



# Integrated Care Training Program

UW Psychiatry & Behavioral Sciences

# Collaborative Care for Remote Populations

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# Speaker Disclosures

- None

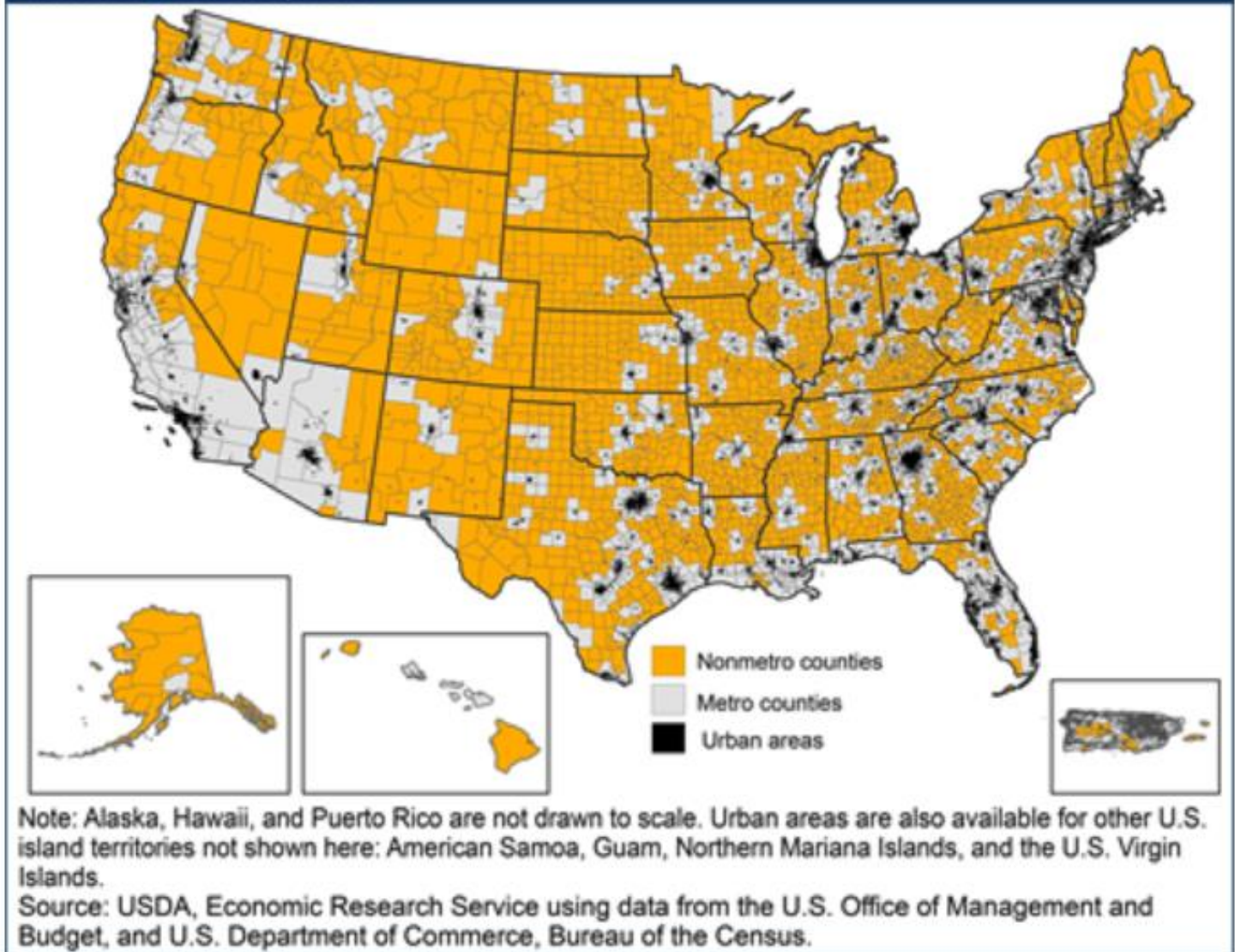
# Learning Objectives

- Define remote populations
- Name at least two aspects of CoCM that help to particularly meet the mental health care needs of remote patient populations

