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Community Partners in Care: 6- and 12-month Outcomes of Community Engagement versus Technical Assistance to Implement Depression Collaborative Care among Depressed Older Adults

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Objective: Community Partners in Care, a community-partnered, cluster-randomized trial with depressed clients from 95 Los Angeles health and community programs, examined the added value of a community coalition approach (Community Engagement and Planning [CEP]) versus individual program technical assistance (Resources for Services [RS]) to implement depression collaborative care in underserved communities. This exploratory subanalysis examines 6- and 12-month outcomes among CPIC participants aged >50 years.

Design: Community-partnered, cluster-randomized trial conducted between April 2010 and March 2012.

Setting: Hollywood-Metropolitan (HM) and South Los Angeles (SLA) Service Planning Areas (SPAs), Los Angeles, California

Participants: 394 participants aged >50 years with depressive symptoms (8-item Patient Health Questionnaire score ≥ 10).

Intervention: A community-partnered multi-sector coalition approach (Community Engagement and Planning [CEP]) vs individual program technical assistance (Resources for Services [RS]) to implement depression collaborative care.

Main Outcome Measures: Depressive symptoms (PHQ-8 score), mental health-related quality of life (MHRQL), community-prioritized outcomes including mental wellness, homelessness risk and physical activity, and services utilization.

Results: At 6 months, CEP was more effective than RS at improving MHRQL and mental wellness among participants aged >50 years; no differences were found in

Introduction

Older adult depression is associated with functional impairment, diminished quality of life and increased mortality.[1] The US population of adults aged >65 years is projected to grow from 43 million in 2012 to 84 million in 2050.[2] Without the implementation of interventions that effectively engage older adults in depression care, the burden of death and disease due to depression will likely increase.

In spite of being highly prevalent, older adult depression, especially among minorities, is underrecognized and undertreated in primary care settings.[3] Models of collaborative care for treating older adult depression in primary care settings have been developed and are effective, relative to usual primary care, at improving health outcomes both for minority and White depressed older adults.[4,5] Collaborative care involves a structured approach to care based on chronic disease management principles,[6] and may include collaboration among primary care practitioners, patients and specialists on a common definition of the problem,

the effects of CEP vs RS on other outcomes. No significant outcome differences between CEP and RS were found at 12 months.

Conclusions: A multisector community coalition approach may offer additional benefits over individual program technical assistance to improve outcomes among depressed adults aged >50 years living in underserved communities. *Ethn Dis*. 2018;28(Suppl 2):339-348; doi:10.18865/ed.28.S2.339.

Keywords: Community Partnered Participatory Research; Community Based Participatory Research; Depression Services; Minorities; Older Adults

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development of a therapeutic alliance, a personalized treatment plan that includes patient preferences, proactive follow-up and outcomes-monitoring by a depression care manager, targeted use of specialty consultation, and protocols for stepped care.[4] Despite recommendations to disseminate depression collaborative care models,[7] safety-net primary care settings generally have limited capacity for full implementation of such interventions.[8,9] Ethnic and racial disparities in access to and quality of depression care persist,[10] exacerbated in under-resourced communities by homelessness and other social determinants of health.[11,12]

Community-based participatory research (CBPR) is recommended for reducing disparities[13] and engaging under-resourced communities in improving their health.[14,15] CBPR studies recommend social and community-based services settings to address depression care for disadvantaged and/or racial/ethnic minority adults, including older adults.[16,17] Providing mental health care in settings where people live, spend time and/or seek services has been nationally promoted to improve mental health outcomes and care access among community-dwelling older adults with mental illness.[18-20] Although collaborations among health care, social services and community-based services have been shown to be effective at addressing the mental health and social needs of those with mental illness, a 2015 Cochrane review reported finding only one "high-quality" study on the added value of a community coalition-based vs non-coalition based intervention to improve the health of minority communities – Community Partners in Care (CPIC), which, in terms of participant age, focused on the general public; no high-quality studies were found that specifically examined older adults.[21]

