

## Evidence Base for Collaborative Care

### Treating Racial and Ethnic Minority Groups

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1. Hu J, Wu T, Damodaran S, Tabb KM, Bauer A, Huang H. The effectiveness of collaborative care on depression outcomes for racial/ethnic minority populations in primary care: a systematic review. *Psychosomatics*. 2020, online first.

**Summary:** A recent systematic review addressed the question of effectiveness of Collaborative Care on depression outcomes for racial/ethnic minority populations in primary care.

The authors conducted a systematic review in 2020 and included articles comprising adult patients from at least one racial/ethnic minority group, located in the United States, measured depression outcomes quantitatively, and published in English. Included studies must have reported key components of Collaborative Care including patient-centered team care, population-based care, measurement-based treatment to target, and evidence-based care. Nineteen studies (10 trials and 9 observational) were identified. Twelve studies compared Collaborative Care to usual depression care for minority patients, and 8 of those studies showed collaborative care was effective. Five studies compared depression outcomes in minority and white patients who received treatment with Collaborative Care, with results showing either equivalent or significantly better outcomes for minority compared to white individuals. Two trials tested the effectiveness of culturally-tailored Collaborative Care to usual Collaborative Care for minority individuals, and found equivalent or trend toward improvement outcomes. High-fidelity to Collaborative Care was discussed as the top priority for improving outcomes. Select studies included in the systematic review by 3.1.Hu, et al. are summarized below.

**Scientific Abstract:**

**Background:** Racial/ethnic minorities experience a greater burden of mental health problems than white adults in the United States. The collaborative care model is increasingly being adopted to improve access to services and to promote diagnosis and treatment of psychiatric diseases.

**Objective:** This systematic review seeks to summarize what is known about collaborative care on depression outcomes for racial/ethnic minorities in the United States.

**Methods:** This review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses method. Collaborative care studies were included if they comprised adults from at least one racial/ethnic minority group, were located in primary care clinics in the United States, and had depression outcome measures. Core principles described by the University of Washington Advancing Integrated Mental Health Solutions Center were used to define the components of collaborative care.

**Results:** Of 398 titles screened, 169 full-length articles were assessed for eligibility, and 19 studies were included in our review (10 randomized controlled trials, 9 observational). Results show there is potential that collaborative care, with or without cultural/linguistic tailoring, is effective in improving depression for racial/ethnic minorities, including those from low socioeconomic backgrounds.

**Conclusions:** Collaborative care should be explored as an intervention for treating depression for racial/ethnic minority patients in primary care. Questions remain as to what elements of cultural adaptation are most helpful, factors behind the difficulty in recruiting minority patients for these studies, and how the inclusion of virtual components changes access to and delivery of care. Future research should also recruit individuals from less studied populations.

## 2. Arean P, Ayalon L, Hunkeler E. Improving depression care for older, minority patients in primary care. *Med Care.* 2005;43:381-390.

**Summary:** This report included a secondary analysis of data collected in a collaborative care treatment trial enrolling older adults in primary care (6.7.Unützer, et al.) to examine outcomes among individuals from three racial minority groups. Among 1801 individuals included in the clinical trial, 12% (n=222) were Black, 8% (n=138) were Latino, and 3% (n=53) were from other minority groups. In all ethnic and racial groups, treatment with Collaborative Care was associated with significantly improved 12 month outcomes due to more than doubling the effectiveness of depression treatment. Treatment effects were of similar magnitude in all racial and ethnic groups included in the trial.

**Scientific Abstract:**

**Objective:** Few older minorities receive adequate treatment of depression in primary care. This study examines whether a collaborative care model for depression in primary care is as effective in older minorities as it is in nonminority elderly patients in improving depression treatment and outcomes.

**Study design:** A multisite randomized clinical trial of 1801 older adults comparing collaborative care for depression with treatment as usual in primary care. Twelve percent of the sample were black (n = 222), 8% were Latino (n = 138), and 3% (n = 53) were from other minority groups. We compared the 3 largest ethnic groups (non-Latino white, black, and Latino) on depression severity, quality of life, and mental health service use at baseline, 3, 6, and 12 months after randomization to collaborative care or usual care.