# Urban and Rural Designations

- Rural – areas with fewer than 2,000 housing units and 5,000 residents
- Urban - densely developed areas with 2,000 or more housing units or 5,000 or more residents.
- 20 % of country lives in rural areas

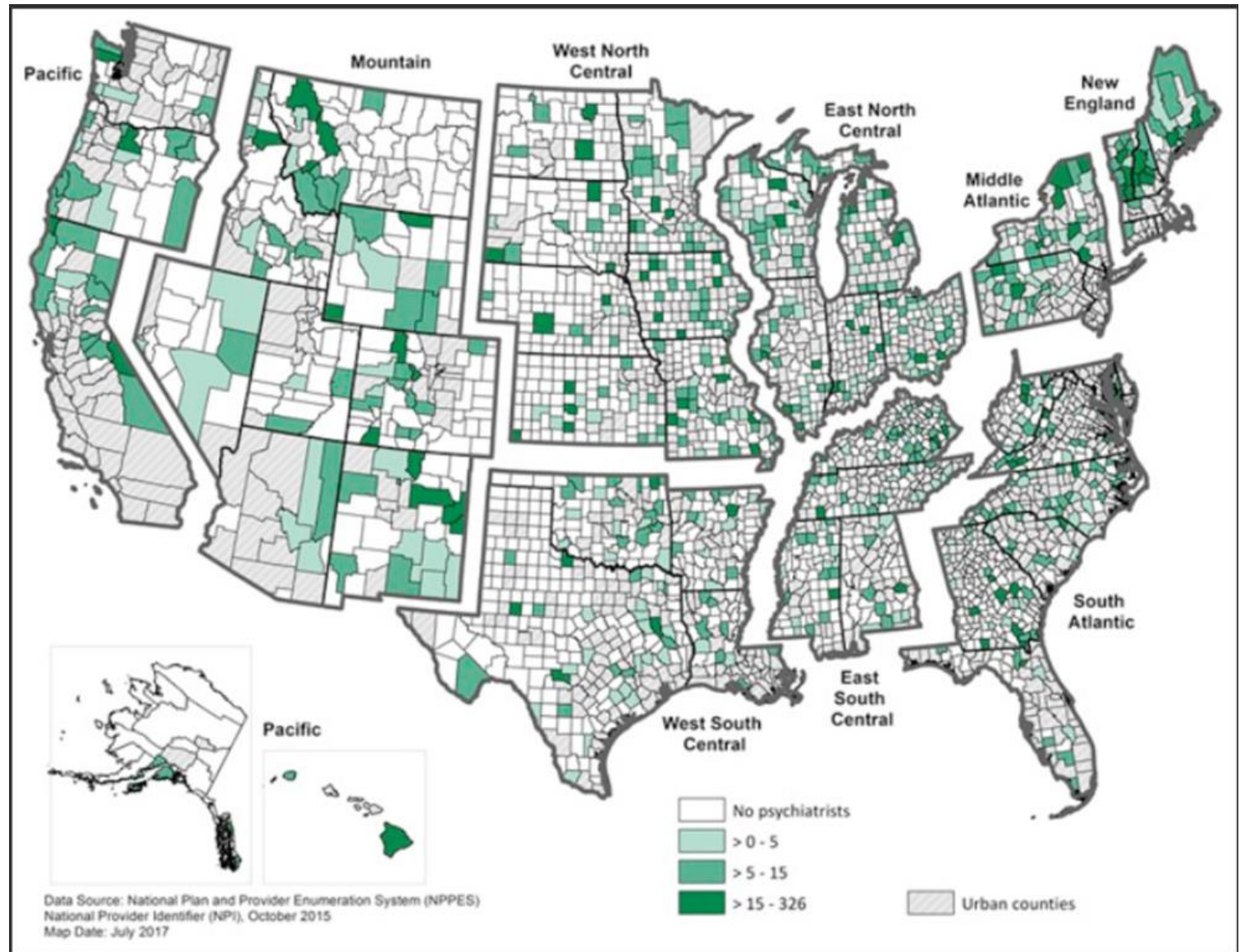
Metropolitan (metro) counties, nonmetropolitan (nonmetro) counties, and urban areas, 2023



