



ACADEMY OF
CONSULTATION-LIAISON
PSYCHIATRY

ACLP Interdisciplinary Outpatient Collaborative Care Guide

Interdisciplinary Education Subcommittee

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Academy of Consultation-Liaison Psychiatry Interdisciplinary Outpatient Collaborative Care Guide

Developed by the ACLP Interdisciplinary Education Subcommittee.

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Purpose: In the era of value-based care, consultation-liaison psychiatrists can play a role as leaders of integrated care teams. The readings in this guide serve as resources for teaching interdisciplinary team members topics related to integrated care. This list of readings and resources on psychiatry in outpatient medical settings (i.e., integrated care) was compiled by the Academy of Consultation Liaison Psychiatry (ACLP) Interdisciplinary Education Subcommittee and is based on expert opinion. It has been peer reviewed by the ACLP Education Committee.

How to Use the Guide: Resources were selected for relevance, accessibility, and usefulness as teaching resources. Articles covering the main clinical issues of the outpatient setting are presented in tabular form, followed by suggested resources online and books. Links to articles or abstract are provided where possible. Note that articles from the journal *Psychosomatics* can be accessed by any member of the ACLP by first logging on to the ACLP website with their user ID and password, followed by selecting the “News and Publications” column and then selecting the link for *Psychosomatics*.

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Comments: Please contact this Subcommittee if you have suggestions for resources that would contribute to this resource.



Evidence Base	Key Article	Summary
Introduction to collaborative care	<p>Katon W. Collaborative care models: From development to dissemination. <i>American Journal of Preventive Medicine</i>. 2012 May; 42(5);550-2.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/22516497</p>	<p>This concise paper summarizes the history of collaborative care and its potential for improving depression care in medical settings.</p>
	<p>Joseph R, Kester R, O'Brien C, Huang H. The evolving practice of psychiatry in the era of integrated care. <i>Psychosomatics</i>. 2017 Sep-Oct;58(5):466-473.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/28606419</p>	<p>This review paper provides a conceptual framework to understand the landscape of models of integrated care and to use this framework to contrast the roles of behavioral health providers in integrated settings with those in traditional behavioral health delivery models. It also reviews some of the advantages and limitations of integrated care for health care delivery systems, patients, and primary care providers.</p>
Depression	<p>Unützer J, Katon W, Callahan CM, Williams JW Jr, Hunkeler E, Harpole L, Hoffing M, Della Penna RD, Noël PH, Lin EH, Areán PA, Hegel MT, Tang L, Belin TR, Oishi S, Langston C. Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. <i>JAMA</i> 2002;288(22):2836-2845.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/12472325.</p>	<p>An early, large trial (IMPACT) of collaborative care for older adults with depression. Overall, 1801 patients were randomized to receive collaborative depression care management or treatment as usual. Collaborative care was associated with significantly greater improvements in depression, function, and quality of life at 12 months</p>
	<p>Archer J, Bower P, Gilbody S, Lovell K, Richards D, Gask L, Dickens C, Coventry P. Collaborative care for depression and anxiety problems. <i>Cochrane Database Syst Rev</i> 2012;10:CD006525.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/23076925.</p>	<p>This was a Cochrane review of collaborative care interventions for depression or anxiety. This review examined 79 RCTs involving over 24,000 patients. The authors found that CC had significantly greater effects on depression and anxiety (standardized mean difference of approximately 0.3 for nearly all analyses) in the short-, medium-, and long-term compared with control conditions. Such interventions also appeared to provide benefit on mental quality of life, medication use/adherence, and overall satisfaction with care;</p>



		there was less evidence for effect on physical health–related quality of life
Adolescent Depression	Asarnow JR, Jaycox LH, Duan N, LaBorde AP, Rea MM, Murray P, Anderson M, Landon C, Tang L, Wells KB. Effectiveness of a quality improvement intervention for adolescent depression in primary care clinics: a randomized controlled trial. JAMA 2005;293(3):311-319. http://www.ncbi.nlm.nih.gov/pubmed/15657324 .	This RCT compared a collaborative care intervention for adolescents (13–21 years old) with depression care as usual (total n= 418). Patients were selected from 5 diverse sites that included managed care, public sector, and academic medical center settings. The intervention was associated with improved depression and mental health related quality of life compared with usual care.
	Asarnow JR, Rozenman M, Wiblin J, Zeltzer L. Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health: A meta-analysis. JAMA pediatrics. 2015 October; 169(10): 929–37. https://www.ncbi.nlm.nih.gov/pubmed/26259143	This meta-analysis compared integrated pediatric care models versus usual care (n=31). The authors note that the strongest effects were among those interventions that targeted mental disorders as well as those that used collaborative care models.
Depression, Diabetes, and Heart Disease	Katon WJ, Lin EH, Von Korff M, Ciechanowski P, Ludman EJ, Young B, Peterson D, Rutter CM, McGregor M, McCulloch D. Collaborative care for patients with depression and chronic illnesses. N Engl J Med 2010;363(27):2611-2620. http://www.ncbi.nlm.nih.gov/pubmed/21190455 .	TEAMCare (n = 214) is a RCT of a multi-condition care management intervention that managed depression and medical targets (e.g., blood pressure or blood glucose) in depressed primary care patients in a managed/integrated care setting.. Patients who received collaborative care received interventions and management of both depression (via pharmacotherapy or care manager–delivered psychotherapy) and chronic medical illness (via assessment of illness markers and coordination of treatment adjustments to targeted outcomes). Intervention patients had lower cholesterol levels, blood pressure, and hemoglobin A1c levels at 12 months, in addition to better quality of life and less depression, compared with those getting usual care.
	Katon WJ, Von Korff M, Lin EH, Simon G, Ludman E, Russo J, Ciechanowski P, Walker E, Bush T. The Pathways Study: a randomized trial of collaborative	A key early collaborative care depression RCT in integrated/ managed care primary care practices, in this case for patients with diabetes. The intervention in this trial focused specifically on