CPIC was a group-level randomized trial that compared Community Engagement and Planning (CEP), which employed CBPR to cultivate a multi-sector coalition approach, with Resources for Services (RS), which provided technical assistance to individual agencies, to implement an expanded model of depression collaborative care across health care, social services and community-based services settings in two under-resourced communities in Los Angeles.[22,23] CPIC was conducted in 95 programs across five sectors: outpatient primary care, outpatient mental health care, substance abuse treatment services (residential and outpatient), homeless services, and other community-based and social services (eg, parks-and-recreation-operated community and/or senior centers, exercise clubs, hair salons, and faith-based programs). All CPIC participants had depression severity corresponding to a score of ≥10 on the eight-item Patient Health Questionnaire (PHQ-8). At 6-month follow-up, participants in CEP, relative to those in RS, experienced greater improvements in mental health-related quality of life (MHRQL, a primary outcome) and mental wellness, increased physical activity, reduced homelessness risk factors, and reduced behavioral health hospitalizations.[23] At 12-month follow-up, no consistent effects of CEP on MHRQL and behavioral health hospitalizations were found.[22] No significant comparative intervention effects on depressive symptoms or use of health care depression treatments were found at 6- and 12-month follow-up. Results have not previously been reported separately for older adult CPIC participants.

Our current study is an exploratory subgroup analysis that examines the extent to which the effects of CEP relative to RS on primary and secondary outcomes among the whole sample at 6- and 12-month follow-up are confirmed among older adult CPIC participants. In CPIC's initial community planning meetings, community partners identified older adults as a vulnerable population of particular importance to their agencies and emphasized older adults as a population for over-sampling and sub-group analysis. The rationale for conducting an older adult sub-group analysis is rooted in the principles of CBPR, which include respect for community partners' priorities, needs and values as equal consider-

> *Our current study is an exploratory subgroup analysis that examines the extent to which the effects of CEP relative to RS on primary and secondary outcomes among the whole sample at 6- and 12-month follow-up are confirmed among older adult CPIC participants.*

ations in study design and data analysis to support the advocacy, policy and health care efforts and goals of both community and academic partners.[24] We hypothesized that a pattern generally consistent with the overall sample, with some benefits of CEP relative to RS for MHRQL and at least some secondary outcomes would hold true for seniors. We posited that a depression collaborative care intervention across settings that included community-based and social services settings might be uniquely positioned to improve older adult depression outcomes by better addressing previously cited barriers to mental health care utilization among older adults (eg, transportation issues, social isolation and frailty).[19] Depression outcomes could be adversely affected, however, if stigma, a significant barrier to depression care among older depressed adults,[25] were augmented in community settings where clients are more likely to be seen and recognized. Additionally, depressed older adults might not trust non-medical providers of depression care. This subgroup analysis was considered exploratory and was done to inform future research on community-partnered and multi-sector approaches to implementing collaborative depression care among older adults, including minorities and the socioeconomically disadvantaged.

Methods

Study Design

Community Partners in Care (CPIC) was a group-level randomized comparative effectiveness trial of CEP compared to RS to implement depression collaborative care in under-resourced communities. CPIC was designed and implemented using a community-partnered participatory (CPPR) approach. A form of CBPR, CPPR promotes equal authority of community and academic partners in all aspects of the research through trust-building and two-way knowledge exchange.[24] The study was approved by the institutional review boards of RAND Corp. and participating agencies. Study design is described elsewhere.[23,26-28]

Setting

CPIC took place in South Los Angeles (SLA) (1.5 million people) and Hollywood-Metro (HM) (500,000 people). SLA and HM are geographically defined, Los Angeles County service planning areas (SPAs) with low rates of insurance and high rates of poverty and avoidable hospitalizations.[29] Community partners identified service sectors (ie, settings) that support vulnerable depressed populations with the aim of oversampling from these sectors. They included: mental health, primary care and public health, substance abuse, homeless services, and social/community services (eg, parks and recreation community and senior centers, faith-based organizations, hair salons, exercise clubs).[26] Community partners also prioritized populations for oversampling: older adults and homeless clients (HM-nominated), and African Americans and substance abuse clients (SLA-nominated).

