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## A Collaborative Care Approach to Depression Treatment for Asian Americans

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### Abstract

**Objective**—To compare the effectiveness of collaborative care for depression in three groups: Asians treated at a community health center focusing on Asians (a culturally sensitive clinic), Asians treated in general community health centers and a matched population of Caucasians treated in the same general community clinics.

**Methods**—A longitudinal study of 345 participants in a state-wide collaborative care program tracked use of psychotropic medications, primary care-based visits with depression care managers, and depression severity with the 9-item Patient Health Questionnaire (PHQ-9).

**Results**—After adjusting for differences in baseline demographic characteristics, all three groups had similar treatment process and depression outcomes. Asian patients served at the culturally sensitive clinic were less likely than Asians in other clinics or Caucasians to be prescribed psychotropic medications.

**Conclusions**—Collaborative care for depression was equally effective in Asian patients in culturally sensitive clinics and general community health clinics as in Whites.

### Introduction

Asian Americans are the fastest growing ethnic group in America (1). Although Asian Americans may have lower rates of depression compared to other ethnic groups, they have unique challenges receiving effective mental health care (1,2) including refugee status, cultural barriers and disparities in access to care (3).

More than 40 randomized controlled trials have demonstrated effectiveness of collaborative care for depression in primary care (4–6). This model of care has been shown to be effective in general populations (4) and certain ethnic minority groups (African-American or Latino) (7–9), but there is little information about effectiveness of collaborative care with Asian American populations.

The Mental Health Integration Program (MHIP) is a statewide implementation of collaborative care serving safety net populations in over 100 community health clinics in the

State of Washington (10, 11). Since January 2008, MHIP has served over 24,000 patients including patients from diverse ethnic groups. One participating community health center (CHC) focuses primarily on immigrant populations. As the largest community health center serving Asian Americans and Pacific Islanders in Washington State, this culturally sensitive CHC has a multicultural and multilingual staff that provides culturally appropriate and in-language health services to patients.

We used data from MHIP to examine differences in the patterns and outcomes of care among Asian patients served at the culturally sensitive clinic with Asian and White patients served in clinics that serve predominantly non-Asian patients. We hypothesized that collaborative care would be effective at engaging Asian American patients and that patients served in that culturally sensitive clinic show more engagement.

## Methods

Funded by the State of Washington and King County and administered by the Community Health Plan of Washington in collaboration with Public Health-Seattle & King County, MHIP provides integrated mental health services for safety net populations in community health clinics (<http://integratedcare-nw.org/>) through a collaborative team approach including a primary care provider, care coordinator based in the primary care clinic, and consulting psychiatrist. Care coordinators and consulting psychiatrists use a web-based care management tracking system (CMTS) adapted from an earlier research trial (6) to monitor the care and outcomes of patients. Assessment and treatment were completed by the care coordinators using both verbal and written methods. For non-English speaking patients, either the care coordinator or a clinic translator was used to make verbal assessments. All care coordinators are accountable to quality aims related to clinic processes to standardize care across different clinic systems.

All adult Asian patients and a comparison, representative sample of White patients (age, gender and clinic matched) who participated in MHIP between 2008 and 2010 for at least 4 months and had significant depression (a baseline PHQ-9 depression score of 10 or greater) were included. The final sample is comprised of 129 Asian patients served in the culturally sensitive clinic (ACSC), 72 Asian patients served in 12 general clinics (AGC) that do not specifically cater to Asian Americans, and 144 age and gender-matched White patients served in the same general clinics (WGC). Our analyses were conducted on de-identified data collected for quality improvement activities that were not considered research requiring individual patient consent by the University of Washington's Institutional Review Board.

Treatment processes examined include psychiatric case reviews, receipt of psychotropic medications, and number of follow-up contacts during 16-week period after program enrollment. The PHQ-9 (12, 13) was used to measure depression severity at baseline and follow-up assessments. Depression improvement was defined as achieving a PHQ-9 score <10 or a 50% or greater reduction from baseline at 16-week follow up assessment.