	<p>care in patients with diabetes and depression. Arch Gen Psychiatry 2004;61(10):1042-1049</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/15466678</p>	<p>depression, with care managers providing education, monitoring, and care coordination related to depression but not diabetes. In 329 patients, the depression intervention led to improved depression and QoL, but not to better levels of hemoglobin A1c - this was finding that led to the development of TEAMcare.</p>
	<p>Katon W. Epidemiology and treatment of depression and patients with chronic medical illness. Dialogues Clin Neurosci. 2011; 13(1):7-23.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/21485743</p>	<p>This review article examines the bidirectional relationship between depression and chronic medical illnesses. The author describes plausible mechanisms for this relationship.</p>
	<p>Huffman JC, Adams CN, Celano CM. Collaborative care and related interventions in patients with heart disease: an updated in new directions. Psychosomatics. 2018; (59): 1–18.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/29078987</p>	<p>This review paper examines varying degrees and models of collaborative care targeting mental health, quality of life, and functioning in patients with heart disease. The authors also provide tips for the implementation of these models in healthcare settings.</p>
Depression and Cancer	<p>Strong V, Waters R, Hibberd C, Murray G, Wall L, Walker J, McHugh G, Walker A, Sharpe M. Management of depression for people with cancer (SMaRT oncology 1): a randomized trial. Lancet 2008;372(9632):4048.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/18603157.</p>	<p>An RCT comparing collaborative depression care management to usual care for patients (n= 196) with cancer and major depression evaluated in a regional cancer center. The intervention consisted of depression education, longitudinal assessment, nurse-delivered psychotherapy, and antidepressant monitoring/support. Patients receiving the CC intervention had clinically significant 3-month improvements in depression, anxiety, and fatigue but not in function or pain. These benefits of CC were sustained at 6 and 12 months</p>
	<p>Ell K, Xie B, Quon B, Quinn DI, Dwight-Johnson M, Lee PJ. Randomized controlled trial of collaborative care management of depression among low-income patients with cancer. J Clin Oncol 2008;26(27):4488-4496.</p>	<p>An RCT of CC (n=472) for low-income (predominantly Hispanic) patients with cancer and depression seen at an academic center that provides oncology care to a low-income, predominantly Hispanic population. The intervention utilized a care management model adapted from the IMPACT model, though study psychiatrists prescribed medications if needed. The intervention was associated with significant reduction in depressive symptoms,</p>



	http://www.ncbi.nlm.nih.gov/pubmed/18802161	improvement in quality of life, and lower pain levels compared with usual care
	<p>Sharpe M, Walker J, Holm Hansen C, Martin P, Symeonides S, Gourley C, Wall L, Weller D, Murray G. Integrated collaborative care for comorbid major depression in patients with cancer (SMaRT Oncology-2): a multi-centered randomized controlled effectiveness trial. <i>Lancet</i>. 2014 September 20; 384 (9948): 1099–108.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/25175478</p>	This randomized controlled effectiveness trial enrolled patients with cancer and major depressive disorder. Participants were randomized to a collaborative care arm and a usual care arm (care provided by PCPs). The primary outcome was depression response at 24 weeks using the symptom checklist depression scale–20 using intention to treat analysis. Compared with the usual care arm, participants in the intervention group demonstrated less depressive symptoms, anxiety, pain, fatigue, and had improved functioning, health, quality of life, and perceived quality of depression care.
HIV	<p>Pyne JM, Fortney JC, Curran GM, Tripathi S, Atkinson JH, Kilbourne AM, Hagedorn HJ, Rimland D, Rodriguez-Barradas MC, Monson T, Bottonari KA, Asch SM, Gifford AL Effectiveness of collaborative care for depression in human immunodeficiency virus clinics. <i>Arch Intern Med</i> 2011;171(1):23-31.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/21220657</p>	An RCT comparing collaborative care with usual care (n= 249) for patients with HIV and depression in VA medical centers. The CC intervention was delivered by an offsite team of clinicians who utilized telephone interventions and web-based communication and decision support to patients' primary treatment providers; the care managers provided support but did not specifically provide psychotherapy. Collaborative care was associated with significantly reduced depression and HIV symptom severity but not change in HRQoL or adherence to HIV treatment.
Depression in Women's Health Care	<p>Melville JL, Reed SD, Russo J, Croicu CA, Ludman E, LaRocco-Cockburn A, Katon W. Improving care for depression in obstetrics and gynecology: a randomized controlled trial. <i>Obstet Gynecol</i>. 2014 Jun;123(6): 1237-46.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/24807320</p>	RCT in OB/GYN clinics. PST delivered by care managers, meds per algorithm, followed q 1-2 wks. Intervention group: greater improvement in depressive sx, improved functioning, more specialty MH visits, adequate dose of antidepressant, greater satisfaction with care. Intervention patients had a mean of 9.6 (SD=7.1) in-person visits and 6.4 (SD=6.0) telephone visits. Fifty-five women (53.9%) were treated with antidepressant medication and PST-PC, 32 (31.4%) with PST-PC alone, 12 (11.8%) with antidepressants alone, and 4 (3.9%) elected not to receive either treatment. The estimated cost per patient, including all depression



