401 the influence of “difficult” social dynamics and leveraging existing close  
402 relationships. Participants suggested that “groups should be optional”, self-  
403 selected, led by “trained” facilitators, and “limited” in size (4-5 people) or  
404 scope (i.e., ACP introduction only). To address additional *motivation* barriers,  
405 facilitated sessions should be “brief”, “frequent,” and easily accessible to  
406 enable participation when “[PSH] residents are ready” to engage. Incentives,  
407 such as “snacks” and other rewards could also be provided to encourage  
408 PSH resident participation.

## 409 **DISCUSSION**

410 In this study, PSH staff and older homeless-experienced PSH residents  
411 identified barriers and facilitators to ACP discussions and documentation in  
412 PSH. Tools such as the PREPARE easy-to-read AD and online video stories  
413 provided education and enhanced participants’ *capability* to engage in ACP

414 conversation that might otherwise be unfamiliar or difficult to understand.  
415 Established housing and supportive services created greater *opportunity* for  
416 participants to consider ACP; yet lack of standardized procedures and  
417 complex relationships between PSH residents and staff complicated this  
418 potential. While barriers to *motivation* such as pessimistic beliefs, competing  
419 priorities, and anxiety about death were common, PSH residents felt more  
420 prepared to engage in ACP after obtaining housing. For staff, lack of  
421 confidence in their own abilities and negative outcome expectations  
422 hindered *motivation* to engage PSH residents, despite belief in the potential  
423 benefits. Staff were interested in obtaining more ACP training. We identified  
424 several strategies to target these barriers and facilitators using the BCW and  
425 TDF, including education, training, and ACP modeling using simple scripts for  
426 PSH staff. For PSH residents, these included enabling and modeling with  
427 easy-to-use materials, providing incentives, and optimizing the social  
428 environment through optional, self-selected groups.

429 Our work builds upon previously documented findings that PSH creates novel  
430 social and environmental opportunities for behavior change.<sup>13</sup> With safety  
431 and survival addressed, some PSH residents described greater optimism, a  
432 “shift” in priorities, and more motivation to plan. When provided with easy-  
433 to-use resources, PSH residents and staff described ACP as an empowering  
434 and dignifying process. PSH staff may be uniquely suited to reduce anxiety  
435 by introducing the subject over several months, individualizing the  
436 discussion, or simply choosing “a good day” for the PSH resident. Still,

437 interventions to strengthen variable relationships between PSH staff and  
438 residents or outside facilitators/trusted peer counselors may be needed in  
439 some cases.

440 The PREPARE easy-to-read AD and video guides appear to improve PSH  
441 residents' ability to engage by providing real-time education and step-by-  
442 step modeling of ACP. The existing PREPARE tools may be useful to model  
443 several ACP topics (i.e., discussions with surrogates and medical providers).  
444 Training staff how to use PREPARE tools may also improve staff confidence  
445 and motivation to facilitate. Suggestions for change include adding  
446 information about pets, belongings, and estranged family to the easy-to-read  
447 ADs and showing examples of PSH residents in the video stories.

448 The well-described familiarity with end of life and chronic illness among PSH  
449 residents and staff may create an opportunity to introduce ACP in a group  
450 setting. In primary care, groups have been shown to be effective in engaging  
451 patients in ACP.<sup>31-34</sup> Despite complex relationship dynamics in PSH, groups  
452 may be an important option in this resource-limited setting. Per PSH resident  
453 comments, restricting group size, allowing resident self-selection, and  
454 providing options for alternative one-on-one sessions may be important  
455 considerations to improve engagement. Future studies will explore the most  
456 effective role, scope of responsibility, and needed training methods for PSH  
457 staff in ACP.

## 458 **Limitations**

459 Generalizability of our findings is limited due to potential bias related to  
460 recruitment from a single region, the small sample size, and exclusion of  
461 participants who are non-English speaking or have hearing or vision  
462 impairment. Due to the COVID-19 pandemic, we used convenience sampling  
463 and recruited participants virtually. This may have led to selection bias in  
464 favor of participants with interest in ACP engagement and capability bias in  
465 favor of participants with greater technological ability, cognitive faculty, or  
466 psychosocial capacity.

## 467 **CONCLUSIONS AND IMPLICATIONS**

468 The population of older adults experiencing chronic homelessness is  
469 increasing with high rates of morbidity and mortality. Innovative and novel  
470 strategies for ACP engagement are needed. Future ACP interventions may  
471 improve success by addressing behavioral barriers and leveraging  
472 facilitators. Future studies should explore utilization of easy-to-use ACP  
473 materials, including PREPARE for Your Care, and development of resources to  
474 educate PSH residents, train staff, and model the ACP process in groups or  
475 one-on-one sessions.

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486 **Author Contributions**

487 SEP, RS, MK, MAH, PO, BL, and CE contributed to study design, results  
488 analysis, and implementation. SEP wrote the manuscript with contributions  
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612

613 **LEGENDS**

614 Figure 1. We applied the Capability Opportunity Motivation Behavior (COM-B)  
615 model to understand barriers and facilitators to ACP. Each of the qualitative themes  
616 are organized within five of the six COM-B subcategories (psychological capability,  
617 social opportunity, physical opportunity, automatic motivation, reflective  
618 motivation; not shown: physical capability). Barriers are represented with rounded  
619 rectangles and facilitators with dotted ovals. The COM-B model integrates with the  
620 Theoretical Domain Framework (TDF) and the Behavior Change Wheel model <sup>25,35-38</sup>  
621 to provide behavior change strategies for implementation. Solid lines connect  
622 identified barriers and facilitators to one or more TDF domain, and behavior change  
623 strategies to target the TDF domains are listed.

624