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Motivational interviews to enhance advance care plans in older adults: systematic review

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INTRODUCTION

Conversations on advance care planning, sometimes known as ACP, can be difficult for many people. ACP refers to a process by which a healthcare provider prepares an individual to plan for the care they would or would not like to receive before any serious illness or unexpected health crisis, to learn about the types of decisions that need to be made, and to document their wishes in the medical records or advance directives.[1] An advance directive or advance health directive, also known as a living will, is a legal documentation in which a person specifies the treatments and health services they would like to have when they are no longer mentally competent to make their own decision.[2]

Most people tend to avoid talking about death, especially older adults, and some are also afraid of not receiving the best treatment if they have advance directives in place.[3] Despite the critical role the ACP programmes play, the implementation of the ACP service into clinical practice is still limited. Rates of use of advance care plans remain low, with less than 20% among older adults in western countries such as the USA, UK, Finland, Australia and the Netherland.[4] According to a study conducted with physicians, advance practice nurses and other allied health providers,[5] although the majority of healthcare professionals recognise the value of providing ACP conversations, few managed to implement it into their daily practices because of competing priorities. To further engage older adults in ACP activities, there were multiple initiatives in countries around the world. For instance, in 2012, the USA also started the Conversation Project as a nationwide, public initiative to help everyone voice their wishes for end-of-life care in the community and clinical setting.[6] In 2017, Canada launched the Palliative and Therapeutic Harmonisation model for frail older adults during home visits.[7] However, with an ageing population, the gap in ACP service remains largely unfilled, and more effective interventions driven by theories and empirical evidence are needed.

Motivational interviewing is a direct, patient-centred counselling strategy that encourages patients to explore and resolve their ambivalence and promotes their confidence in their ability to change their behaviour. It was originally developed as a treatment for substance abuse and binge drinking in the 1980s.[8] It has been applied successfully in a variety of settings, including the management of chronic disease, smoking cessation, weight loss programmes, treatment for substance use disorders and other health behavioural interventions.[9]

Motivational interview (MI)-based counselling is a set of specific counselling behaviours guided by the principles of resisting the righting reflex, understanding

WHAT WAS ALREADY KNOWN?

⇒ Advance care planning (ACP) improves quality of care.
⇒ Motivational interview (MI) is a communication strategy to increase positive behaviour changes.

WHAT ARE THE NEW FINDINGS?

⇒ Seven MI-based ACP interventions were explored
⇒ MI-based ACP is feasible and effective.

WHAT IS THEIR SIGNIFICANCE?

⇒ Clinical: training lay-persons to delivery MI-based ACP inthe community is feasible.
⇒ Research: offers evidence for developing future ACP interventions

the patient's motivations, listening with empathy and patient empowerment.[8] And it is operationalised by a collection of communication skills such as open-ended questions, affirming, double-sided reflective listening, querying extremes, informing and summarising.[8] Motivational interviewing-based counselling emphasises partnership, eliciting patients' internal motivations and reflecting on perceived barriers to change.

Taking an MI counselling approach in ACP, providers or clinicians are encouraged to resist the urge to address patients' resistance by correcting their perceptions but to acknowledge and explore the values behind it.[10] The MI principles also encourage clinicians to approach patients with open-mindedness, to recognise patients as experts in their own lives, and to respect patients' autonomy to make their own decisions. The principles further encourage clinicians to accept and give affirmations when patients express their emotions and reflect on patients' internal motivations and goals for end-of-life care. Using the fourth principle, clinicians can empower patients in decision-making by supporting patients' self-efficacy in end-of-life care decisions. The Coalition for Supportive Care of Kidney Patients published a training curriculum guide on ACP with an MI approach to assist staff in having ACP discussions with patient.[11]

The potential advantage of applying motivational interviewing techniques to end-of-life communication has been highlighted in recent literature and clinical practice guidelines. However, no systematic review has been conducted. We conducted a systematic review of MI-based ACP interventions for improving ACP-related outcomes (having advance directives and health delegate documentation) in older adults. The review also seeks to identify and summarise evidence from all relevant studies to inform future research on the feasibility, appropriateness, meaningfulness and effectiveness of MI-based ACP interventions for older adults.

METHOD

We undertook a systematic review approach, which was chosen so that studies from different research traditions could be synthesised to guide clinical practice.[12] To better understand the state of evidence for MI counselling in ACP interventions, the review was synthesised based on the 'Feasibility, Appropriateness, Meaningfulness and Effectiveness (F.A.M.E.)' framework, including the following domains: feasibility, appropriateness, meaningfulness and effectiveness. The protocol for this meta-analysis and systematic review was registered on PROSPERO (CRD42022341178). The review process was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[13]

Search strategy

The search question was created in a patient–intervention–comparison–outcomes (PICO) format: in older adults (P) receiving MI-based counselling on ACP (I) in comparison with standard care (C) to examine the impact on the completion of advance directives (O). The initial search was conducted on 27 March 2023 in the following electronic bibliographic databases, MEDLINE/PubMed, Education Resources Information Center, PsycINFO and Cumulative Index to Nursing and Allied Health Literature. There was no restriction on the search period. A base strategy, '[motivational interviewing or motivation interview or motivational therapy] AND [advance care planning or end of life planning or advanced directive]' was developed using MeSH terms. Reference lists of all potentially relevant studies or systematic reviews were screened for any eligible studies that were not found in the initial search.

Inclusion criteria

In the review, the operational definition of the application of motivational interviewing was the specific documentation of using MI techniques in the intervention manual. Studies that met the following criteria were included in this review: (1) one of the following study designs (qualitative, quantitative randomised controlled trials (RCT), quantitative non-randomised, quantitative, descriptive or mixed methods); (2) *adults 18 years old and above*; (3) reporting an intervention targeting ACP; (4) MI techniques/skills as a major component of the intervention and (5) the comparison group was standard care.

Study selection and data extraction

We followed the PRISMA guideline (figure 1). Based on the inclusion and exclusion criteria, one reviewer screened the list of titles and abstracts identified through a search of databases. The full text of the selected studies was further reviewed independently by two reviewers (TW and MH) independently for quality and validity purposes. Reasons for excluding a study are shown in figure 1. Discrepancies between the reviewers about the inclusion or exclusion of any study were resolved by discussion until both reviewers approved.