		care manager contacts, physician supervision, and information system support was \$1,026
	Grote NK, Katon W, Russo JE, Lohr MJ, Curran M, Galvin E, Carson K. Collaborative care for perinatal depression in socioeconomically disadvantaged women: A randomized trial. <i>Depression Anxiety</i> . 2015 November; 32(11):821-34. https://www.ncbi.nlm.nih.gov/pubmed/26345179	The MOMCare examined a collaborative care intervention compared to intensive public health maternity support service for the treatment of depression among pregnant women. The primary outcome was depression severity at 3, 6, 12, and 18-month post baseline. Of note, all participants in this study were on Medicaid. This study shows that this collaborative care intervention improved depression outcomes up to 18 months post baseline.
	Huang H, Tabb K, Cerimele J, Ahmed N, Bhat A, Kester R. Collaborative care for women with depression: a systematic review. <i>Psychosomatics</i> . 2017 Jan-Feb;58(1):11-18. https://www.ncbi.nlm.nih.gov/pubmed/27842779	This systematic review of collaborative care studies resulted in 7 articles that met the inclusion criteria. Included studies were 6 randomized controlled trials and 1 observational study. Among those, 4 studies focused on pregnant or postpartum women. In general, collaborative care interventions focusing on women were more effective than usual care for the management of depressive disorders in women with 5 of the 6 randomized studies showing positive depression outcomes.
Anxiety	Roy-Byrne P, Craske MG, Sullivan G, Rose RD, Edlund MJ, Lang AJ, Bystritsky A, Welch SS, Chavira DA, Golinelli D, Campbell-Sills L, Sherbourne CD, Stein MB. Delivery of evidence-based treatment for multiple anxiety disorders in primary care: a randomized controlled trial. <i>JAMA</i> 2010;303(19):1921-1928. http://www.ncbi.nlm.nih.gov/pubmed/20483968 .	An RCT comparing a coordinated care management intervention (Coordinated Anxiety Learning and Management) and usual care for patients (n= 1004) with 1 or more anxiety disorders (Panic Disorder (PD), posttraumatic stress disorder (PTSD), Social Anxiety Disorder (SAD), and Generalized Anxiety Disorder (GAD)) with or without Multifaceted Diabetes and Depression. This real-world effectiveness study occurred in 17 primary care (mixed fee-for-service and managed care) sites in 4 U.S. cities; the sites varied in patient characteristics and payer mix. Collaborative care was linked to reduced depression, anxiety, and functional impairment, compared with usual care
	Archer J, Bower P, Gilbody S, Lovell K, Richards D, Gask L, Dickens C, Coventry P. Collaborative care	This was a Cochrane review of CC interventions for depression or anxiety. This review examined 79 RCTs involving over 24,000 patients. The authors found that collaborative care had