Other sample characteristics include age, gender, problems with social support and unstable housing based on self-report at intake. A probable anxiety disorder was defined as score of

Generalized Anxiety Disorder-7 item (GAD-7) scale  $\geq 10$  (12) or previously documented anxiety disorder diagnosis. Thoughts of suicide or death were obtained through self-report or an endorsement of a score  $\geq 1$  on item 9 of the PHQ-9 (“thoughts that you would be better off dead, or of hurting yourself in some way”) at baseline. Descriptive analyses included chi-square tests and t-tests for baseline characteristics comparisons. To examine whether there were differences in treatment process and depression outcomes between ACSC and AGC and between AGC and WGC at follow-up, adjusted means of outcome measures (e.g., any follow up contact in 4 weeks of treatment, number of follow up follow up contacts in 16 weeks, depression improvement at 16 weeks) were estimated and tested. Mixed-effect logistic model for binary outcomes and mixed-effect Poisson model for count of follow up contacts were applied, taking into account nesting of patients within participating community health centers. Estimates were adjusted for baseline age, gender, PHQ-9 score, anxiety, suicidal thoughts, problems with social support and housing. Analysis was completed using STATA version 11 (College Station, TX).

## Results

There were no significant differences in baseline PHQ-9 depression scores between the three populations studied (Table 1). Asians served at the culturally sensitive clinic (ACSC) were significantly older than Asians in the other clinics (AGC) and somewhat less likely to have co-morbid anxiety. There were no significant differences between groups with regard to gender, suicidal thoughts, problems with social support or unstable housing.

After adjusting for differences in baseline characteristics, all three groups had similar treatment processes and depression outcomes (Table 1). Depression improvement was achieved at 16 weeks in an average of 28% of the patients evaluated for this study. The rate of improvement was slightly higher for Asians (35% for ACSC, 24% for AGC) than for age and gender matched Whites (22%), but these differences were not statistically significant. ACSC participants were significantly less likely to receive psychotropic medications than AGC (51 % versus 67%).

## Discussion

Our study demonstrates that Asian Americans receiving collaborative care in community health centers have depression outcomes that are as good as or even better than those of Whites served in the same settings. This finding is consistent with other studies showing that collaborative care is effective for ethnic minority patients (7–10, 14).

A limitation of this study is that we were not able to further characterize the diversity of Asian American groups represented in this mixed sample which makes it difficult to generalize these results to all Asian populations. We know that the population of patients that are served by the culturally sensitive clinic during the study period included 39.9–41.3% Chinese patients and 26.4–26.5% Vietnamese patients and the predominate languages spoken at that clinic include Cantonese (29.8–31.7%), Vietnamese (24.6–24.7%) and English (21.1%–21.6%). This would suggest that a large percentage of the patients included in this study were Chinese and Vietnamese and that this type of program is able to engage

non-English speaking patients. Future research in which ethnic data were specifically collected would be useful to confirm the generalizability of our results.

Despite the limitations of this study, there are several important findings related to providing mental health care for Asian populations. Asians in the culturally sensitive clinic were less likely to receive psychotropic medications than those in general clinics. Asian Americans may be less comfortable with the notion of taking a psychotropic medication than White Americans (15) and providers in the culturally sensitive clinic may be sensitive to this preference. Alternatively, Asian Americans served in general clinics may be somewhat more acculturated than ACSC clients and thus more accepting of medications.

Although all three groups had similar reductions in depression, our largest group of Asian patients were from the culturally sensitive clinic (ACSC: n= 129 vs AGC : n=72), indicating that this clinic was able to engage almost twice as many Asian Americans than almost 10 general community health clinics in the same geographic area . Our findings are consistent with a recent study (14) which showed collaborative care was highly effective in engaging and treating Chinese Americans. The culturally sensitive clinic in MHIP has a strong commitment to community outreach programs to engage Asian and other immigrant populations in primary care and provided care that was at least as effective as that provided in other clinics. Future research and quality improvement efforts might explore prescribing practices in the culturally sensitive clinic and encourage use of psychotropic medications for clients who are not improving with psychosocial interventions alone. Lessons from engagement and treatment approaches at the culturally sensitive clinic might provide important strategies for the engagement and care of Asian American clinics in other community health clinics.

## Conclusions

Collaborative care for depression was equally effective in Asian Americans as in age and gender-matched Whites served in community health clinics. Culturally sensitive clinics catering to Asian Americans may be particularly well positioned to utilize a collaborative care approach to engage and care for this population.