**Principal findings:** Compared with care as usual, collaborative care significantly improved rates and outcomes of depression care in older adults from ethnic minority groups and in older whites. At 12 months, intervention patients from ethnic minorities (blacks and Latinos) had significantly greater rates of depression care for both antidepressant medication and psychotherapy, lower depression severity, and less health-related functional

impairment than usual care participants (64%, 95% confidence interval [CI] 55-72 versus 45%, CI 36-55,  $P = 0.003$  for antidepressant medication; 37%, CI 28-47 versus 13%, CI 6-19,  $P = 0.002$  for psychotherapy; mean = 0.9, CI 0.8-1.1 versus mean = 1.4, CI 1.3-1.5,  $P < 0.001$  for depression severity, range 0-4; mean = 3.7, CI 3.2-4.1, versus mean = 4.7, CI 4.3-5.1,  $P < 0.0001$  for functional impairment, range 0-10).

**Conclusions:** Collaborative Care is significantly more effective than usual care for depressed older adults, regardless of their ethnicity. Intervention effects in ethnic minority participants were similar to those observed in whites.

3. Ell K, Katon W, Xie B, et al. Collaborative care management of major depression among low-income, predominantly Hispanic subjects with diabetes: a randomized controlled trial. *Diabetes Care*. 2010;33:706-713.

**Summary:** This study recruited Hispanic adult primary care patients with diabetes and depression. Approximately 85% of participants were Spanish speaking. The study compared treatment with enhanced usual primary care to treatment with Collaborative Care that included social work diabetes depression clinical specialists as care managers working in safety net primary care clinics. The intervention sociocultural enhancements included psychoeducation to dispel treatment misconceptions and reduce stigma, patient choice of treatment, open-ended patient support group, 8-12 psychotherapy treatment sessions with tailored problem-solving treatment, and patient navigation. Patients receiving treatment with Collaborative Care were significantly more likely (1.5 times) to experience response or remission of depression symptoms compared to enhanced usual care.

#### **Scientific Abstract:**

**Objective:** To determine whether evidence-based socioculturally adapted collaborative depression care improves receipt of depression care and depression and diabetes outcomes in low-income Hispanic subjects.

**Research design and methods:** This was a randomized controlled trial of 387 diabetic patients (96.5% Hispanic) with clinically significant depression recruited from two public safety-net clinics from August 2005 to July 2007 and followed over 18 months. Intervention (INT group) included problem-solving therapy and/or antidepressant medication based on a stepped-care algorithm; first-line treatment choice; telephone treatment response, adherence, and relapse prevention follow-up over 12 months; plus systems navigation assistance. Enhanced usual care (EUC group) included standard clinic care plus patient receipt of depression educational pamphlets and a community resource list.

**Results:** INT patients had significantly greater depression improvement ( $>$  or  $=50\%$  reduction in Symptom Checklist-20 depression score from baseline; 57, 62, and 62% vs. the EUC group's 36, 42, and 44% at 6, 12, and 18 months, respectively; odds ratio 2.46-2.57;  $P < 0.001$ ). Mixed-effects linear regression models showed a significant study group-by-time interaction over 18 months in diabetes symptoms; anxiety; Medical Outcomes Study Short-Form Health Survey (SF-12) emotional, physical, and pain-related functioning; Sheehan disability; financial situation; and number of social stressors ( $P = 0.04$  for disability and SF-12 physical functioning,  $P < 0.001$  for all others) but no study group-by-time interaction in A1C, diabetes complications, self-care management, or BMI.

**Conclusions:** Socioculturally adapted collaborative depression care improved depression, functional outcomes, and receipt of depression treatment in predominantly Hispanic patients in safety-net clinics.

4. Davis T, Deen T, Bryant-Bedell K, Tate V, Fortney J. Does minority racial-ethnic status moderate outcomes of collaborative care for depression? *Psychiatr Serv*. 2011;62:1282-1288.