	<p>for depression and anxiety problems. Cochrane Database Syst Rev 2012;10:CD006525.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/23076925.</p>	<p>significantly greater effects on depression and anxiety (standardized mean difference of approximately 0.3 for nearly all analyses) in the short-, medium-, and long-term compared with control conditions. Such interventions also appeared to provide benefit on mental quality of life, medication use/adherence, and overall satisfaction with care; there was less evidence</p>
	<p>Rollman BL, Herbeck Belnap B, Abebe KZ, Spring MD, Rotondi AJ, Rothenberger SD, Karp JF. Effectiveness of online collaborative care for treating mood and anxiety disorders and primary care: A randomized clinical trial. JAMA psychiatry. 2018 Jan 1;75(1):56-64.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/29117275</p>	<p>This effectiveness trial used a multicomponent intervention of collaborative care that included online computerized cognitive behavioral therapy (CCBT) and Internet support group (ISG) for treating depression and anxiety versus CCBT alone and usual care. 704 adult patients were enrolled in this trial and randomized into 3 arms with the intervention lasting 6 months with a primary outcome being mental health-related quality of life and depression and anxiety symptoms at 6 months follow-up along with treatment irritability assessed 6 months later. The study found that provided no additional benefit over ISG guided and improving primary outcomes; guided CCBT alone is more effective than usual care.</p>
PTSD	<p>Fortney JC, Pyne JM, Kimbrell TA,, Hudson TJ, Robinson DE, Schneider R, Moore WM, Custer PJ, Grubbs KM, Schnurr PP. Telemedicine-based collaborative care for posttraumatic stress disorder: a randomized clinical trial. JAMA Psychiatry. 2015 Jan;72(1):58-67. doi: 10.1001/jamapsychiatry.2014.1575.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/25409287</p>	<p>This randomized pragmatic comparative effectiveness trial compared the effectiveness of locally provided practice-based collaborative care (on-site PCP and depression care manager) with telemedicine-based collaborative care (on-site PCP and an off-site team [nurse care manager and mental health experts participating via phone and videoconferencing]). Study patients (n = 364) with depression were enrolled from fee-for-service sites caring for medically underserved populations without mental health specialists onsite; the off-site team was located at an academic medical center. Patients randomized to the telemedicine intervention had superior depression outcomes, including greater rates of response and remission, in the 18- month trial; improvements in outcomes appeared to be attributable to higher fidelity to the CC evidence base in the telemedicine-based group.</p>



<p>Chronic Pain</p>	<p>Dobscha SK, Corson K, Perrin NA, Hanson GC, Leibowitz RQ, Doak MN, Dickinson KC, Sullivan MD, Gerrity MS. Collaborative care for chronic pain in primary care: a cluster randomized trial. JAMA 2009;301(12):1242-1252.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/19318652.</p>	<p>A cluster RCT of collaborative care for patients (n= 401) with chronic musculoskeletal pain seen in a VA medical center. Intervention patients received an assessment visit with the care manager. The care manager and intervention internist then jointly reviewed assessment results and developed treatment recommendations that were communicated to clinicians, usually through medical record electronic alerts or e-mail. Patients requiring more intensive assessment or specialized care received stepped-care components of greater intensity (e.g., referral of specialty care or direct communication between patient and study clinician). Collaborative care improved depression and achieved modest improvements in pain intensity and pain-related disability compared with usual care</p>
	<p>Kroenke K, Bair MJ, Damush TM, Wu J, Hoke S, Sutherland J, Tu W. Optimized antidepressant therapy and pain self-management in primary care patients with depression and musculoskeletal pain: a randomized controlled trial. JAMA 2009;301(20):2099-2110.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/19470987.</p>	<p>A stepped-care care management RCT (n=250) for patients with musculoskeletal pain in community-based clinics and 5 VA general medicine clinics. The intervention consisted of 12 weeks of optimized antidepressant therapy followed by 6 sessions of a pain self-management program over 12 weeks, along with a continuation phase for 6 months. The intervention was associated with substantial depression improvement and moderate reductions of pain severity and intensity</p>
	<p>Martín J, Torre F, Padierna A, Aguirre U, González N, García S, Matellanes B, Quintana JM. Six-and 12-month follow-up of an interdisciplinary fibromyalgia treatment programme: results of a randomised trial. Clin Exp Rheumatol 2012;30(6 Suppl 74):103-111.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/23261008</p>	<p>An RCT of a 6-week, 12-session interdisciplinary integrated-care model that combined medical and psychological interventions for 153 patients with fibromyalgia in an academic hospital. Compared with patients receiving standard pharmacologic therapy, patients in the intervention arm had significantly greater improvements in quality of life, pain, physical function, anxiety and depression, and pain coping strategies 12 months post-intervention.</p>
<p>Dementia</p>	<p>Callahan CM, Boustani MA, Unverzagt FW, Austrom MG, Damush TM, Perkins AJ, Fultz BA, Hui SL, Counsell SR, Hendrie HC. Effectiveness of</p>	<p>RCT for 153 patients with Alzheimer. The intervention patients were more likely to receive cholinesterase inhibitors (79.8% vs 55.1%; P = .002) and antidepressants (45.2% vs 27.5%; P = .03),</p>