Assessment of study quality

The assessment of the methodological quality was conducted by two independent reviewers (T.W. and M.H.) using the Mixed Methods Appraisal Tool (MMAT) V.2018, which is a framework for critically appraising studies included in a systematic review of mixed-methods studies.[14] The MMAT is a questionnaire examining the overall study quality based on seven methodological quality criteria for each category of a research study. Reviewers' judgement for each

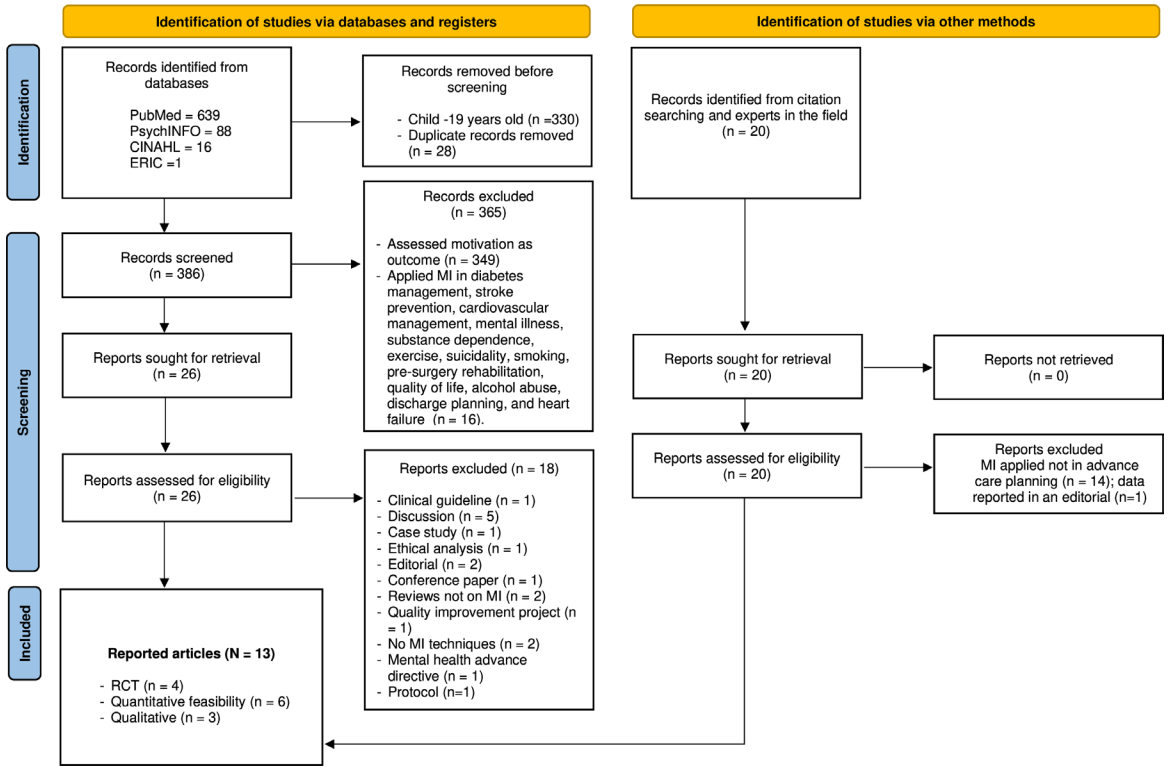

Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow chart.

criterion was categorised as yes, no or 'cannot tell.' Then, an overall score of study quality was generated.

Data extraction

For descriptive and feasibility studies that did not have means and SDs, descriptive results were reported in online supplemental table 1 by name of the project, reporting studies of the project, study aim, study design, participants, description of the intervention and study results. For RCTs, the mean and SDs of each outcome measurement were extracted from the intervention and control groups. One study reported results in an OR format only. An email request was sent to the corresponding author for the original values.

Data analysis

The quantitative and qualitative data were first aggregated based on the following four domains in the 'F.A.M.E.' framework: feasibility, appropriateness, meaningfulness and effectiveness. Quantitative results were presented descriptively.

RESULTS

Study selection

A total of 744 records were found, and additional 17 records were identified from reference lists and other sources. After screening titles and abstracts, 26 studies were retrieved for full-text review. Additional 20 full-text articles were identified by citation searching and experts in the field. Finally, four RCTs, six quantitative feasibility studies and three qualitative studies were included.

Methodological quality

The quality assessment of the included study is demonstrated in table 1, and all included studies demonstrated satisfied performance during the quality assessment using the MMAT.

Study characteristics

The review included 14 studies that examined seven MI-based ACP interventions in assisting older adults with completing advance directives, namely, 'Sharing and Talking About My Preferences,'[15] 'Emergency Department Brief Negotiated Interview,'[16] 'Make Your Wishes Your Way (MY WAY),'[17] 'Support Older Latinos on ACP,'[18] 'Brief Motivational Stage-Tailored Intervention,'[19] 'Thinking Ahead'[20] and 'Apoyo con Cariño/Support With Caring.'[21] The review comprised a total of 1265 adult patients. Participants were diagnosed with multiple comorbidities or advanced illnesses such as end-stage cancer or kidney disease, and three studies were conducted on older adults without any health impairment in the community. The settings of the MI-based ACP intervention include the emergency department, dialysis clinics, supportive housing, hospice settings, primary or specialist ambulatory clinics, or residential homes. Trials were conducted between 2015 and 2021. All studies were conducted in the USA: Massachusetts, New Mexico, Washington,

Table 1 Quality appraisal via the MMAT

Study		Category of study design	Methodological quality criteria						
			Screening Q1	Screening Q2	1	2	3	4	5
1	Fried *et al*[15]	RCT	Y	Y	Y	Y	Y	Y	Y
2	Leiter *et al*[23]	Quantitative non-randomised	Y	Y	Y	Y	Y	Y	Y
3	Ouchi *et al*[25]	Qualitative	Y	Y	Y	Y	Y	Y	Y
4	Pajka *et al*[16]	Quantitative non-randomised	Y	Y	Y	Y	Y	Y	Y
5	Lupu *et al*/Anderson *et al* (intervention protocol paper)[11 17]	RCT	Y	Y	Y	Y	Y	Y	Y
6	Nedjat-Haiem *et al*[22]	Quantitative descriptive	Y	Y	Y	Y	Y	Y	Y
7	Nedjat-Haiem *et al*[28]	Qualitative	Y	Y	Y	Y	Y	Y	Y
8	Nedjat-Haiem *et al*[18]	RCT	Y	Y	Y	Y	Y	Y	Y
9	Ko *et al*[19]	Quantitative non-randomised	Y	Y	Y	Y	Y	Y	Y
10	Huang *et al*[20]	Quantitative non-randomised	Y	Y	Y	Y	Y	Y	Y
11	Fischer *et al*[21]	Pilot RCT	Y	Y	Y	Y	Y	Y	Y
12	Fisher *et al*[24]	RCT	Y	Y	Y	Y	Y	Y	Y
13	Fink *et al*[27]	Qualitative	Y	Y	Y	Y	Y	Y	Y

Mixed Methods Appraisal Tool V.2018

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?				
	S2. Do the collected data allow to address the research questions?				
	Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?				
	1.2. Are the qualitative data collection methods adequate to address the research question?				
	1.3. Are the findings adequately derived from the data?				
	1.4. Is the interpretation of results sufficiently substantiated by data?				
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?				
2. Quantitative randomised controlled trials	2.1. Is randomisation appropriately performed?				
	2.2. Are the groups comparable at baseline?				
	2.3. Are there complete outcome data?				
	2.4. Are outcome assessors blinded to the intervention provided?				
	2.5 Did the participants adhere to the assigned intervention?				
3. Quantitative non-randomised	3.1. Are the participants representative of the target population?				
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?				
	3.3. Are there complete outcome data?				
	3.4. Are the confounders accounted for in the design and analysis?				
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?				
	5.2. Are the different components of the study effectively integrated to answer the research question?				
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?				
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?				
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?				