Sampling

Programs

County directories and community nominations were employed to identify relevant agencies in the five service sectors identified by community partners. Sixty eligible agencies were invited to participate in CPIC; 133 of 194 programs within those agencies were potentially eligible (ie, serving 15 or more clients per week, having 1 or more staff members, and not focused on psychotic disorders or home services). Programs or clusters within each community were paired based on geographic location, service sector, size, population served, services provided, and funding; one of each pair was randomized to CEP and the other one to RS. Recruiters blinded to intervention status conducted site visits to finalize enrollment. Ninety-five programs from 50 participating agencies enrolled (46 RS, 49 CEP). From census track data, participating and nonparticipating programs were comparable in population density and their clients' age, sex, race, and income at the zip code level (each P>.10).[28]

Clients

Clients within programs were screened for eligibility between March 2010 and November 2010 in waiting rooms or at CPIC-sponsored community events. Staff blinded to intervention status approached 4649 adults (aged ≥18 years) over 2-3 days per program; 4440 (95.5%) agreed to depression screening. Study eligibility included the ability to provide contact information and being depressed, as indicated by a score ≥10 on the 8-item Patient Health Questionnaire (PHQ-8), which has the same scoring characteristics and cut-point as the PHQ-9.[30] Of 4440 adults screened, 1322 (29.8%) were eligible. Of eligible adults, 1246 (94.3%) were consented

and enrolled. Between April 2010 and January 2011, 981 (78.7% of consented) completed baseline telephone surveys by interviewers blinded to intervention. Between November 2010 and August 2011, 759 (61.1% of consented minus three deaths) completed 6-month follow-up telephone surveys. Between May 2011 and March 2012, 733 (59% of consented minus three deaths) completed 12-month follow-up telephone surveys. The CONSORT flowchart describing inclusion and exclusion is presented elsewhere.[23] Our analytic sample includes 394 participants aged >50 years with baseline or follow-up data.

Interventions

Both CEP and RS were active interventions that supported implementation of existing evidenced-based collaborative care depression care toolkits (eg, clinical assessments, medication management, case management, cognitive behavioral therapy (CBT) manuals, patient education materials).[31] In CEP, program administrators, providers and community and academic partners met biweekly for 5 months to adapt toolkits and write a training and implementation plan that incorporated community preferences and strengths. Examples of toolkit adaptations include providing training sessions on provider self-care and listening skills and incorporating alternative therapies into medication management.[32] CEP also supported efforts to build coalitions, or multi-agency networks, by SPA to provide trainings to programs and providers, monitor implementation according to the written plan, and develop strategies to meet intervention goals. CEP pro-

moted collaboration among programs to encourage referrals and share care tasks to increase capacity. Community representatives co-led CEP coalitions and toolkit trainings for programs and providers. Separately reported, CEP was associated with increased use of psychotherapeutic skills by case managers, more time spent providing community services by case managers, and increased participation of eligible programs and providers in depression training.[27,32,33] In RS, technical assistance in the form of written and online depression collaborative care resources and a series of 12 "train-the-trainer" webinars on topics such as team management, CBT, care management, and patient education was provided to individual programs. Additionally, primary care site visits were offered to support toolkit implementation. No intentional promotion of agency collaboration was included in RS.

Measures

Baseline and outcome measures were client self-report from telephone-administered surveys conducted by RAND staff at baseline, 6- and 12-month follow-up. Baseline measures included age, sex, race/ethnicity, marital and work status, education level, presence of 3 or more chronic conditions (among 18), family income, meeting federal criteria for family poverty, insurance status, mean score on the 8-item Patient Health Questionnaire (PHQ-8), and homelessness risk (ie, homeless or living in a shelter, or at least two of four risk factors (eg, at least two nights homeless, food insecurity, eviction, financial crisis).[34,35] The Mini-International Neuropsychiatric Interview was used

to create an indicator for 12-month major depressive disorder.[36] Alcohol abuse was assessed by the 3-item AUDIT[37] and illicit drug use by the 10-item Drug Abuse Screening Test.[38]

The two primary outcomes were poor MHRQL (MCS-12 ≤40, one standard deviation below the population mean on the 12-item Short Form Health Survey Mental Health Composite),[39] and exceeding the cut-point for mild/moderate depression (PHQ-9 ≥10 on the 9-item PHQ-9)[30] at 6- and 12-month follow-up. Secondary outcomes included self-reported use of multisector services (eg, hospitalizations, primary care visits, community program visits) for behavioral health at 6- and 12-month follow-up. Community partners, through a pre-specified participatory process, prioritized additional outcomes: mental wellness (a response of at least "a good bit of the time" in the prior four weeks to feeling calm or peaceful, having energy, or being happy), homelessness risk, and physical activity (reporting at least fair on the question "How physically active are you?").[23]