	<p>collaborative care for older adults with Alzheimer disease in primary care: a randomized controlled trial. JAMA. 2006 May 10;295(18):2148-57.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/16684985</p>	<p>had significantly fewer behavioral and psychological symptoms of dementia. Intervention caregivers also reported significant improvements in distress as measured by the caregiver NPI at 12 months; at 18 months, caregivers showed improvement in depression. No group differences were found on the Cornell Scale for Depression in Dementia (CSDD), cognition, activities of daily living, or on rates of hospitalization, nursing home placement, or death.</p>
Geriatric	<p>Gilbody S, et al, Effect of Collaborative Care vs Usual Care on Depressive Symptoms in Older Adults With Subthreshold Depression. The CASPER Randomized Clinical Trial. JAMA. 2017;317(7):728-737.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/28241357</p>	<p>In this RCT of 705 participants aged 65 years or older with subthreshold depression, those randomized to a collaborative care intervention had lower depression scores as measured by the Patient Health Questionnaire 9-item survey at 4-month follow-up compared with usual care. The long-term efficacy of this intervention is unclear.</p>
Substance use disorders	<p>Watkins KE, Ober AJ, Lamp, Lind M, Setodji C, Osilla K, Hunter SB, McCullough CM, Becker, Iyiewuare PO, Diamant A, Heinzerling K, Pincus HA. Collaborative Care for Opioid and Alcohol Use Disorders in Primary Care: The SUMMIT Randomized Clinical Trial. JAMA Intern Med. 2017 Oct 1;177(10):1480-1488.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/28846769</p>	<p>RCT (n=377). Safety-net FQHC setting was a system-level intervention, increased either a 6-session brief psychotherapy treatment and/or medication-assisted treatment with either sublingual buprenorphine/naloxone for opioid use disorders or long-acting injectable naltrexone for alcohol use disorders, but uptake not high: 39% of any ABP and only 13% MAT in treatment group.</p>
	<p>Chan Y, Huang H, Sieu N, Unutzer J. Substance screening and referral for substance abuse treatment in an integrated mental health care program. Psychiatric Services 2013. Jan;64(1):88-90.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/23280462</p>	<p>This study examined rates of substance screening and referral for substance abuse treatment as part of an integrated care program providing mental health services to low-income patients in primary care. From 2008-2010, among 2,856 participants who screened positive for a substance use disorder, 47% were referred for treatment. After adjustment for covariates, accessing recommended treatment was associated with past substance abuse treatment history, alcohol use, heavy drug use,</p>



		posttraumatic stress disorder, and number of follow-up contacts with a care manager.
	<p>Chan Y, Huang H, Bradley K, Unutzer J. Referral for substance abuse treatment and depression improvement among patients with co-occurring disorders seeking behavioral health services in primary care. <i>Journal of Substance Abuse Treatment</i>. 2014 Feb;46(2):106-12.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/24095002</p>	<p>This study examined the relationship between substance treatment referrals and depression improvement among 2,373 participants with concurrent substance use and depressive disorders enrolled in an integrated behavioral health program. Three groups of substance treatment referral status were identified: accessed treatment (n=780), declined treatment (n=315), and no referral for treatment (n=1278). The primary outcome is improvement in depressive symptoms (PHQ-9<10 or ≥50% reduction). Using propensity score adjustments, patients accessing substance treatment were significantly more likely to achieve depression improvement than those who declined receiving treatment services (hazard ratio (HR)=1.82, 95% confidence interval (CI): 1.50-2.20, p<0.001) and those without a referral for treatment (HR=1.13, 95% CI: 1.03-1.25, p=0.014). Each 1 week delay in initiating a referral was associated with a decreased likelihood of depression improvement (HR=0.97, 95% CI: 0.96-0.98, p<0.001). Study findings highlight the need of enhancing early treatment contact for co-occurring substance use disorders in primary care.</p>
Attention deficit disorder	<p>Myers K, Stoep AV, Thompson K, Zhou C, Unutzer J. Collaborative care for the treatment of Hispanic children diagnosed with attention-deficit hyperactivity disorder. <i>Gen Hosp Psychiatry</i> 2010;32(6): 612-614.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/21112453</p>	<p>This was a preliminary, single-arm trial of a collaborative care (CC) model for Hispanic children (n= 116) with attention deficit/hyperactivity disorder in a rural and an urban underserved setting. The CC model consisted of onsite care managers fluent in Spanish who consulted with psychiatrists by telephone. The CC model was successfully implemented in both settings, was well accepted by patients, and was associated with improvements in attention-deficit/hyperactivity disorder symptoms</p>
Bipolar disorder	<p>Simon GE, Ludman EJ, Bauer MS, Unutzer J, Operskalski B. Long-term effectiveness and cost of</p>	<p>This RCT compared the effect of a 2-year multicomponent CC intervention program aimed at improving the quality of care and long-term outcomes with usual care among 441 persons with</p>