C, can't tell; MMAT, Mixed Methods Appraisal Tool; N, no; RCT, randomised controlled trial; Y, yes.

DC, California, Alabama, Connecticut and Colorado, respectively. Two studies were conducted to explore cultural-specific ACP interventions for African Americans and Latinos.

Characteristics of ACP interventions

Two key elements in the intervention were ACP education and/or counselling with an MI approach. Four out of the seven interventions provided educational materials.[17 20–22] The official advance directive forms, such as the National Physician Orders for Life Sustaining Treatment form[17] and the health-literacy adaptive advance directive form,[20] were also provided in two studies. In terms of the MI-based counselling section, three studies followed script-based intervention manuals for the MI-based counselling session.[17 21 23] The procedure involved in MI-based counselling includes three key phases: (1) encourage the expression of values and beliefs, (2) exploring and empowering internal motivation and (3) supporting decision-making. The counselling ranged from 11 min to 90 min in one or more separate sessions.

Description of the ACP interventionists

Interventionists in the six ACP projects were physicians,[23] nurses,[17] social workers,[17 22] nursing assistants and medical assistants,[24] individuals with minimal healthcare experience,[20] or health psychologists or psychology interns.[15] For projects that targeted Spanish-speaking communities,[21 22] interventionists were also required to be bilingual and familiar with the Spanish culture and the communities where the studies were conducted.

Description of the 'train the trainer' protocol

The intervention training comprised (1) education on ACP and (2) MI training and role-play practice, with the exception that training for physicians working in the emergency department only included training in MI coaching skills.[23] The length of the intervention varied from 3 hours to 200 hours. *Training on ACP knowledge and end-of-life care*, for those with minimal clinical experience, was provided in structured courses. Huang's team provided the ACP Facilitator Certification Course from the international, evidence-based, decision-making organisation,[20] and Fischer and his colleagues provided the course, Education in Palliative and End-of-Life Care from the Northwestern University, School of Medicine.[21] *Training on MI skills and supportive counselling* were provided via workshops including lectures, discussion and role-play practices. Lupu and his colleagues also established a training curriculum on MI-based ACP specifically for patients with end-stage kidney disease.[17] Core MI strategies that were incorporated into the training workshops encompassed reflective listening, resisting the righting reflex, rolling with resistance, eliciting internal motivation, asking open-ended questions, patient-centred feedback, using affirmation, supporting autonomy, change planning and informing.[15 17 20 23] Competency in MI skills was assessed using the coding of recorded counselling sessions[25] or bedside auditing.[23]

The feasibility domain

Feasibility refers to whether the intervention delivery process is physically, culturally or financially practical in the context of ACP communication.[26]

Cultural and financial feasibility

The cultural feasibility was managed by having interventionists who were familiar with the target participants' culture and languages, and designing the intervention and educational materials at the participants' health literacy levels.[21] In terms of financial feasibility, though no study reported cost-effectiveness data, interventions conducted in community settings used a variety of workforces, such as nurses, social workers, nursing or medical assistants, and lay persons. Moreover, in the emergency department, Leiter and his colleagues also found that there was no significant difference in intervention fidelity between a physician and a physician assistant ($p=0.08$).[23]

Recruitment and completion rates

The physical characteristics of intervention delivery were measured by the study recruitment rate, completion and dropout rates, and length of the interventions. The *recruitment rates*, which were defined as the percentage of eligible people recruited in a study, were 36% in adults with end-stage kidney disease, 47%–55% in older patients with advanced illness in the emergency department,[16 23] 67% in older adults living in supportive housing[19] and 51.5% via telephone call of patients in ambulatory clinics.[15] The *intervention completion rates*, which were defined as the portion of participants who received the full intervention dose, were high, ranging from 94% in healthy older adults,[19] 81.3% and 100% in community-dwelling Latinos and African Americans[20 21] and 53.8% in patients in ambulatory clinics, respectively.[15] In addition, interventions delivered in the clinical setting were in one session only and took an average of 11–65 min.[17 23] Interventions in the community settings encompassed multiple sessions, and the mean time of delivery was longer as well, from 85 min to 105 min.[20 24] Furthermore, one study also reported intervention fidelity of 78%, indicating that a high portion of the ACP counselling had incorporated MI techniques.[23]

Appropriateness and meaningfulness of MI-based ACP interventions refer to the patient's personal experience with the intervention, such as their positive and negative views on the intervention, and their interpretation of the interventions in terms of satisfaction and usefulness.[26] Relevant information was extrapolated from three studies where participants, navigators or authors commented on the appropriateness and/or

meaningfulness of the MI-based ACP interventions or where their recommendations for intervention improvement were discussed.[25 27 28]

Stages of change in ACP

Guided by Prochaska and DiClemente's stages of change transtheoretical model,[28 29] it was found that participants who received an ACP education plus MI-based counselling interventions were at different stages of change (ie, precontemplation, contemplation, preparation, ACP action and maintenance). Participants in the precontemplation stage felt uncertain about ACP after receiving education and counselling, and they could not recall what ACP meant even after intervention. Some participants expressed confusion or misunderstanding about the purpose of an advance directive, and some did not believe it applied to them because they were not sick enough. Participants at this stage also expressed that it was a hard subject to discuss with family and providers. Participants in the contemplation and preparation stages were open to learning new ideas and how they could prepare for ACP. The authors did not indicate the number of participants at each stage.[28] As participants may experience different levels of readiness for ACP after receiving the intervention, it was recommended that providers hold ACP discussions multiple times.[28]

Intervention satisfaction

All the studies included in the review reported high satisfaction with their programmes from participants, with a satisfaction rate ranging from 70% to 96%.[17 19] Latino participants found the ACP intervention particularly useful as it filled their knowledge gap.[22] In a study conducted by Ouchi's team, over 70% (17/23) of the participants who received the intervention viewed the intervention as positive.[25] Participants largely attributed their positive experience to the emergency clinicians' gentle and comforting approach. The intervention identified questions for participants to ask their doctors and provided the opportunity for them to reflect on their future care.[25] In Fink's study, the patient navigators were able to establish relationships and rapport with participants and family caregivers and their knowledge played a large role in assisting patients with advance directive completion.[27] Furthermore, patient navigators empowered participants to communicate with providers about their pain and other symptoms. The bilingual and bicultural navigators played a role as cultural brokers and were effective in reducing barriers to palliative care and improving health literacy for underserved populations.