# Why Integrated Care?

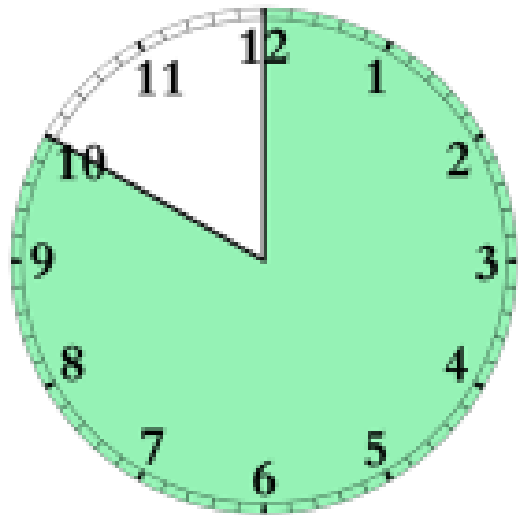
- **51 % counties without psychiatrist**
- **37% without psychologist**

*Psychiatrists in rural U.S. counties per 100,000 population by Census Division*



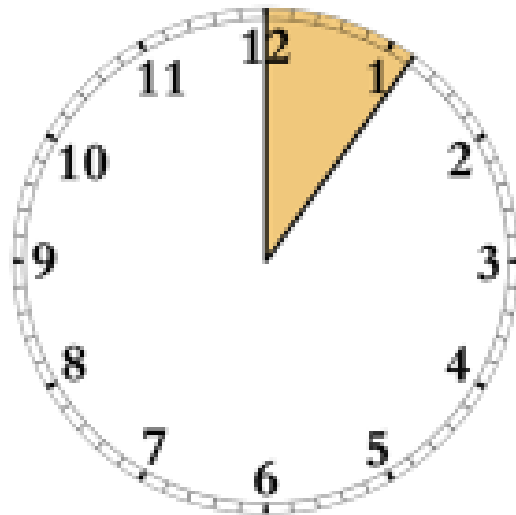
# Why Not Just Work Harder?

**Ideal**



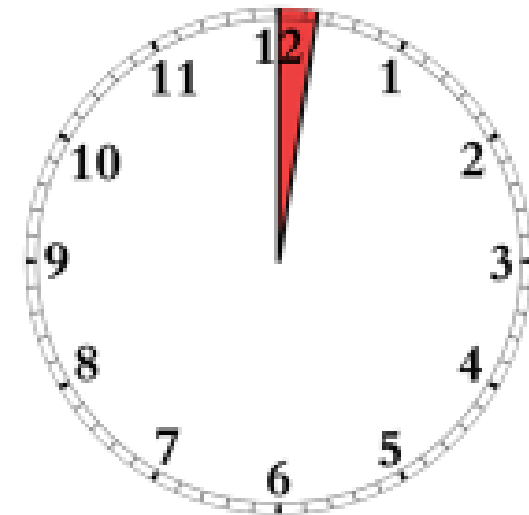
**50 minutes**

**Urban US**



**6 minutes**

**Rural US**



**1.5 minutes**

*Assuming that 3 % of population could benefit from psychiatric care.*

# Clinical Studies



# A Remote Collaborative Care Program for Patients with Depression Living in Rural Areas: Open-Label Trial

Rojas G, Guajardo V, Martínez P, Castro A, Fritsch R, Moessner M, Bauer S. J Med Internet Res. 2018 Apr 30;

**Why this paper?** To test the feasibility, acceptability, and effectiveness of a remote collaborative care program for patients with depression living in rural areas in Chile

**Methods:** In a nonrandomized, open-label, 250 patients aged 18 to 70 years with a major depressive episode (DSM-IV criteria).

Two-arm clinical trial: Remote collaborative care program (Web-based clinic records, telephone monitoring) or to usual care.

1. At 3 and 6 months after baseline assessment monitored 1. Depressive symptoms, 2. Health-related quality of life, 3. Service use, and 4. Patient satisfaction

**Results:** Six-month follow-up assessments were completed by 84.4% (221/250) of patients.

The remote collaborative care program achieved:

1. Higher user satisfaction (odds ratio [OR] 1.94, 95% CI 1.25-3.00)
2. Better treatment adherence rates (OR 1.81, 95% CI 1.02-3.19) at 6 months compared to usual care.
3. There were no statically significant differences in depressive symptoms between the remote collaborative care program and usual care.
4. Significant differences between groups in favor of remote collaborative care program were observed at 3 months for mental health-related quality of life (beta 3.11, 95% CI 0.19-6.02).