	<p>a systematic care program for bipolar disorder. Arch Gen Psychiatry 2006;63(5):500-508.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/16651507</p>	<p>bipolar disorder. Participants in the trial were members of 1 of 4 group model behavioral health clinics of a managed care organization. Compared with patients receiving usual care, intervention subjects had fewer and shorter manic symptoms, though no significant change in depressive symptoms was observed; the benefits of the intervention were found only in the subgroup (approximately 75%) who had clinically significant mood symptoms at the baseline assessment. The total adjusted incremental cost of the intervention was estimated to be \$1251/patient.</p>
	<p>Bauer MS, McBride L, Williford WO, Glick H, Kinosian B, Altshuler L, Beresford T, Kilbourne AM, Sajatovic M. Collaborative care for bipolar disorder: Part II. Impact on clinical outcome, function, and costs. Psychiatr Serv 2006;57(7):937-945.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/16816277.</p>	<p>This was an RCT of a 3-year CC intervention (vs. usual care) for patients (n= 306) with bipolar disorder that combined group psychoeducation, clinician decision support, and care coordination via nurse care managers. Participants had severe illness and multiple comorbidities, and they were enrolled via 11 VA inpatient units; they were randomized to CC or usual care at the time of discharge. The intervention was associated with significantly reduced weeks in an active mood episode (primarily mania) and with significant improvements in social role function, mental quality of life, and treatment satisfaction. It is noteworthy that reductions in mean manic and depressive symptoms were not significant. The intervention was cost-neutral while achieving a net reduction of 6 weeks in an affective episode.</p>
<p>Telepsychiatry</p>	<p>Fortney JC, Pyne JM, Mouden SB, Mittal D, Hudson TJ, Schroeder GW, Williams DK, Bynum CA, Mattox R, Rost KM. Practice-based versus telemedicine-based collaborative care for depression in rural federally qualified health centers: a pragmatic randomized comparative effectiveness trial. Am J Psychiatry 2013;170(4):414-425.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/23429924</p>	<p>This randomized pragmatic comparative effectiveness trial compared the effectiveness of locally provided practice-based collaborative care (CC) (on-site PCP and depression care manager) with telemedicine-based CC (on-site PCP and an off-site team [nurse care manager and mental health experts participating via phone and videoconferencing]). Study patients (n= 364) with depression were enrolled from fee-for-service sites caring for medically underserved populations without mental health specialists onsite; the off-site team was located at an academic medical center. Patients randomized to the telemedicine</p>



		<p>intervention had superior depression outcomes, including greater rates of response and remission, in the 18- month trial; improvements in outcomes appeared to be attributable to higher fidelity to the CC evidence base in the telemedicine-based group</p>
	<p>Yellowlees P, Burke Parish M, González Á, Chan S, Hilty D, Iosif AM, McCarron R, Odor A, Scher L, Sciolla A, Shore J, Xiong G. Asynchronous Telepsychiatry: A Component of Stepped Integrated Care. <i>Telemed J E Health</i>. 2017 Oct 12. doi: 10.1089/tmj.2017.0103.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/29024612</p>	<p>Integrated behavioral healthcare models typically involve a range of consultation options for mental healthcare. Asynchronous telepsychiatry (ATP) consults may be an additional potential choice, so this paper discusses early data from a 5-year clinical trial comparing ATP with synchronous telepsychiatry (STP) consultations. Patients referred by primary care providers were randomly assigned to one of the two treatment groups, ATP or STP. Clinical outcome, satisfaction, and economic data were collected from patients for at 6-month intervals over 24 months. Early data suggests that implementing ATP in existing integrated behavioral healthcare models could make mental healthcare more efficient.</p>
	<p>Bashshur RL, Shannon GW, Bashshur N, Yellowlees PM. The Empirical Evidence for Telemedicine Interventions in Mental Disorders. <i>Telemed J E Health</i>. 2015 Dec 1</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/26624248</p>	<p>This article is aimed assessing the state of scientific knowledge regarding the merit of telemedicine interventions in the treatment of mental disorders (TMH) in terms of feasibility/acceptance, effects on medication compliance, health outcomes, and cost. The published scientific literature on TMH reveals strong and consistent evidence of the feasibility of this modality of care and its acceptance by its intended users, as well as uniform indication of improvement in symptomology and quality of life among patients across a broad range of demographic and diagnostic groups.</p>
	<p>Raney L, Bergman D, Torous J, Hasselberg M. Digitally Driven Integrated Primary Care and Behavioral Health: How Technology Can Expand Access to Effective Treatment. <i>Curr Psychiatry Rep</i>. 2017 Sep 30;19(11):86.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/28965319</p>	<p>This review discussing how evidence-based models of integrated care such as the collaborative care model have a robust evidence base including studies that demonstrate effective delivery from remote locations. Technology solutions that can serve as practice extenders by performing some of the tasks, and can expand the competency of primary care providers to treat mild to moderate</p>