Sensitive conversations at the personal and culture levels

Some participants had mixed emotions during the discussion, but they emphasised the helpful nature of the intervention despite the upsetting topic.[25] Two participants in Ouchi's study had negative sentiments regarding the intervention and wished the discussion was less vague and more direct.[25] Lupu and his colleague also reported that 4 out of 109 participants experienced moderate distress during the conversations on end-of-life care.[17] Furthermore, ACP is not a lived experience among Latinos and can be perceived as interfering with traditional and religious values. The authors also expressed that the existing primary advance directive documentation was not culturally and linguistically adapted for those with low levels of health literacy.[28]

The effectiveness domain

Effectiveness refers to the impact of the MI-based ACP intervention on clinical or health outcomes.[26] The primary outcome in this review was the completion of advance directives, and, secondary outcomes include ACP engagement (knowledge, attitude and skills) and health service utilisation.

Impact on the advance directive completion

Four interventions, 'MY WAY,' 'Support Older Latinos on ACP', 'Apoyo con Cariño (Support with Caring)', and 'Sharing and Talking About My Preferences' reported their impact on advance directive documentation. Participants who received the 'MY WAY' intervention were 79% more likely to complete an advance directive ((95% CI, 1.18 to 2.72), 32.8% vs 17.8%, p=0.004), and 2.2 times more likely to have a documented health agent ((95% CI, 1.32 to 3.68), 29.6% vs 13.2%, p=0.001) in comparison to usual care.[17] The RCT of 'Support Older Latinos on ACP' showed that, in comparison to receiving an ACP education, those who received additional MI-based ACP counselling sessions had a significantly higher completion rate of advance directives (OR=6.901, p<0.05).[18] In terms of the 'Apoyo con Cariño (Support with Caring)' intervention, the completion rates of living wills and powers of attorney were 39.3% and 61.6% in comparison to 12.6% and 25.2% in the control group that received an educational booklet only.[24] In the 'Sharing and Talking About My Preferences' study, participants who received MI-based counselling or MI-based counselling enhanced with tailored education handouts were significantly more likely to talk about quality versus quantity of life with a loved one, to assign a health delegate, to complete their living wills and to have their decisions written in their health records that those received usual care.[15] Notably, Fried and his colleagues also found no significant differences in ACP-related outcomes between the usual care group and the group that received tailored, stage-based education handouts in their mailbox.[15]

Impact on ACP engagement (knowledge, attitude and confidence)

The effectiveness of the other three interventions was tested using a cross-sectional feasibility design, which was assessed by the change in ACP engagement

measured by individuals' knowledge, attitudes and confidence.[16 19 20] The 'Brief Negotiated Interview in ED' intervention showed a significant positive impact (from 3.8 to 4.3 out of 5, p=0.01) on participants' readiness to sign advance directives and communicate end-of-life care decisions with family members and physicians.[16] In terms of the 'Brief Motivational Stage-Tailored Intervention' for low-income, supportive housing residents, participants had significant increases in ACP knowledge (p<0.001), attitudes towards ACP (p<0.05), self-efficacy on advance directives (p<0.05) and perceived importance (p=0.05), but no change in negative attitudes (p=0.91) was observed.[19] The 'Thinking Ahead Intervention' for community-dwelling African Americans resulted in a significant increase (p=0.01, d=1.67) in knowledge related to advance directives.[20] In addition, two out of three RCTs also reported significant improvements in ACP engagement measurement (p=0.03)[17] and readiness to engage in ACP discussion with family members (p<0.001) and physicians (p<0.03).[18]

Impact on health service utilisation

The project involving two RCTs[21 24] that tested the 'Apoyo con Cariño (Support with Caring)' intervention reported health service utilisation. Both studies did not find significant differences in hospice utilisation, length of hospice stay or aggressiveness of treatment received at the end-of-life, between the intervention and control groups.

DISCUSSION

Main findings

This is the first systematic review to summarise interventions adopting MI in end-of-life care planning and to synthesise the evidence on the effects of seven MI-based ACP interventions. We used the F.A.M.E. framework to integrate quantitative and qualitative evidence to gain a comprehensive understanding of the state of science on MI-based ACP interventions.

The quantitative evidence was complementary to the quantitative evidence, and the aggregated findings support that ACP counselling delivered using MI techniques by health professionals or certified laypersons is effective in improving older adults' engagement in ACP but has no impact on health service utilisation. The MI-based ACP interventions reviewed in the study demonstrated adequate feasibility, as evidenced by the high recruitment and study completion rates in a variety of patient populations and settings. Notably, we found that the MI counselling on ACP for older adults in the community is feasible to be delivered by lay persons with appropriate training, which indicates a great potential to scale up the intervention for a larger population.

The qualitative data also suggest that the MI-based ACP intervention was appropriate and meaningful for participants, who viewed the interventions as a helpful and new experience in end-of-life discussions and would recommend them to others. Participants generally appreciated the supportive communication styles in MIs to express their personal values and explore the motivation for ACP engagement. This could be explained by the fact that the philosophy of motivational interviewing aligns well with the objective of ACP conversation, which is to encourage patients to discover their own values, as opposed to pressuring them to provide the correct responses or perform the appropriate behaviours.[30] In addition, the cultural appropriateness was also analysed in the qualitative data, and indicates that ACP interventions should be flexible and sensitive not only to the recipients' cultural background on death-related talks but also to their readiness to engage in those conversations.[31] Therefore, ACP counselling based on MI revealed a significant potential for practicability and acceptability in routine practice for the elderly.