**Conclusions:** Higher rates of treatment adherence in the remote collaborative care program suggest that technology-assisted interventions may help rural primary care teams in the management of depressive patients.



# Implementing collaborative care to reduce depression for rural native American/Alaska native people

Bowen DJ, Powers DM, Russo J, Arao R, LePoire E, Sutherland E, Ratzliff ADH. BMC Health Serv Res. 2020 Jan 13

**Why this paper?** 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 and observed for 2 years.

The clinics participated in training and practice coaching to implement Collaborative Care for depressed patients.

1. Universal screening, 2. Evidence-based treatment to target, 3. use of behavioral health care manager 4. psychiatric consultants (caseload consultation), 5. quality improvement tracking to improve and maintain outcomes

**Results:** 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.

# Collaborative care compared to enhanced standard treatment of depression with co-morbid medical conditions among patients from rural South India: a cluster randomized controlled trial (HOPE Study)

Srinivasan K, Heylen E, Johnson Pradeep R, Mony PK, Ekstrand ML. BMC Psychiatry. 2022 Jun 13

**Why this study?** To test whether depression outcomes are different among collaborative care model compared to enhanced standard treatment in patients with co-morbid chronic medical conditions.

**Methods:** Cluster randomized controlled trial among participants 30 years or older seeking care at 49 primary health centers (PHCs) in rural Karnataka, diagnosed with major depressive disorder, dysthymia, generalized anxiety disorder, or panic disorder (MINI-International Neuropsychiatric Interview) plus either hypertension, diabetes, or ischemic heart disease. 2486 participants observed over about 3 years, were assessed at baseline, 3, 6 and 12 months. The mean PHQ-9 depression score was around 8.5 at baseline.

**Results:** At each follow-up PHQ-9 scores were significantly lower in the intervention (5.24, 4.81 and 4.22 at respective follow-ups) than in the control group (6.69, 6.13, 5.23, respectively).

**Conclusions:** The collaborative care intervention resulted in significantly lower depression scores compared to enhanced standard care among participants with co-morbid physical conditions.

The findings have potential implications for integrating mental health and chronic disease treatment in resource constrained settings.