Statistical Analysis

We conducted intention-to-treat, comparative-effectiveness analyses with intervention status as the independent variable, using logistic regression models. Consistent with group-randomized trial recommendations, we adjusted for baseline status of dependent variables and covariates (eg, education, race/ethnicity and community). CPIC used nonresponse weighting to address missing data for non-enrollment among eligible clients and for attrition, with item-level imputation for missing data and wave-

Table 1. Baseline characteristics of depressed participants aged >50 years, by intervention[a]

Characteristic	Overall, N=394	RS Group, n=188	CEP Group, n=206	P
Service sector, n (%)				.669
Primary care or public health	117 (31.1)	62 (34.1)	55 (28.6)	
Mental health services	58 (13.5)	36 (18.3)	22 (9.4)	
Substance abuse	67 (16.3)	28 (14.2)	39 (18)	
Homeless services	79 (19.9)	67 (16.3)	39 (18.5)	
Community-based	74 (19.2)	79 (19.2)	52 (25.4)	
Mean age (SD), years	57.7±7.1	56.9±6.4	58.5±7.6	.268
Female, n (%)	221 (55.4)	99 (50.3)	122 (59.8)	.227
Ethnicity, n (%)				.912
African American	210 (50.4)	98 (51.9)	112 (49.1)	
Non-Latino White	41 (11.4)	19 (10.9)	22 (11.8)	
Latino	132 (35.2)	63 (33.5)	69 (36.8)	
Other	10 (3.0)	8 (3.7)	2 (2.3)	
Married or living with partner, n (%)	73 (18.9)	35 (18.8)	38 (18.9)	.978
Working for pay	77 (19.4)	39 (20.5)	38 (18.4)	.682
Less than high school education, n (%)	169 (42.9)	84 (44.8)	85 (41.2)	.639
≥ 3 chronic medical conditions, n (%)	275 (69.5)	130 (68.8)	145 (70.1)	.820
Family income from work in the past 12 months ≤ $10,000, n (%)	299 (75.2)	145 (77.9)	154 (72.8)	.367
Family income under poverty level, n (%)	284 (72.7)	138 (74.3)	146 (71.3)	.652
No health insurance, n (%)	196 (50.3)	106 (56.7)	90 (44.8)	.076
PHQ-8, mean (SD)	15.3±4.0	15.5±3.9	15.2±4.0	.661
Homelessness risk, n (%)[b]	203 (52.5)	108 (59.4)	94 (46.5)	.097
12-month depressive disorder, n (%)	233 (59.1)	108 (58.2)	125 (59.9)	.786
Alcohol abuse or use of illicit drugs in the past 12 months, n (%)	135 (34.5)	56 (30.6)	80 (37.8)	.349
Poor mental health-related quality of life, n (%)[c]	199 (49.4)	95 (50.1)	104 (48.8)	.830
Mental wellness, n (%)[d]	152 (38.8)	71 (37.9)	81 (39.5)	.758

CEP, community engagement and planning; PHQ-8, 8-item Patient Health Questionnaire; RS, resources for services; SD, standard deviation.

a. Data were multiply imputed. The chi-square test was used to compare the groups, taking into account the design effect of the cluster randomization.

b. Homeless or living in a shelter, or at least two risk factors of four (at least two nights homeless, food insecurity, eviction, financial crisis).

c. Mental Health Composition Score of SF-12 (MCS12) ≤ 40; 1 SD below the population mean.

d. At least a good a bit of the time in the prior 4 weeks on any of three items: feeling peaceful or calm, being a happy person, having energy.

level imputation for missing surveys. Weights account for non-enrollment among eligible clients and attrition; methods are described elsewhere.[22] For this subanalysis, we used Taylor series linearization with a "subppn" statement in SUDAAN Version 11.1 (http://www.rti.org/sudaan/) and accounted for clustering (clients within programs), weighting and multiple imputations. Significance of comparisons by intervention status was based on regression coefficients. Results of regression models are presented as odds ratios (OR) with 95% CI. We illustrate results for intervention groups adjusted for covariates using standardized predictions generated from fitted regression models.[40]