In terms of effectiveness, all the studies found a significantly positive impact of the ACP interventions on the completion of advance directives and health delegates. This was consistent with previous meta-analysis that showed ACP interventions in general can be effective (OR=3.26, 95% CI (2.00 to 5.32)) in increasing the completion of advance directives.[32] Likewise, the effectiveness of the MI-based ACP intervention was in line with the significant effects of brief MIs on changing health behaviours such as weight control, blood pressure and substance use management.[9 33] Furthermore, this finding is also in line with the transtheoretical model, which states that individuals' decision-making for a behaviour change is a continuous cognitive and affective evaluation process through six stages of precontemplation, contemplation, preparation, action, maintenance and termination.[29] The benefit of MIs is that they focus on creating cognitive and affective knowledge of ACP by addressing individuals' ambivalence and reluctance about making a decision before encouraging them to act on ACP.[34] Therefore, the effectiveness of the MI-based ACP highlights the potential mechanism underlying the nature of motivational interviewing for the development of ACP behaviours.

What this study adds

The use of motivational interviewing in the ACP programme is an evidence-based and theory-driven approach, and when adopted into routine practice, it can help older adults engage in end-of-life care planning. The current review found that using MI strategies to facilitate older adults' (1) value expression, (2) motivation recognition and (3) supportive decision-making with compassion and education in ACP counselling is likely to be the core elements of effective ACP interventions. In addition, following the four core principles of motivational interviewing, facilitators for ACP conversations give older adults autonomy

and prioritise establishing their readiness to engage in end-of-life planning before the emotionally charged communication. This practice was key for the older adults and family members to find these interventions appropriate and meaningful. Notably, the motivational interviewing theory offers a practical structure and communication strategies for delivering ACP conversations. Furthermore, the results suggested that a multisession or single session of 60-minute, structured MI-based ACP counselling can be feasible and effective in enhancing older adults' ACP. This preliminary implementation evidence provides a valuable design framework for future research in this area.

Fully powered clinical trials on older adults from different demographic backgrounds and clinical settings are needed to establish the validity of the MI-based ACP programmes as a routine practice. In addition, to develop a full picture of the MI-based ACP implementation, additional studies that involve multiple stakeholders to integrate MI-based ACP practice into routine practice, which helps to engage more patients and family members in end-of-life communications at the point of care, should be conducted as well. More research is also necessary on the effects of MI-based ACP interventions on advance directive completion and compliance, cost-effective analysis, end-of-life decisional conflicts and health-related outcomes such as symptom burden and quality of dying across different patient populations and clinical settings.

Strengths and limitations of the study

The search for the systematic review was guided by PRISMA standards in several databases, and the rigour of the included studies was assessed by two evaluators using the MMAT. However, our review has several limitations. First, shared metrics were not used in all RCTs. Second, heterogeneity in the MI-based interventions indicates that the findings of the review should be interpreted within the relevant context. Third, all the studies did not measure ACP-related outcomes, such as quality of communication, decisional conflicts, symptom burden at the end of life and concordance between preferences for care and delivered care. These measurements may provide additional insights into the application and effectiveness of MI-based ACP interventions.

CONCLUSIONS

This systematic review reveals that there is strong evidence to support the application of motivational interviewing skills in ACP programmes for older adults. The MI-based ACP intervention is effective in improving older adults' readiness to engage in ACP in the short term and the completion of advance directives in the long term. Future research in the field of MI-counselling facilitated ACP is needed across healthcare disciplines, especially in nursing, as nurses play a vital role in delivering compassionate care. Such efforts are essential to the integration of the MI-based ACP intervention into the clinical practice for providing quality end-of-life care for the rapidly ageing population.

Contributors TW: conceptualisation, methodology, software, data curation, literature appraisal, formal analysis, writing—original draft. MH: methodology, data curation, literature appraisal, writing—original draft, review and editing. XX: Methodology, writing—original draft, review and editing. HRC: methodology, review and editing. CL: supervision, resources, methodology, writing—review and editing, guarantor.

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REFERENCES

1 National Institutes on Aging. Advance care planning: health care directives. 2018. Available: https://www.nia.nih.gov/health/advance-care-planning-health-care-directives#what [Accessed 24 Jun 2022].
2 Lau G. Advance healthcare directives of patients: legislative council of the Hong Kong special administrative region of the people's Republic of China. 2019. Available: https://www.legco.gov.hk/research-publications/english/essentials-1819ise07-advance-healthcare-directives-of-patients.htm
3 Bernard C, Tan A, Slaven M, *et al*. Exploring patient-reported barriers to advance care planning in family practice. *BMC Fam Pract* 2020;21:94.
4 Lewis E, Cardona-Morrell M, Ong KY, *et al*. Evidence still insufficient that advance care documentation leads to engagement of healthcare professionals in end-of-life discussions: a systematic review. *Palliat Med* 2016;30:807–24.
5 Arnett K, Sudore RL, Nowels D, *et al*. Advance care planning: understanding clinical routines and experiences of interprofessional team members in diverse health care settings. *Am J Hosp Palliat Care* 2017;34:946–53.