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**Table 1**  
Baseline sample characteristics, treatment process and depression outcomes at follow up assessments

Variables	Total (n=345)	ACSC <sup>a</sup> (n=129)	AGC <sup>b</sup> (n=72)	WGC <sup>c</sup> (n=144)	p-value <sup>d</sup>
<b>Baseline sample characteristics, n (%)</b>					
Age Mean (SD)	44.9 (14.3)	51.4 (16.1)	41.4 (11.8)	40.9 (11.3)	<0.001, 0.74
Sex					
Male	107 (31.0)	35 (27.1)	24 (33.3)	48 (33.3)	
Female	238 (69.0)	94 (72.9)	48 (66.7)	96 (66.7)	0.36, 1.00
<b>PHQ-9 score Mean (SD)</b>	<b>16.8 (4.6)</b>	<b>17.1 (5.0)</b>	<b>16.4 (4.6)</b>	<b>16.7 (4.3)</b>	<b>0.40, 0.67</b>
<b>Depression severity</b>					
Moderate	249 (72.2)	47 (36.4)	16 (22.2)	33 (22.9)	0.04, 0.91
Severe	96 (27.8)	82 (63.6)	56 (77.8)	111 (77.1)	
<b>Anxiety diagnosis</b>					
Yes	180 (52.2)	42 (32.6)	36 (50.0)	102 (70.8)	0.02, 0.003
No	165 (47.8)	87 (67.4)	36 (50.0)	42 (29.2)	
<b>Suicidal thought</b>					
Endorsed	186 (53.9)	69 (53.5)	40 (55.6)	77 (53.5)	0.79, 0.77
Not endorsed	159 (46.1)	60 (46.5)	32 (44.4)	67 (46.5)	
<b>Problems with social support</b>					
Endorsed	124 (39.5)	61 (48.8)	23 (39.0)	40 (30.8)	0.21, 0.27
Not endorsed	190 (60.5)	64 (51.2)	36 (61.0)	90 (69.2)	
<b>Unstable housing</b>					
Endorsed	148 (46.4)	76 (60.3)	28 (45.9)	67 (50.8)	0.06, 0.53
Not endorsed	171 (53.6)	50 (39.7)	33 (54.1)	65 (49.5)	
<b>Treatment process and depression outcomes at follow up, adjusted mean (SE)<sup>e</sup></b>					
Any follow up contacts in 4 weeks % (SE)	0.63 (0.09)	0.61 (0.20)	0.71 (0.09)	0.60 (0.08)	0.62, 0.20
Any follow up contacts in 16 weeks % (SE)	0.79 (0.07)	0.77 (0.17)	0.87 (0.06)	0.78 (0.07)	0.53, 0.15
Number of follow up contacts	2.91 (0.95)	2.92 (2.17)	2.68 (0.65)	3.0 (0.69)	0.91, 0.23

Variables	Total (n=345)	ACSC <sup>a</sup> (n=129)	AGC <sup>b</sup> (n=72)	WGC <sup>c</sup> (n=144)	p-value <sup>d</sup>
in 16 weeks Mean (SE)					
At least 5 follow up contacts in 16 weeks % (SE)	0.26 (0.05)	0.24 (0.10)	0.27 (0.07)	0.27 (0.06)	0.83, 0.98
Any psychiatric case review in 16 weeks % (SE)	0.55 (0.09)	0.59 (0.20)	0.45 (0.10)	0.54 (0.09)	0.52, 0.27
Any psychiatric medication receipt in 16 weeks % (SE)	0.60 (0.03)	0.51 (0.05)	0.67 (0.06)	0.66 (0.05)	0.05, 0.88
Achieved depression improvement at 16 weeks <sup>i</sup> % (SE)	0.28 (0.03)	0.35 (0.06)	0.24 (0.07)	0.22 (0.05)	0.28, 0.75

<sup>a</sup> ACSC: Asian Americans in a culturally sensitive clinic

<sup>b</sup> AGC: Asian Americans in general clinics

<sup>c</sup> WGC: White Americans in general clinics

<sup>d</sup> First number compares ACSC to AGC, second number compares AGC to WGC

<sup>e</sup> Based on Kroenke et al (2001) PHQ-9 cut-off score  $\geq 10$  &  $< 20$  as moderately severe depression, cut off score  $\geq 20$  as severe depression

<sup>f</sup> A total of 31 patients did not provide information on social support problems, including 4 from ACSC, 13 from AGC and 14 from WGC

<sup>g</sup> A total of 26 patients did not provide information on housing problems, including 3 from ACSC, 11 from AGC and 12 from WGC

<sup>h</sup> Adjusted estimates were computed holding constant of baseline age, gender, PHQ-9 score, anxiety disorder, suicidal thoughts, problems with social support, problems with housing, and length of treatment in the model. SE: standard error

<sup>i</sup> Among patients with a 16-week outcome measure (n=235)