RESULTS

Baseline Participant Characteristics

All baseline characteristics of participants aged >50 years were similar between CEP and RS arms (Table 1). Fifty-five percent of the sample was female, 86% were Latino or African American, and 43% had less than a high school education. Seventy-three percent had a family income below the poverty level, 70% had ≥ 3 chronic medical conditions, and over half were uninsured and had homelessness risk. Further, 59% were diagnosed with a 12-month depressive disorder, 49% reported poor MHRQL at baseline, over half had homelessness risk, and one-third were found to have alcohol abuse or use of illicit drugs in the past 12 months. Only 39% reported mental wellness. On average, the overall sample scored as moderately depressed (mean PHQ-8=15.3, SD 4.0). Compared with participants aged <50 years, participants aged >50 years had simi-

Table 2. Baseline characteristics of depressed participants aged <50 years, by intervention[a]

Characteristic	Overall, N=624	RS Group, n=316	CEP Group, n=308	P
Service sector, n (%)				.938
Primary care or public health	173 (29.0)	72 (23.9)	101 (34.3)	
Mental health services	137 (20.9)	74 (22.7)	63 (19.1)	
Substance abuse	163 (25.8)	83 (25.7)	80 (25.9)	
Homeless services	83 (13.8)	52 (16.8)	31 (10.7)	
Community-based	67 (10.5)	35 (11.0)	32 (10.0)	
Mean age (SD), years	37.2±8.5	37.0±8.5	37.4±8.5	.697
Female, n (%)	374 (58.2)	187 (57.8)	187 (58.6)	.920
Ethnicity, n (%)				.655
African American	278 (42.8)	141 (43.7)	137 (41.9)	
Non-Latino White	45 (7.7)	26 (8.8)	19 (16.6)	
Latino	277 (45.1)	131 (42.3)	146 (47.9)	
Other	25 (4.4)	18 (5.2)	7 (3.6)	
Married or living with partner, n (%)	158 (25.3)	81 (25.1)	77 (25.4)	.957
Working for pay	128 (20.4)	66 (20.6)	62 (20.1)	.917
Less than high school education, n (%)	276 (44.1)	137 (43.0)	139 (45.2)	.653
≥ 3 chronic medical conditions, n (%)	273 (44.2)	140 (44.9)	133 (43.5)	.800
Family income from work in the past 12 months ≤ $10,000, n (%)	456 (72.5)	229 (73.5)	226 (71.5)	.701
Family income under poverty level, n (%)	466 (74.5)	236 (74.6)	231 (74.4)	.965
No health insurance, n (%)	349 (56.8)	180 (57.7)	169 (55.9)	.825
PHQ-8, mean (SD)	15.2±4.1	15.3±4.2	15.1±4.0	.620
Homelessness risk, n (%)[b]	336 (55.3)	175 (57.1)	161 (53.4)	.504
12-month depressive disorder, n (%)	396 (63.9)	203 (65.2)	193 (62.6)	.61
Alcohol abuse or use of illicit drugs in the past 12 months, n (%)	263 (42.8)	125 (40.1)	138 (45.6)	.455
Poor mental health-related quality of life, n (%)[c]	347 (56.0)	176 (56.2)	171 (55.7)	.912
Mental wellness, n (%)[d]	255 (40.3)	129 (40.1)	126 (40.6)	.909

CEP, community engagement and planning; PHQ-8, 8-item Patient Health Questionnaire; RS, resources for services; SD, standard deviation.

a. Data were multiply imputed. The chi-square test was used to compare the groups, taking into account the design effect of the cluster randomization.

b. Homeless or living in a shelter, or at least two risk factors of four (at least two nights homeless, food insecurity, eviction, financial crisis).

c. Mental Health Composition Score of SF-12 (MCS12) ≤ 40; 1 SD below the population mean.

d. At least a good a bit of the time in the prior 4 weeks on any of three items: feeling peaceful or calm, being a happy person, having energy.

lar mean PHQ-8 scores, homelessness risk, educational status, and income but were more likely to have ≥ 3 chronic conditions. Baseline characteristics of study participants aged <50 years are presented by intervention in Table 2.