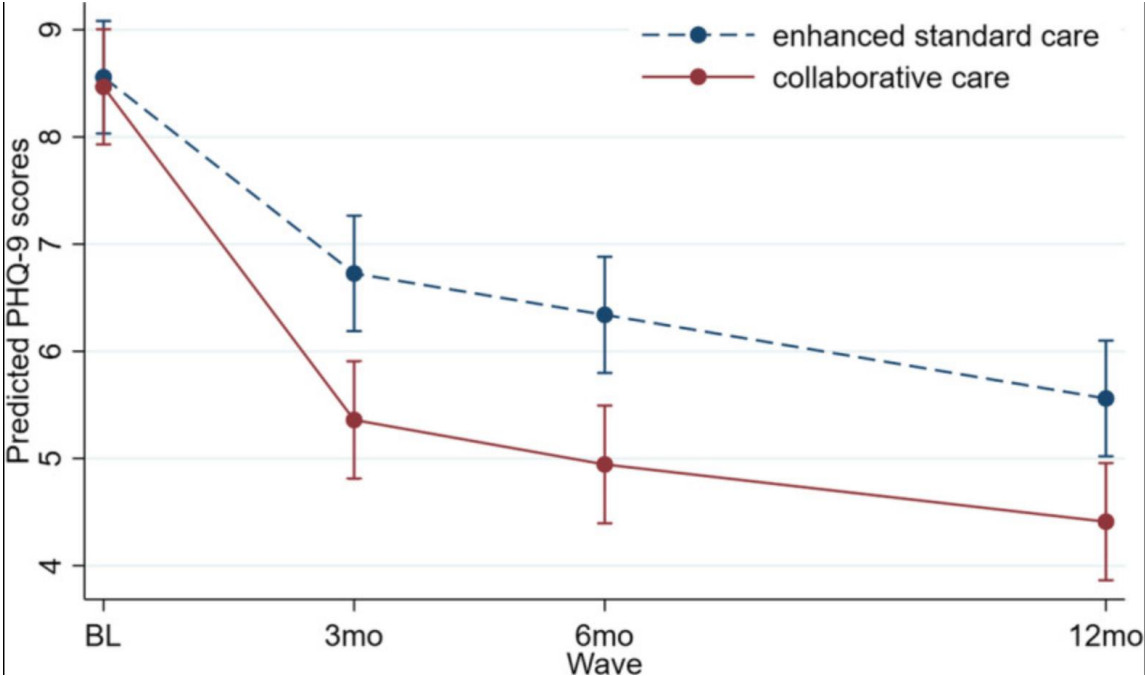


Figure 1. PHQ-9 depression scores over time by treatment arm, with 95% CI

# Geriatric Population

# Improving Access to Collaborative Behavioral Health Care for Rural-Dwelling Older Adults

Gerlach LB, Mavandadi S, Maust DT, Streim JE, Oslin DW. Psychiatr Serv. 2018 Jan 1

**Why this study?** To examine whether a telephone-delivered collaborative care intervention (SUpporting Seniors Receiving Treatment And INtervention [SUSTAIN]) improved access to mental health services similarly among older adults in rural areas and those in urban-suburban areas in Pennsylvania.

**Methods:** This cohort study of 8,621 older adults participating in the SUSTAIN program, a clinical service provided to older adults in Pennsylvania newly prescribed a psychotropic medication by a primary care or non-mental health provider, examined rural versus urban-suburban differences in rates of initial clinical interview completion, patient clinical characteristics, and program penetration.

## **Results:**

Participants in rural counties were more likely than those in urban-suburban counties to complete the initial clinical interview (27.0% versus 24.0%,  $p=.001$ ).

Program penetration was significantly higher in rural than in urban-suburban counties ( $p=.02$ ).

## **Conclusions:**

Telephone-based care management programs such as SUSTAIN may be an effective strategy to facilitate access to collaborative mental health care regardless of patients' geographic location.

# Collaborative care for depression yields similar improvement among older and younger rural adults

Renn BN, Johnson M, Powers DM, Vredevoogd M, Unützer J. J Am Geriatr Soc. 2022 Jan

**Why this study?** To compare treatment outcomes in depression care of CoCM between older (65+ years) and younger (18–64 years) adults in low-resource rural settings.

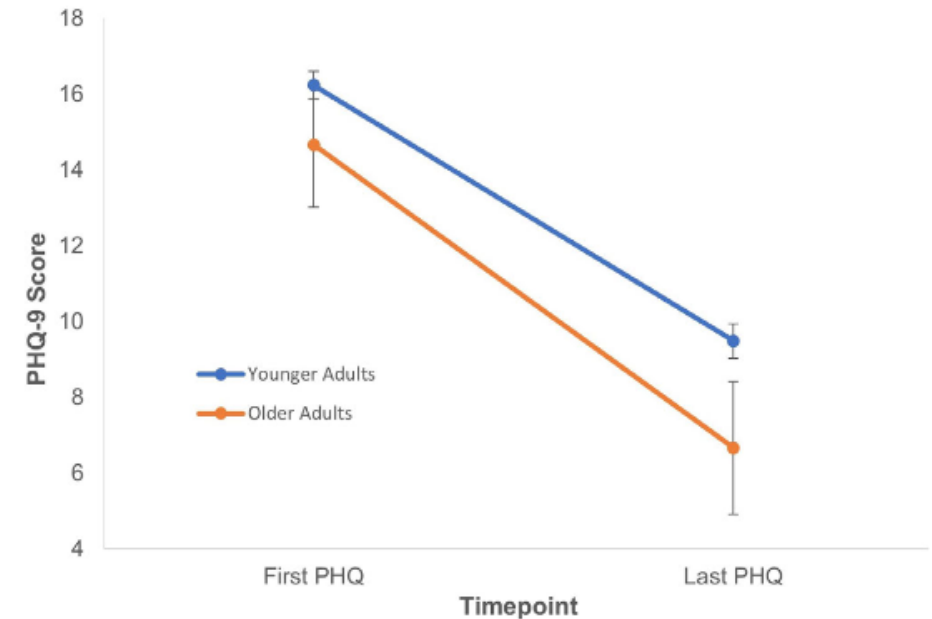
**Methods:** Secondary data analysis of a longitudinal, observational implementation demonstration at eight primary care clinics across low-resourced rural or frontier areas of the Western United States. Seven of these clinics were federally qualified health centers.