		mental illness, have an emerging literature in the behavioral health arena that shows promise for integrating care. More widespread implementation of effective integrated primary care and behavioral health can be accomplished with the help of technology solutions that can address the problems of workforce shortages and competencies. Use of these technologies alone or in combination is a growing area of research and development and an untapped frontier that warrants further investigation.
	Hilty DM, Rabinowitz T, McCarron RM, Katzelnick DJ, Chang T, Bauer AM, Fortney J. An Update on Telepsychiatry and How It Can Leverage Collaborative, Stepped, and Integrated Services to Primary Care. <i>Psychosomatics</i> . 2018 May - Jun;59(3):227-250. doi: 10.1016/j.psych.2017.12.005. Epub 2017 Dec 26. https://www.ncbi.nlm.nih.gov/pubmed/29544663	This conceptual review article explores telepsychiatry as applied to integrated models of care (e.g., collaborative, stepped, and integrated care).
Cost	Unutzer J, Katon WJ, Fan MY, Schoenbaum MC, Lin EH, Della Penna RD, Powers D. Long-term cost effects of collaborative care for late-life depression. <i>Am J Manag Care</i> 2008;14(2):95-100. http://www.ncbi.nlm.nih.gov/pubmed/18269305	An analysis of total health care costs over 4 years among IMPACT participants (n=551) at the 2 sites for which 4-year cost data were available. Intervention patients had lower health care costs (by \$3000/ patient) than those receiving usual care.
	Simon GE, Katon WJ, Lin EH, Rutter C, Manning WG, Von Korff M, Ciechanowski P, Ludman EJ, Young BA. Cost-effectiveness of systematic depression treatment among people with diabetes mellitus. <i>Arch Gen Psychiatry</i> 2007;64(1):65-72. http://www.ncbi.nlm.nih.gov/pubmed/17199056	An analysis of outpatient health care costs (and depression-free days) for patients in the Pathways trial (n=329). Intervention patients had \$300 less health care costs than those receiving usual care. Intervention subjects also had 61 more depression-free days, with likely additional financial benefit as a result.
	Katon W, Russo J, Lin EH, Schmittdiel J, Ciechanowski P, Ludman E, Peterson D, Young B, Von Korff M. Cost-effectiveness of a multicondition	A cost analysis of TEAMcare examining cost related outcomes at 24 months. Intervention patients had 114 additional depression-free days, 0.335 additional quality-adjusted life-years (QALYs),



	<p>collaborative care intervention: a randomized controlled trial. Arch Gen Psychiatry 2012;69(5):506-514.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/22566583</p>	<p>and lower mean outpatient health costs of \$594 per patient, relative to usual care patients</p>
	<p>Simon GE, Ludman EJ, Rutter CM. Incremental benefit and cost of telephone care management and telephone psychotherapy for depression in primary care. Arch Gen Psychiatry 2009 ;66(10):1081-1089.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/19805698</p>	<p>A cost analysis of a trial examining 2 programs, 1 utilizing telephone depression care management and 1 utilizing care management plus phone psychotherapy (n= 600). Telephone care management was linked to a gain of 29 depression-free days and an increase of \$676 in outpatient health care costs. Care management plus psychotherapy led to a gain of 46 depression-free days and an increase of \$397 in outpatient costs.</p>
	<p>Pyne JM, Fortney JC, Tripathi SP, Maciejewski ML, Edlund MJ, Williams DK. Cost-effectiveness analysis of a rural telemedicine collaborative care intervention for depression. Arch Gen Psychiatry 2010;67(8):812-821.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/20679589</p>	<p>A cost analysis of a rural telemedicine-based collaborative care depression intervention over 12 months. The intervention was effective but not significantly associated with more depression-free days (p=0.10) and was substantially more expensive (\$85K/QALY) than other integrated-care programs.</p>
	<p>Jacob V, Chattopadhyay SK, Sipe TA, Thota AB, Byard GJ, Chapman DP; Community Preventive Services Task Force. Economics of collaborative care for management of depressive disorders: a community guide systematic review. Am J Prev Med 2012; 42(5):539-549.</p> <p>http://www.ncbi.nlm.nih.gov/pubmed/22516496</p>	<p>A review of cost analyses performed as part of 30 collaborative care (CC) trials. Overall, there were more “positive” than “negative” results with regard to reduced health care use, averted productivity loss, and cost-effectiveness (using \$50,000/QALY, the standard threshold) in CC patients. The analysis concluded that this model provides very good economic value</p>