Intervention Effects

At 6-month follow-up, CEP reduced the percentage of participants aged >50 years with poor MHRQL, a primary outcome, from 50.2% to 41% (effect size=9.2%; 95% CI, 34.8-47.2; P<.05), relative to RS (Table 3). There was no significant difference between CEP and RS in the second pri-

mary outcome, PHQ-9 ≥10. Among community-prioritized outcomes, CEP relative to RS increased the percentage of participants aged >50 years reporting mental wellness from 31.2% to 44% (effect size: 12.8%; 95% CI, 36.7-51.4; P<.05). No significant differences between CEP and RS groups were found at 6 months in other community-prioritized outcomes, including homelessness risk and physical activity, or in additional secondary outcomes, including hospitalizations for behavioral health problems (5.4% RS vs 3.8% CEP, P=.534) and outpatient services use for behav-

ioral health problems in the past six months (63.0% RS vs 73.2% CEP, P=.21). At 12-month follow-up, no significant outcome differences were found between CEP and RS (data available from authors on request).

Discussion

In this exploratory sub-analysis, we examined the extent to which the effects of CEP relative to RS on primary and secondary outcomes for the whole sample at 6- and 12- month follow-up were confirmed among older

Table 3. Proportion of participants aged >50 years with PHQ-9, mental wellness and poor mental health-related quality of life at 6- and 12-month follow- up

		Unadjusted Estimates[a]			Adjusted Analysis[b]			
	N	RS no./total n (%)	CEP no./total n (%)	N	RS % (95% CI)	CEP % (95% CI)	OR (95% CI)	P
PHQ-9>10								
6 months	304	100/146 (68.5)	102/158 (64.6)	394	67.4 (57.9, 76.9)	62.2 (51.0, 73.5)	.78 (.4, 1.51)	.441
12 months	303	70/148 (47.3)	72/155 (46.5)	393	48.1 (38.9, 57.2)	46.4 (36.9, 55.9)	.93 (.53, 1.64)	.795
Poor mental health-related quality of life, MCS12 ≤ 40								
6 months	303	74/146 (50.7)	64/157 (40.8)	394	50.2 (43.5, 57.0)	41.0 (34.8, 47.2)	.68 (.47, 1)	.049
12 months	311	69/151 (45.7)	71/160 (44.4)	393	46.7 (38.2, 55.3)	45.5 (37.2, 53.8)	.95 (.6, 1.48)	.808
Mental wellness								
6 months	304	46/146 (31.5)	67/158 (42.4)	394	31.2 (22.7, 39.7)	44.0 (36.7, 51.4)	1.8 (1.05, 3.07)	.033
12 months	311	69/151 (45.7)	71/160 (44.4)	393	46.7 (38.2, 55.3)	45.5 (37.2, 53.8)	.95 (.6, 1.48)	.807

RS, Resources for Services or individual program technical assistance; CEP, Community Engagement and Planning; N, analytic sample.

a. Raw data without weighting or imputation.

b. Adjusted analyses used multiply imputed data, weighted for eligible sample for enrollment; logistic regression models adjusted for baseline status of the dependent variable, community, education, race/ethnicity, and accounted for the design effect of the cluster randomization.

adult CPIC participants. The pattern of findings in the main study suggesting improved MHRQL and mental wellness under CEP relative to RS at 6-month follow-up applied to participants aged >50 years as well. These findings suggest that coalition-based depression collaborative care interventions may be as effective for older adults as they are for younger adults, without specific need for targeting older adult organizations or modifying the intervention for older adults. Unlike the parent study, participants aged >50 years did not differ by study arm (CEP, RS) at 6-month follow-up in other community-prioritized outcomes (eg, physical activity, homelessness risk) or in the secondary outcome of hospitalizations for behavioral health, which could be attributable to limited power or a lack of significant intervention differences in this subsample. No significant differences in this subanalysis or the parent study were found at 6 months between CEP and RS in the standard cut-point for

probable depression (PHQ-9 ≥10), a primary outcome. Further, we found no significant intervention effects on outcomes among participants aged >50 years at 12-month follow-up, which is consistent with the parent study's findings and which may be due to decreased intervention support after the first 6 months. Methods for sustaining and/or adapting over time coalition-based approaches to depression collaborative care implementation is an area for exploration in future research.