6 The conversation project. Institute for health improvement, Available: https://theconversationproject.org/nhdd/advance-care-planning/ [Accessed 6 Jul 2022].
7 Cox MB, McGregor MJ, Huggins M, *et al*. Evaluation of an initiative to improve advance care planning for a home-based primary care service. *BMC Geriatr* 2021;21:97.
8 Miller WR. Motivational interviewing with problem drinkers. *Behav Psychother* 1983;11:147–72.
9 Frost H, Campbell P, Maxwell M, *et al*. Effectiveness of motivational interviewing on adult behaviour change in health and social care settings: a systematic review of reviews. *PLoS One* 2018;13:e0204890.
10 Fried TR, Leung SL, Blakley LA, *et al*. Development and pilot testing of a motivational interview for engagement in advance care planning. *J Palliat Med* 2018;21:897–8.
11 Anderson E, Aldous A, Lupu D. Make your wishes about you (MY WAY): using motivational interviewing to foster advance care planning for patients with chronic kidney disease. *Nephrol Nurs J* 2018;45:411–21.
12 Pearson A, White H, Bath-Hextall F, *et al*. A mixed-methods approach to systematic reviews. *Int J Evid Based Healthc* 2015;13:121–31.
13 Page MJ, McKenzie JE, Bossuyt PM, *et al*. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71.
14 Fàbregues S, Paré M-H. Appraising the quality of mixed methods research in nursing: a qualitative case study of nurse researchers' views. *Nurs Inq* 2018;25:e12247.
15 Fried TR, Yang M, Martino S, *et al*. Effect of computer-tailored print feedback, motivational interviewing, and motivational enhancement therapy on engagement in advance care planning: a randomized clinical trial. *JAMA Intern Med* 2022;182:1298–305.
16 Pajka SE, Hasdianda MA, George N, *et al*. Feasibility of a brief intervention to facilitate advance care planning conversations for patients with life-limiting illness in the emergency department. *J Palliat Med* 2021;24:31–9.
17 Lupu DE, Aldous A, Anderson E, *et al*. Advance care planning coaching in CKD clinics: a pragmatic randomized clinical trial. *Am J Kidney Dis* 2022;79:699–708.
18 Nedjat-Haiem FR, Cadet TJ, Amatya A, *et al*. Efficacy of motivational interviewing to enhance advance directive completion in Latinos with chronic illness: a randomized controlled trial. *Am J Hosp Palliat Care* 2019;36:980–92.
19 Ko E, Hohman M, Lee J, *et al*. Feasibility and acceptability of a brief motivational stage-tailored intervention to advance care planning. *Am J Hosp Palliat Care* 2016;33:834–42.
20 Huang C-HS, Crowther M, Allen RS, *et al*. A pilot feasibility intervention to increase advance care planning among African Americans in the deep South. *J Palliat Med* 2016;19:164–73.
21 Fischer SM, Cervantes L, Fink RM, *et al*. Apoyo con Cariño: a pilot randomized controlled trial of a patient navigator intervention to improve palliative care outcomes for Latinos with serious illness. *J Pain Symptom Manage* 2015;49:657–65.
22 Nedjat-Haiem FR, Carrion IV, Gonzalez K, *et al*. Implementing an advance care planning intervention in community settings with older Latinos: a feasibility study. *J Palliat Med* 2017;20:984–93.
23 Leiter RE, Yusufov M, Hasdianda MA, *et al*. Fidelity and feasibility of a brief emergency department intervention to empower adults with serious illness to initiate advance care planning conversations. *J Pain Symptom Manage* 2018;56:878–85.
24 Fischer SM, Kline DM, Min S-J, *et al*. Effect of Apoyo con Cariño (support with caring) trial of a patient navigator intervention to improve palliative care outcomes for Latino adults with advanced cancer: a randomized clinical trial. *JAMA Oncol* 2018;4:1736–41.
25 Ouchi K, George N, Revette AC, *et al*. Empower seriously ill older adults to formulate their goals for medical care in the emergency department. *J Palliat Med* 2019;22:267–73.
26 Pearson A, Wiechula R, Court A, *et al*. The JBI model of evidence-based healthcare. *Int J Evid Based Healthc* 2005;3:207–15.
27 Fink RM, Kline DM, Siler S, *et al*. A qualitative analysis of a palliative care-focused lay patient navigation intervention for Hispanics with advanced cancer. *J Hosp Palliat Nurs* 2020;22:335–46.
28 Nedjat-Haiem FR, Carrion IV, Gonzalez K, *et al*. Exploring motivational interviewing to engage Latinos in advance care planning: a community-based social work intervention. *Am J Hosp Palliat Care* 2018;35:1091–8.
29 Prochaska JO, DiClemente CC. Stages and processes of self-change of smoking: toward an integrative model of change. *J Consult Clin Psychol* 1983;51:390–5.
30 Pollak KI, Childers JW, Arnold RM. Applying motivational interviewing techniques to palliative care communication. *J Palliat Med* 2011;14:587–92.
31 Marcus JD, Mott FE. Difficult conversations: from diagnosis to death. *Ochsner J* 2014;14:712–7.
32 Houben CHM, Spruit MA, Groenen MTJ, *et al*. Efficacy of advance care planning: a systematic review and meta-analysis. *J Am Med Dir Assoc* 2014;15:477–89.
33 Rubak S, Sandbaek A, Lauritzen T, *et al*. Motivational interviewing: a systematic review and meta-analysis. *Br J Gen Pract* 2005;55:305–12.
34 Pollak KI, Gao X, Arnold RM, *et al*. Feasibility of using communication coaching to teach palliative care clinicians motivational interviewing. *J Pain Symptom Manage* 2020;59:787–93.

Supplementary Table 1:

Projects and studies to improve advance care planning with motivational interview

Project Name	Reporting Study	Study Aim	Design	Participant	Intervention (if applicable)	Outcome
Sharing and Talking About My Preferences (STAMP - VA) **US, Connecticut**	*Terri R. et al., 2022 (ClinicalTrials.gov: NCT03103828)*	To examine the efficacy of computer-tailored print feedback (CTPF), motivational interviewing (MI), and motivational enhancement therapy (MET) on ACP-related activities	Single setting RCT	N=483 Veterans aged ≥ 55 who had a primary care visit in the VA facility within the last 12 months n(CTPF) = 122 n(MI) = 121 n(MET) = 120 n(c) =125	**Interventions** **CTPF:** Computer tailored ACP print feedback, designed based on the Transtheoretical Model of Change at baseline, 2 months, and 4 months **MI:** a motivational interview session to explore ambivalence and change toward ACP **MET**: MI and CTPF at baseline, 2 months, and 4 months **Control** Usual care	• The outcome measure refers to the completion of ACP activities on (1) completing living wills, (2) identifying a health decision delegate, (3) having conversations with a loved one on quality or quantitative of life, and (4) documentation of ACP in health medical record. • Mean age 68.3(SD=8), 88% women, 68.9% white • At 6-month follow up, the probability of completing all ACP activities in the control group was 5.7% (95% CI, 2.8% to 11.1%); in the MI group was 15.8% (95% CI, 10.2% to 23.6%; P = .01) the MET group was 17.7% (95% CI, 11.8% to 25.9%; P = .003) for MET, and in the CTPF group was 10.0% (95% CI, 5.9% to 16.7%; P = .18).
Emergency Department Brief Negotiated Interview (ED-BNI) **US, Massachusetts**	*Leiter et al., 2018*	To assess the intervention's fidelity and feasibility in the ED setting	Feasibility	**Clinician participants**: one physician and two physician assistants in the ED **Patient participants:** n = 46, adults with serious illness	**Clinicians received training on how to deliver ED-BNI to patients in the ED:** 1. Motivational interview lecture 2. Role play training on communication skills (appropriate language, reflective listening, use of empathic language, assess mutual understanding, listen for cues and redirects when needed) 3. Bedside coaching until competency at 5 consecutive sessions	• Recruitment rate = 55% • Length of the ED-BNI intervention: Median = 10.5 minutes; number of interruptions = 0.4, SD = 0.7 • Intervention fidelity = 78.04% • Clinician type (physician or physician assistant) did not influence intervention fidelity (p = .08)