The sample consisted of 3722 younger (18-64 years) and older (65+ years) adult primary care patients diagnosed with unipolar depression. All participants received depression treatment via CoCM. Clinics were followed for up to 27 months.

**Results:** Across both age groups, there was an average overall reduction of 6.9 points on the PHQ-9.

Older adults demonstrated a greater decrease in depression scores of 2.06 points (95% CI -2.98 to -1.14,  $p < 0.001$ ) on the PHQ-9 compared with younger adults.

**Conclusions:** CoCM resulted in meaningful improvement in depressive symptoms across age groups.



**FIGURE 1** Line graph presenting first and last Patient Health Questionnaire (PHQ-9) total scores stratified by age groups (younger adults: 18–64 years; older adult: 65 years and older). Possible PHQ-9 scores range from 0 to 27, with higher scores indicating greater depressive symptom severity. Error bars signify 95% confidence intervals of the mean score at each timepoint



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## **Implementation in Remote Areas**

# Unique Challenges

- Smaller hiring pool
- More frequent dependence on remote clinical teams
- Fewer specialty resources in the area
- Patients oftentimes traveling long distances for care
  - Limited crisis services



# Implementation in Remote Areas: CoCM in Nepal

- 2 year mixed methods cohort study of CoCM implementation in clinic in rural Nepal (Achham)
- Clinic: 100 000 outpatient visits annually, 15–20 PCPs, EHR
  - Nearest psychiatrist 14 hour drive away
- Substantial clinical response in 99 (49%) of the 201 cohort patients; a median 7-point decrease in PHQ-9 scores.



# CoCM in Nepal: Addressing Challenges

- Challenges:
  - High PCP turnover: 93 PCPs received training!
  - Remote PC: some PCPs preferred when could review cases in person
- Improvements:
  - PCPs and PCs: used more video for case reviews
  - PCPs wanted rationales in PC recommendations
  - Changed recruitment of BHCM to having med background
  - senior onsite clinician to be the primary program supervisor after study ended
  - Improving process for emergency curbside with PC



# Implementing collaborative care for older people with comorbid hypertension and depression in rural China

- **COACH Study:** 12 month RCT to test the effectiveness of a primary-care-based collaborative care approach to treat co-morbid hypertension and depression in Chinese rural elders.
- **Team:** a team-village doctor (VD), aging worker (AW), and psychiatrist consultant
- **Methods:** Five focus groups were conducted, two with VDs, two with AWs, and one with psychiatrists, for a total of 38 participants. Transcripts were analyzed using qualitative content analysis.
- **Qualitative results from focus groups with team:** Team members had shared understanding and appreciation of the team approach and integrated management of hypertension and depression and thought approach was effective clinically

Li LW, Xue J, Conwell Y, Yang Q, Chen S. Implementing collaborative care for older people with comorbid hypertension and depression in rural China. *Int Psychogeriatr*. 2020 Dec;32(12):1457-1465. doi: 10.1017/S1041610219001509. Epub 2019 Oct 21. PMID: 31630703; PMCID: PMC7170762.



# Implementing collaborative care for older people with comorbid hypertension and depression in rural China

- **Implementation facilitators:** training, leaders' support, geographic proximity between VD and AW pairs, preexisting relationships among care-team members, comparability of COACH activities and existing practices of VDs and AWs, and care team members' caring about older members of their villages.
- **Implementation Barriers:** frustration of some VDs related to their low wages and feelings of overload of some AWs.

*About mental health problems, I think it is a taboo subject in rural villages. If the AW goes to home visit with us, it's more like usual chatting and the interaction is smooth. If only we village doctors visit the patients, the atmosphere would be tense. (VD2E)*

*Three years ago we were ignorant about mental health and did not consider depression at all when treating patients. The training has increased our professional knowledge and raised the management standard. (VD1G)*

Li LW, Xue J, Conwell Y, Yang Q, Chen S. Implementing collaborative care for older people with comorbid hypertension and depression in rural China. *Int Psychogeriatr.* 2020 Dec;32(12):1457-1465. doi: 10.1017/S1041610219001509. Epub 2019 Oct 21. PMID: 31630703; PMCID: PMC7170762.