**Summary:** This report included a secondary analysis of data collected in a primary care Collaborative Care trial (6.9. Fortney, et al.) to explore outcomes among individuals from minority racial or ethnic groups, and the effect of

minority status on treatment response (n=360). In this analysis, 25% (n=88) of the sample identified as a minority group. Patients in the usual care arm of the study showed no difference in response rates based on minority status. In the Collaborative Care arm, patients from minority groups had significantly higher response rates than Caucasian patients. Minority group status significantly moderated the treatment effect of Collaborative Care.

#### **Scientific Abstract:**

**Objective:** The authors examined racial differences in response rates to an intervention involving collaborative care and usual care among 360 veterans treated for depression at Department of Veterans Affairs community-based primary care clinics.

**Methods:** Individuals who screened positive for depression were assigned randomly to usual care (N=200) or to a collaborative care intervention (N=160) that provided phone contact when necessary with a registered nurse and clinical pharmacist to address issues related to compliance with medication and side effect management as well as supervision by a psychiatrist through video chats with the collaborative care team. Data about patients' characteristics, treatment history, and response to treatment were collected by telephone at baseline and after six months.

**Results:** Seventy-five percent (N=272) of the veterans were Caucasian, and 25% (N=88) belonged to a minority group, including 18% (N=64) who were African American, 3% (N=11) who were Native American, and 3.6% (N=13) who were of other minority groups. There were no significant differences between response rates between the Caucasian and minority group to usual care (18% and 8%, respectively), but the minority group had a higher response rate (42%) than Caucasians (19%) to the intervention ( $\chi^2=8.2$ ,  $df=1$ ,  $p=.004$ ). Regression analysis indicated that the interaction of minority group status by intervention significantly predicted response (odds ratio [OR]=6.2, 95% confidence interval [CI]=1.6-24.5,  $p=.009$ ), even after adjustment for other factors associated with minority status (OR=6.0, 95% CI=1.5-24.3,  $p=.01$ ).

**Conclusions:** Racial disparities in depression care may be ameliorated through collaborative care programs.

5. Cooper LA, Dinoso BK, Ford DE, et al. Comparative effectiveness of standard versus patient-centered collaborative care interventions for depression among African Americans in primary care settings: the BRIDGE study. *Health Serv Res.* 2013;48:150-174.

**Summary:** Ten primary care clinics enrolled n=132 African American patients with depression who were randomized to depression treatment with standard collaborative care or patient-centered culturally-tailored collaborative care. Patients receiving treatment in both arms experienced similar depression outcomes at 6, 12 and 18 months. Some aspects of care, such as patient report of depression care manager identifying concerns and encouraging treatment adherence, were rated more favorably by patients in the patient-centered arm of the study.

#### **Scientific Abstract:**

**Objective:** To compare the effectiveness of standard and patient-centered, culturally tailored collaborative care (CC) interventions for African American patients with major depressive disorder (MDD) over 12 months of follow-up.

**Data sources/study setting:** Twenty-seven primary care clinicians and 132 African American patients with MDD in urban community-based practices in Maryland and Delaware.

**Study design:** Cluster randomized trial with patient-level, intent-to-treat analyses.

**Data collection/extraction methods:** Patients completed screener and baseline, 6-, 12-, and 18-month interviews to assess depression severity, mental health functioning, health service utilization, and patient ratings of care.

**Principal findings:** Patients in both interventions showed statistically significant improvements over 12 months. Compared with standard, patient-centered CC patients had similar reductions in depression symptom levels (-2.41 points; 95 percent confidence interval (CI), -7.7, 2.9), improvement in mental health functioning scores (+3.0 points; 95 percent CI, -2.2, 8.3), and odds of rating their clinician as participatory (OR, 1.48, 95 percent CI, 0.53, 4.17). Treatment rates increased among standard (OR = 1.8, 95 percent CI 1.0, 3.2), but not patient-centered (OR = 1.0, 95 percent CI 0.6, 1.8) CC patients. However, patient-centered CC patients rated their care manager as more helpful at identifying their concerns (OR, 3.00; 95 percent CI, 1.23, 7.30) and helping them adhere to treatment (OR, 2.60; 95 percent CI, 1.11, 6.08).