	Ouchi et al., 2019 *(ClinicalTrials.gov:* NCT03208530)	To assess the acceptability of the intervention to engage ED patients with primary outpatient clinicians on ACP	Qualitative	**Clinician participants**: one physician and three physician assistants in the ED **Patient participants:** n = 23, older adults (above 65 years old) with serious illness	Same as the above study (Leiter et al., 2018)	• In the 16 mock sessions with individuals from the Patient and Family Advisory Council, average intervention length = 6.8 minutes (SD = 3), acceptability score = 7 out of 10 (6-9: somewhat acceptable) • **Patients viewed the intent of the intervention as** communication with primary care doctor on ACP (n=13), assessment of current care (n = 7) and relationship with patients (n = 4) • **Patients' attitude toward making ACP with their primary care physicians**: 17 found it positive, 2 negative and 4 neutral
	Pajka et al., 2021	To assess the feasibility of the intervention to engage ED patients with primary outpatient clinicians on ACP	Pre-and-post feasibility	N = 52 older patients (above 65 years old) with advance illness	1. A script-based, brief negotiated ACP interview delivered by trained ED physicians 2. Received a list of helpful questions to discuss with their primary outpatient clinicians	• **Feasibility**: recruitment rate (46.8%), median length of intervention (11.8 minutes), 83% perceived the intervention as positive • **ACP engagement** scores increased from 3.8 to 4.3 out of 5 (p = .01) • **Barriers to ACP completion**: communication gaps among multiple providers, primary focus on immediate health needs
"Make your wishes about you (MY WAY)" **US, Washington DC**	*Lupu et al., 2022* Study Intervention Protocol reported at *Anderson et al., 2018* (*ClinicalTrials.gov:* NCT03506087)	To examine the effect of MI-based ACP coaching in outpatient chronic kidney disease (CKD) clinics	Multicenter, pragmatic RCT	N= 254 patients age 55 or older, had stage 3-5 CKD n(x) = 125 n(c) = 129	**Intervention** Intervention nurses or social workers received 3-hour curriculum-based, training on MI techniques (using a flexible approach, resisting the righting reflex and rolling with resistance, listening for client motivation, asking open-ended questions, listening and reflecting, and informing) "MY WAY" consisted of 60 minutes, MI-based, patient-centered coaching following seven steps: 1. Values Assessment 2. Introduce the advance directive 3. Review the advance directive	**<u>4-month Follow Up</u>** • **Completion rate of advance directives**: 32.8% vs. 17.8% (p =.004, Mantel-Haenszel risk ratios = 1.79 [95% CI, 1.18-2.72]) • **Completion of healthcare agent:** 29.6% vs. 13.2% (p =.001, Mantel-Haenszel risk ratios = 2.20 [95% CI, 1.32-3.68]) • **Had ACP conversation with nephrologist:** 3.2% vs. 6.3% (p =.2, Mantel-Haenszel risk ratios = 0.49 [95% CI, 0.15-1.58]) • **Post-hoc**: the intervention had greater impact in participant with CKD stage 4+ than stage 3 on ACP engagement (β = 2.80, [95% CI, 0.01-5.59] vs 0.99 [95% CI, −1.27 to 3.24]) and completion of advance directive (Mantel-Haenszel risk ratios = 2.13 [95% CI, 1.12-4.05] vs 1.52 [95% CI, 0.88-2.63])

					4. Choose a healthcare agent 5. Have the conversation 6. Ask for the National Physician Orders for Life Sustaining Treatment form 7. Conclusion of MY WAY approach [1] Link to full intervention training curriculum **Control** Usual care	• **ACP engagement score (ACP Engagement Survey)**: 38.1 vs. 37.2 (*p* =.03) • **Feasibility of intervention delivery**: significant outcome variations by study site (*p* =.04), recruitment rate was 36%, length of coaching session (range 10-65 min), participants found the intervention highly acceptably (96.3%), encouraged them on ACP (77.9%), and would recommend it to others (96.3%). • **Adverse events**: 4 out of 109 (3.7%) had moderate distress on end-of-life discussion
Support Older Latinos on ACP **US, New Mexico**	*Nedjat-Haiem et al., 2017*	To assess the feasibility of the MI-based ACP counseling for older Latinos	Randomized, control, feasibility	N = 74 community dwelling Latinos with age above 50 years old and having one or more chronic illnesses n(x) = 39 n(c) = 35	**Intervention** **1. ACP education session** 2. **30-40 min MI counselling session on ACP** delivered by graduate school prepared social worker including exploring participants' knowledge and attitude on end-of-life care, and supportive counseling to talk with families and physicians on end-of-life treatment **Control** **ACP education session** that discussed 1. Medical decision making during an individual's end of life 2. Importance of having a power of attorney 3. How to sign the advance directive form 4. Respond to participants' questions	• **Recruitment strategies:** Two Spanish-speaking social workers talk and post information about the study in the community weekly for six months. • **Demographics:** mean age of 66, 76.5% were females, 52.9% preferred Spanish, 31.4% had less than six-grade education, • **Feasibility:** 93% study completion rate; pretest survey completed at 18 days after screening, MI-based ACP intervention completed at 14 days after the pretest; intervention session was 33 minutes (SD = 10); 22% over the phone while 78% face to face. • **Satisfaction:** participants were highly satisfied with the intervention, stated the intervention was useful and filled their gap of knowledge, and provided feedback on improving the intervention
	Nedjat-Haiem et al., 2018	To explore older Latinos' experience with MI-based ACP counseling	Qualitative	N = 32 community dwelling Latinos who received the MI-based ACP counselling in the study of	Secondary analysis of qualitative data reported in the study of Nedjat-Hajem et al, 2017	Key themes of the study indicated participants experienced the following stage of change: 1) **Precontemplation:** found the topic confusing, did not believe it applies to them and found it hard to talk with families about death

				Nedjat-Hajem et al, 2017		2) **Contemplation:** found the topic interesting and open to think about benefits of ACP 3) **Preparation:** expressed desire to learn and prepare for ACP 4) **ACP action**: engaged in ACP conversations with families and their health providers 5) **Maintenance:** understood the importance of continuing communication on ACP with families and health providers
	Nedjat-Haiem et al., 2019 *(ClinicalTrials.gov: NCT01695382.)*	To test the effectiveness of the intervention on advance directive documentation	Pilot RCT	N = 74 community dwelling Latinos with age above 50 years old and having one or more chronic illnesses n(x) = 39 n(c) = 35	**Intervention** 1. ACP education 2. 30-40 min MI session delivered by a social worker for ACP treatment decisional support, counseling, emotional support, and barrier navigation **Control** ACP education	• **Two constructs in readiness to engage ACP:** 1) readiness to talk with doctors on severity of illness, possibility of dying, goals of care, advance directives, and medical treatment plan, and 2) readiness to talk with families on possibility of dying, advance directives, end-of-life care, and goals of care • **One construct of ACP engagement barriers:** difficulty to talk about dying due to families not let patients to about dying, language barriers with doctors, potential family conflicts on ACP • **Advance directive completion rate** was significantly higher in the intervention group (odds ratio = 6.901, p <.05) after controlling for the covariates • **Secondary outcomes**: significant improvements on scores of readiness to talk with doctor (p <.03) and family (p <.001) and perceived ACP barrier of "my family will not let e talk about the possibility of dying" (p =.03) • Participants who thought talking about dying was difficult was less likely to complete advance directive (odds ratio = .866, p <.01)
Brief Motivational Stage-Tailored Intervention **US, California**	*Ko et al., 2016*	To assess the intervention's feasibility in improving ACP engagement	Pre-and-post feasibility	Low-income, older, supportive housing residents (n = 30)	1. **10-15 min advance directive education** on end-of-life treatment options, purpose, and contents of advance directives 2. **Stage-matched MI counseling** on exploring values and beliefs of meaningful end of life, eliciting internal motivation with reflective listening and	• **Feasibility:** recruitment rate (66.7%) and dropout rate (6.3%); participants found the intervention beneficial (80%) • Participants in the planning stage increased from 10% to 46.7%; in the action stage (completed advance directive) increased from 0 to 23.3%, additional 23.3% identified power of attorney only. • Significant increases in knowledge (p < .001), positive attitudes towards ACP (p < .05), self-efficacy (p < .05), and