# Rural clinics implementing collaborative care for low-income patients can achieve comparable or better depression outcomes

- **Observational Study:** Depression treatment outcomes, clinical processes of care, and primary care provider experiences for CoCM implementation in 8 rural clinics treating low-income patients.
- **Results:** 5,187 adult patients, Mean PHQ-9 depression score was 16.1 at baseline and 10.9 at last individual measurement, a statistically and clinically significant improvement (SD6.7; 95% CI [4.9, 5.3]).
- Primary care providers reported positive experiences overall.
- Three quarters of participating primary care clinics, adapting CoCM for limited resource settings, exceeded depression response outcomes reported in a controlled research trial and mirrored results of large-scale quality improvement implementations.

Powers DM, Bowen DJ, Arao RF, Vredevoogd M, Russo J, Grover T, Unützer J. Rural clinics implementing collaborative care for low-income patients can achieve comparable or better depression outcomes. *Fam Syst Health*. 2020 Sep;38(3):242-254. doi: 10.1037/fsh0000522. Epub 2020 Jul 23. PMID: 32700931.

*“The model is only as  
successful as the  
team.”*

*- Child/adolescent psychiatric consultant  
who works off-site*

*“The ability of a  
telepsychiatry team to work  
effectively in virtual/hybrid  
environments has significant  
implications for treatment  
outcomes.”*

*– Shore J et al 2019*

# Benefits to off-site teams

- Can be just as effective as clinic-based teams
  - Early comparisons show remote integrated behavioral health care is effective, and as effective as clinic-based models (Fortney J et al 2013; Fortney J et al 2018)
- Can expand hiring pool
  - Wider range of skills/training possible
- Can increase access and integrate more specialties
- Shown to increase team productivity and reduce stress/burnout (less commute)

<https://healthtechmagazine.net/article/2020/08/why-providers-should-address-disparities-telehealth-access>



# Remote Clinical Team Challenges

Team cohesion challenges (“Out of sight, out of mind”, isolation)

Team miscommunication, difficulty closing communication loops

Privacy and security

Technology snafus

Shore J et al 2019; Ackerman B et al 2009

# Best Practices in Tele-teaming Literature

- Scant literature
  - What's available: tele-teaming impacts patient/provider experience and outcomes
  - Current understanding drawn from fields of applied psychology and business
- Overarching themes:
  - (1) rapid growth/deployment of virtual care teams across medical fields
  - (2) evolution of studies from initialing examining in-person vs. virtual teams to strengths/challenges in virtual teaming
  - (3) delineation of best practices for virtual care teams

Review > [Curr Psychiatry Rep.](#) 2019 Jul 8;21(8):77. doi: 10.1007/s11920-019-1052-x.

## Best Practices in Tele-Teaming: Managing Virtual Teams in the Delivery of Care in Telepsychiatry

Jay H Shore <sup>1 2 3</sup>

Shore J et al 2019

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# Take Homes: Adapting to Challenges

- More intentional workflows around communication

Challenge	Adaptation
<ul style="list-style-type: none"><li>• Loss of cohesion, harder to team build</li></ul>	<ul style="list-style-type: none"><li>• Intentional team formation and relationship building</li></ul>
<ul style="list-style-type: none"><li>• Difficulty closing team communication loops</li></ul>	<ul style="list-style-type: none"><li>• Structured communication workflows</li></ul>
<ul style="list-style-type: none"><li>• Privacy and security</li></ul>	<ul style="list-style-type: none"><li>• HIPAA compliant platforms</li><li>• Clear expectations when onboarding</li></ul>
<ul style="list-style-type: none"><li>• Technology snafus</li></ul>	<ul style="list-style-type: none"><li>• Plan B</li><li>• Have call contact numbers available to the team</li></ul>

# Resources

- [AIMS Center office hours](#)
- [UW PACC](#)
- [Psychiatry Consultation Line](#)
  - (877) 927-7924
- [Partnership Access Line \(PAL\)](#)
  - (866) 599-7257
- [PAL for Moms](#)
  - (877) 725-4666
- [UW TBI-BH ECHO](#)