The CPIC intervention improved two outcomes important to older populations, MHRQL and mental wellness, at 6-month follow-up. Improving older adults' quality of life is a key public health goal.[41] Among older adults, HRQL is a valid and appropriate indicator of intervention outcomes[42] and an important and useful measure in the assessment of older adults' health status.[43] MHRQL, in contrast to objective health indices, can provide a more thorough picture of the effect health conditions have

on individuals' daily lives, and of how psychosocial factors may influence the impact of diseases.[43] Mental wellness, a measure that emphasizes positive characteristics and reflects personal strengths, was an outcome prioritized by community partners. Models of care for older adults that include promoting wellness as part of healthy and active aging more proximately reflect the WHO's definition of health ("a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity")[44] and underscore the value of vitality and positive psychological function among older adults.[45,46] Future research should evaluate community perspectives on mental wellness, identify mechanisms through which a multisector coalition and community- partnered approach to depression collaborative care implementation impacts mental wellness, and elucidate how mental wellness relates to other health outcomes among older adults.

Our findings have important prac-

tice and policy implications. CPIC differed from most depression collaborative care studies by including health care and non-health care settings as sites for recruitment and intervention. Older adult minorities disproportionately receive mental health services in primary care settings,[3] where there may be limited infrastructure to support the use of evidence-based mental health care and to coordinate care with social and community resources. Delivering depression care in community settings where older adults live and receive services reflects priorities advanced by national agencies and policy makers to promote aging in place, which is defined as the ability to live in

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These findings suggest that coalition-based depression collaborative care interventions may be as effective for older adults as they are for younger adults,

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one's own home and community safely, independently, and comfortably regardless of age, income or ability level and which has been shown to relate to a sense of identity through autonomy and through caring relationships and roles in the places people live and spend time.[47] More than 90% of adults aged >65 years report they would prefer to stay in their current residence as they age, and community attachment has been linked to life satisfaction, quality of life, success in dealing with aging,

and sense of control.[48,49] One explanation for our subgroup analysis findings of significantly improved MHRQL and mental wellness among participants aged >50 years under CEP compared with RS is that CEP may better support aging in place and community attachment by enabling participants to receive supports and depression care within familiar, trusted locations close to where they live and spend time, and by directly engaging and supporting communities to develop and employ a multisector coalition approach that promotes relationship- building, task-sharing, and collaboration to implement depression care. Future work will need to explore older adult client satisfaction with depression care delivery in non-health care sectors. Importantly, community partners identified that these findings could be shared with state leaders to inform funding priorities for senior centers and other organizational and community-based agencies that work with older adults.

Study Limitations

Our findings have limitations. Data are based on self-report. Only two communities in a single large urban area were included and findings may not generalize to other areas. Many of the study's community partners had prior experience in community engagement and CPPR on depression. The post-hoc nature of this subgroup analysis is also a limitation. Participant enrollment rates were high, but retention rates were lower relative to some depression quality improvement studies, though comparable to safety-net studies.[50,51] Missing data resulting from participant dropout were handled by using weighting and

item- and wave-level imputation in intention-to-treat analyses. Whereas most depression quality improvement and participatory intervention studies use convenience samples of sites or integrated or government systems, CPIC combined public lists and community recommendations to identify financially stable safety-net programs where task shifting for depression may be more effective. Randomization was at the program level within the same communities, with potential for intervention cross-over. Cross-over would lead to CEP intervention effect underestimation. The subsample may have been too small to detect modest outcome differences between CEP and RS at both 6- and 12-month follow-up.

CONCLUSION

Coalition approaches are increasingly promoted to address complex community health issues, including racial and ethnic health disparities. The multisector coalition model is based on the premise that health is a product of interactions between individuals and the social environment and is thus responsive to community-based collaborative efforts to change community-level structures, processes and policies to advance local resident well-being.[52,53] CPIC was conducted in full partnership with community stakeholders across health and non-health care settings and in ethnically diverse and socially at-risk populations. The findings from this subgroup analysis suggest that intervention effects of CEP vs RS for participants aged >50 years were largely consistent with the main study findings, includ-

ing improvement in one primary outcome (MHRQL) and one community-prioritized outcome (mental wellness), at 6-month follow-up. Though exploratory, our analyses may inform future research on the development, evaluation and dissemination of multi-sector coalition approaches to reduce mental health disparities in under-resourced populations that include older adults with depression.

CONFLICT OF INTEREST

No conflicts of interest to report.

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