					other MI techniques, and assisting to explore and resolve ambivalence in making end-of-life decision **Training for Interventionists**: a social work graduate research assistant received a 45 hour graduate-level course on MI including overview of ADs, MI counseling skills, and role-plays, and fidelity check by three consecutive sessions.	perceived importance (p = .05). no change in negative attitude (p = .91)
Thinking Ahead Project (TAP) **US, Alabama**	*Huang et al., 2016*	To assess intervention's feasibility and identify barriers to ACP engagement	Randomised, control feasibility	Community dwelling African Americans n(x) = 15 n(c) = 15	**Intervention** 1. **60-min semi structured interview** by certified ACP Facilitator who received a four-hour lecture and supervised MI training, was adapted from the Respecting Choices First Steps ACP protocol on MI techniques (rolling with resistance, asking open-ended questions, using affirmation, and support autonomy) 2. **30-min guided advance directive coaching** [2] Link to full intervention training curriculum **Control** Educational materials and review on their own for 30 min	• **Feasibility:** Study completion rate = 100%; participants rated the intervention "very helpful" (80%) and meet their need for ACP (93.3%); average session 85 minutes (SD = 7.23, range 64 - 92); intervention had large effect (p = .01, d = 1.67) on knowledge on advance directive. • **Education materials**: preferred the health-literacy adaptive advance directive form • **Perceived barriers to ACP:** lack of informed education/information, lack of family/social support, sense of hopelessness, mistrust of doctors, get caught up with life, reticence to talk about death/future care decision • **Perceived strategies to ACP:** provide education/information, reach more African Americans, increase trust and acceptance, initiate discussions using circle of influence
Apoyo con Cariño (Support With Caring):	*Fischer et al., 2015*	To assess the feasibility of a patient navigator intervention on	Pilot randomized, control feasibility	N = 64 Latino adults with life-limiting illness on palliative care	**Control** Culturally-tailored, 5th grade reading, educational booklet on ACP, hospice care and pain management	**Feasibility**: average number of home visits = 2.7 (SD = 1.9), mean length of visit time = 91 minutes (SD =31) **<u>At 12-month follow up:</u>**

Lay patient navigation intervention **US, Colorado**		palliative care outcomes		n(x) = 32 n(c) = 32	**Intervention** 1. **Patient navigators** were bilingual, bicultural Latino with community health background, and received 200 hours of training on (a) patient navigator training, (b) advance MI training, and (c) one-on-one role play exercise 2. **Home visits** by patient navigators using advocacy, activation, education and MI to help address barriers to the ACP, hospice care and pain management 3. **Written materials** [3] Link to the full intervention training curriculum	• **Completion of advance directives:** 25% vs. 0% (p =.02) • **Completion of power of attorney**: 37.5% vs. 18.8% (p =.1) • **Discussed pain management with providers**: 79% vs. 54% (p =.05) • **Prescription of pain medication**: 76% vs. 58% (p =.17) • **Use of hospice**: 21.9% vs. 25%, (p =1.0) • **Length of hospice stay**: 36.4 days vs. 19.7 days, (p =.39)
	Fischer et al., 2018	To examine the effect of a culturally tailored patient navigator intervention on advance care planning, pain management, and hospice use	Multi-center, RCT	N = 177 Latino adults with stage III/IV cancer n(x) = 87 n(c) = 90	**Control** Same as described in the study, Fisher et al., 2015 **Intervention** Three trained patient navigators (certified nursing assistant, medical translator, medical assistant) delivered 5 home visits as described in the study, Fisher et al., 2015	**Intervention delivery**: 81.3% completed all 5 home visits, average number of home visits = 5.3 (SD=1.9), length of time per visit = 105 min (SD =25), participants were highly satisfied with the intervention **At 3-month follow-up:** • **Completion of advance directives:** 45.5% vs. 0% (p <.001) • **Completion of living will**: 12.6% vs. 39.3% (p <.001) • **Completion of power of attorney**: 25.2% vs. 61.6% (p <.001) • **Discussed future healthcare preferences**: with family members 83.5% vs 55.2%, p < .001, with health providers 60.0% vs 35.2%, p = .001 • **Pain and quality of life**: only significant difference in physical subscale (p = .009) • **Prescription of pain medication**: 76% vs. 58% (p =.17) • **Use of hospice**: 79.7% vs. 83.6%, (p =.58) • **Hospice length of stay:** 58.8 vs. 54.7 days (p =.63) • **End-of-life aggressiveness of care:** no difference between groups

	Fink et al., 2020	To examine intervention home visit content by analyzing the field notes	Qualitative	499 visits field notes to 112 intervention patients with advanced cancer and family caregivers (if available)	Secondary analysis of data reported in the study of Fisher et al., 2018	**Themes of patient navigator role:** 1. **Use of MI strategies** via activation/empowerment, advocacy, awareness, access to help address barriers to care 2. **Consistently build rapport**, provide support, explore barriers, screen for symptoms, and the patient experience 3. **Provide ACP information** and assist with completion of advance directives 4. **Routinely screen for pain and other symptoms** 5. **Create hospice awareness**

Note.
ACP: advance care planning**, MI:** motivational interview**, RCT:** randomized control trial**, SD:** standard deviation

1. **https://www.kidneysupportivecare.org/advanced-care-planning/**
2. **https://respectingchoices.org/types-of-curriculum-and-certification/facilitator-certification/**
3. **https://www.bioethics.northwestern.edu/programs/epec/**