**Conclusions:** Patient-centered and standard CC approaches to depression care showed similar improvements in clinical outcomes for African Americans with depression; standard CC resulted in higher rates of treatment, and patient-centered CC resulted in better ratings of care.

6. Ratzliff ADH, Ni K, Chan YF, Park M, Unützer J. A collaborative care approach to depression treatment for Asian Americans. *Psychiatr Serv.* 2013;64:487-490.

**Summary:** The authors analyzed observational data to determine if Asian patients receiving collaborative care in one culturally sensitive Community Health Center primary care clinic that focuses on care of immigrant populations was associated with better engagement in treatment compared to Asian and white patients receiving care in other primary care clinics. The clinical program served a safety-net population with high proportion of individuals insured by Medicaid. Treatment outcomes were explored. All three groups of patients (n=129 Asian patients at the culturally sensitive clinic, n=72 Asian patients treated in 12 other clinics, n=144 age- and gender-matched control patients) had similar depression outcomes. The culturally sensitive clinic engaged almost twice as many patients in depression treatment than the 12 other clinics combined, suggesting increased reach.

**Scientific Abstract:**

**Objective:** This study examined effectiveness of collaborative care for depression among Asians treated either at a community health center that focuses on Asians (culturally sensitive clinic) or at general community health centers and among a matched population of whites treated at the same general community clinics.

**Methods:** For 345 participants in a statewide collaborative care program, use of psychotropic medications, primary care visits with depression care managers, and depression severity (as measured with the nine-item Patient Health Questionnaire) were tracked at baseline and 16 weeks.

**Results:** After adjustment for differences in baseline demographic characteristics, all three groups had similar treatment process and depression outcomes. Asian patients served at the culturally sensitive clinic (N=129) were less likely than Asians (N=72) and whites (N=144) treated in general community health clinics to be prescribed psychotropic medications.

**Conclusions:** Collaborative care for depression showed similar response rates among all three groups.

7. Bowen D, Powers DM, Russo J, et al. Implementing collaborative care to reduce depression for rural native American/Alaska native people. *BMC Health Services Research.* 2020;20:34  
[doi.org/10.1186/s12913-019-4875-6](https://doi.org/10.1186/s12913-019-4875-6)

**Summary:** This study compared Collaborative Care treatment depression outcomes among Native American / Alaska Native (n=345) versus white (n=1473) and other (n=175) patients in three rural clinics implementing collaborative care. Collaborative Care treatment processes were similar in all groups. Treatment outcomes were similar in all groups, though Native American / Alaska Native group had slightly higher proportion of individuals

with depression remission and significantly higher proportion of individuals with depression response, but had slightly lower severity of baseline depression.

### **Scientific Abstract:**

**Background:** The purpose of this study was to identify the effects of Collaborative Care on rural Native American and Alaska Native (AI/AN) patients.

**Methods:** Collaborative Care was implemented in three AI/AN serving clinics. Clinic staff participated in training and coaching designed to facilitate practice change. We followed clinics for 2 years to observe improvements in depression treatment and to examine treatment outcomes for enrolled patients. Collaborative Care elements included universal screening for depression, evidence-based treatment to target, use of behavioral health care managers to deliver the intervention, use of psychiatric consultants to provide caseload consultation, and quality improvement tracking to improve and maintain outcomes. We used t-tests to evaluate the main effects of Collaborative Care and used multiple linear regression to better understand the predictors of success. We also collected qualitative data from members of the Collaborative Care clinical team about their experience.

**Results:** The clinics participated in training and practice coaching to implement Collaborative Care for depressed patients. Depression response (50% or greater reduction in depression symptoms as measured by the PHQ-9) and remission (PHQ-9 score less than 5) rates were equivalent in AI/AN patients as compared with White patients in the same clinics. Significant predictors of positive treatment outcome include only one depression treatment episodes during the study and more follow-up visits per patient. Clinicians were overall positive about their experience and the effect on patient care in their clinic.

**Conclusions:** This project showed that it is possible to deliver Collaborative Care to AI/AN patients via primary care settings in rural areas.