<p>Care management</p>	<p>Huang H, Bauer AM, Wasse JK, Ratzliff A, Chan YF, Harrison D, Unutzer J. Care managers' experiences in a collaborative care program for high risk mothers with depression. <i>Psychosomatics</i>. 2013 May-June;54(3):272-6.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/23194928</p>	<p>This qualitative study examined the views and experiences of behavioral care managers in a real-world collaborative care program in King County, Washington. Organizing themes that emerged included patient – provider interactions, the importance of engagement with the patient, the need for program resources such as care coordination and referral to specialty services, and patient related factors. The study identified potentially modifiable factors that can support the work of behavioral care managers in such a program.</p>
<p>Education and career development in collaborative care</p>	<p>Arbuckle M, Weinberg M, Kistler S, Cabaniss D, Isaacs A, Sederer L, Essock S. A curriculum in measurement-based care: screening and monitoring of depression in a psychiatric resident clinic. <i>Academic Psychiatry</i>. 2013 Sep;37(5):317-20.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/24026369</p>	<p>Third year psychiatry residents participated in a quality improvement program to implement the PHQ-9 for depression screening and monitoring. Residents showed an increase in rate of depression screening from 4% to 92% of patients and increased monthly monitoring of outpatients with a diagnosis of depression from 1% to 76%. Residents who used the PHQ-9 to monitor patients with depression were significantly more likely to use additional standardized assessments.</p>
	<p>Huang H, Barkil-Oteo A. Teaching collaborative care in primary care settings for psychiatry residents. <i>Psychosomatics</i>. 2015 Nov-Dec;56(6):658-61.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/26211980</p>	<p>A 2014 evaluation of a 2-hour psychiatry resident collaborative care training module that was delivered to forty six psychiatry residents from 5 academic psychiatry residency programs. Participants were asked to complete an anonymous survey at both the beginning and the end of the workshop to rate their comfort level in aspects of collaborative care psychiatry (7 items from SBP4 psychiatry milestones) based on a Likert scale (1-not at all, 2-slightly, 3-moderately, and 4-extremely). The pretest mean score for the group was 2.9 (standard deviation = 0.44), whereas the posttest mean was 3.51 (standard deviation = 0.42), $p < 0.0001$. Only 15% of residents reported having some form of primary care or ambulatory specialty care consultation experience while in training.</p>



	<p>Huang H, Forstein M, Joseph R. Developing a collaborative care training program in a psychiatry residency. 2017 May-Jun;58(3):245-249.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/28233531</p>	<p>This pragmatic paper describes the collaborative care training experience at a safety-net academic institution to provide a template for psychiatry residencies designing curricula to prepare psychiatry residents for collaborative care practices.</p>
	<p>Aquino P, Huang H, Huang H. Getting started in a career in integrated care. Psychosomatics. 2014;Sep-Oct;55(5):519-20.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/24996835</p>	<p>This letter to the editor describes the experience of 3 early career psychiatrists working in integrated care settings and provides tips for getting started in this practice setting.</p>
	<p>Noy G, Greenlee A, Huang H. Psychiatry residents' confidence in integrated care skills on a collaborative care rotation at a safety net health care system. General Hospital Psychiatry. 2019 Mar-Apr;51:130-131.</p> <p>https://www.ncbi.nlm.nih.gov/pubmed/29128281</p>	<p>This letter to the editor describes how psychiatry residents' confidence in delivering population-based care improved after a 6 month rotation in a collaborative care model. Psychiatry residents reported having gained confidence in multiple domains of integrated care. However, additional curriculum development and training is required to help residents improve confidence in indirect consultations.</p>

Online resources:

Patient experience of collaborative care (Daniel story: 7 minute video)-a great place to start when introducing principles and concepts of the collaborative care model.

<http://aims.uw.edu/daniels-story-introduction-collaborative-care>

AIMS Center- integrated care center that curates a host resources related to training and implementation.

<http://aims.uw.edu/>

American Psychiatric Association's introduction to integrated care. Also has resources to training in integrated care for psychiatrists and primary care providers.

<https://www.psychiatry.org/psychiatrists/practice/professional-interests/integrated-care/learn>



Psychiatry residency training modules:

<http://aims.uw.edu/resource-library/psychiatry-resident-training-collaborative-care>

Video illustrating elements of the case review between the consult psychiatrists and behavioral care manager:

<https://www.youtube.com/watch?v=Wxu6lOqr1g4&feature=youtu.be>

LACTMED

<https://womensmentalhealth.org/>

Books on integrated care:

1) Integrated Care: Creating Effective Mental and Primary Health Care Teams by Anna Ratzliff, Jurgen Unutzer, Wayne Katon, and Kari Stephens.

http://www.amazon.com/Integrated-Care-Creating-Effective-Primary/dp/1118900022/ref=sr_1_1/191-5294067-2649515?ie=UTF8&qid=1453481051&sr=8-1

2) Integrated Care: Working at the Interface of Primary and Behavioral Health Care 1st Edition by Lori E. Raney.

http://www.amazon.com/Integrated-Care-Working-Interface-Behavioral/dp/1585624802/ref=pd_sim_sbs_14_1?ie=UTF8&dpID=413X9r88kSL&dpSrc=sims&preST=_AC_UL160_SR107%2C160_&refRID=0WFWAB9KHXYHMYAW4VDB

3) Lippincott's Primary Care Psychiatry by Robert M. McCarron (Editor), Glen L. Xiong (Editor), James A. Bourgeois (Editor)

<https://www.amazon.com/Robert-M-McCarron-Lippincotts-Psychiatry/dp/B008WDKNYK>

