
- **OBJECTIVE**: Cognitive behavioral therapy (CBT) is the gold standard treatment for adult anxiety disorders but is often not readily available in a scalable manner in many clinical settings. This study examines the feasibility, acceptability, and effectiveness of a coach-facilitated digital cognitive behavioral program for anxious adults in primary care.

- **METHOD**: In an open trial, patients who screened positive for anxiety (General Anxiety Disorder-7 [GAD7] score ≥5) were offered the digital cognitive behavioral program (active group, n=593). Primary outcomes included anxiety, quality of life (QoL), and ambulatory medical use over 6 months. Intent-to-treat (ITT) and modified intent-to-treat (mITT) analyses were completed. Subsequently, we compared the outcomes of participants with those of a matched control group receiving primary care as usual (CAU; n=316).

- **RESULTS**: More than half of the patients downloaded the cognitive behavioral mobile app program and about 60% of these were considered engaged, which was defined as completion of ≥3 techniques. The active group demonstrated medium size effects on reducing anxiety symptoms (effect size $d=0.44$; $P<.001$) and improving mental health QoL ($d=0.49$; $P<.001$) and showed significantly improved physical health QoL ($d=0.39$; $P=.002$) and a decreased likelihood of high utilization of outpatient medical care (odds ratio=$0.49$; $P<.001$). The active group did not significantly outperform the CAU group in anxiety reduction or QoL improvement ($d=0.20$; $P=.07$). However, intent-to-treat analysis showed that the active group had a significantly lower likelihood of high utilization of outpatient medical care than the enhanced CAU group ($P<.0001$; odds ratio=0.09).

- **DISCUSSION**: A coach-facilitated digital cognitive behavioral program prescribed in primary care is feasible and acceptable. Primary care patients prescribed a digital cognitive behavioral program for anxiety experienced significant improvements in anxiety symptoms, QoL, and reduced medical utilization. This effect was observed even among patients with chronic medical conditions and behavioral health comorbidities. Although the primary outcomes in the active group did not improve significantly more than the CAU group, health care utilization declined, and some secondary outcomes improved in participants who engaged in the program compared to the CAU group.

Link: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6470461/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6470461/)
OBJECTIVE: Psychological interventions are labor-intensive and expensive, but e-health interventions may support them in primary care. In this study, we systematically reviewed the effectiveness and cost-effectiveness of e-health interventions for depressive and anxiety symptoms and disorders in primary care.

METHOD: We searched MEDLINE, Cochrane library, Embase, and PsychINFO until January 2018, for randomized controlled trials of e-health interventions for depression or anxiety in primary care. Two reviewers independently screened the identified publications, extracted data, and assessed risk of bias using the Cochrane Collaboration's tool.

RESULTS: Out of 3617 publications, we included 14 that compared 33 treatments in 4183 participants. Overall, the methodological quality was poor to fair. The pooled effect size of e-health interventions was small (standardized mean difference = -0.19, 95%CI -0.31 to -0.06) for depression compared to control groups in the short-term, but this was maintained in the long-term (standardized mean difference = -0.22, 95%CI -0.35 to -0.09). Further analysis showed that e-health for depression had a small effect compared to care as usual and a moderate effect compared to waiting lists. One trial on anxiety showed no significant results. Four trials reported on cost-effectiveness. LIMITATIONS: The trials studied different types of e-health interventions and had several risks of bias. Moreover, only one study was included for anxiety.

DISCUSSION: E-health interventions for depression have a small effect in primary care, with a moderate effect compared to waiting lists. The approach also appeared to be cost-effective for depression. However, we found no evidence for its effectiveness for anxiety.

Link: https://www.ncbi.nlm.nih.gov/pubmed/30447572
CLINICAL


- **OBJECTIVE:** Effective interventions are needed to prevent cardiovascular disease (CVD) in people with severe mental illnesses (SMI) because their risk of CVD is higher than that of the general population. **Aim:** test the clinical effectiveness and cost-effectiveness of this new intervention in primary care.

- **METHOD:** Authors conducted a randomised controlled trial (RCT) assessing the clinical effectiveness and cost-effectiveness of a new practitioner-led intervention, and fidelity assessment of audio-recorded appointments. All studies included adults with SMI (schizophrenia, bipolar disorder or other non-organic psychosis). The RCT included adults with SMI and two or more CVD risk factors. The intervention consisted of 8–12 appointments with a practice nurse/health-care assistant over 6 months, involving collaborative behavioural approaches to CVD risk factors. The intervention was compared with routine practice with a general practitioner (GP). The primary outcome for the risk score work was CVD events, in the cost-effectiveness modelling it was quality-adjusted life-years (QALYs) and in the RCT it was level of total cholesterol.

- **RESULTS:** 76 GP practices were randomised to the Primrose intervention (n = 38) or treatment as usual (TAU) (n = 38). The primary outcome (level of cholesterol) was analysed for 137 out of 155 participants in Primrose and 152 out of 172 in TAU. There was no difference in levels of cholesterol at 12 months [5.4 mmol/l Primrose vs. 5.5 mmol/l TAU; coefficient 0.03; 95% confidence interval (CI) –0.22 to 0.29], nor in secondary outcomes related to cardiometabolic parameters, well-being or medication adherence. Mean cholesterol levels decreased over 12 months in both arms (−0.22 mmol/l Primrose vs. −0.39 mmol/l TAU). There was a significant reduction in the cost of inpatient mental health attendances (−£799, 95% CI −£1480 to −£117) and total health-care costs (−£895, 95% CI −£1631 to −£160; p = 0.012) in the intervention group, but no significant difference in QALYs (−0.011, 95% CI −0.034 to 0.011). A total of 69% of patients attended two or more Primrose appointments.

- **DISCUSSION:** This primary care RCT evaluated an evidence-based practitioner-led intervention that was well attended by patients and intervention components were delivered. No superiority was shown for the new intervention over TAU for level of cholesterol, but cholesterol levels decreased over 12 months in both arms and the intervention showed fewer inpatient admissions. There was no difference in cholesterol levels between the intervention and TAU arms, which might reflect better than standard general practice care in TAU, heterogeneity in intervention delivery or suboptimal emphasis on statins.

Note: This abstract has been altered from its original form to decrease length and to highlight pieces most relevant to collaborative family medicine.

Link: https://eprints.soton.ac.uk/430406/1/NIHR_PRIMROSE_report.pdf
IMPLEMENTATION


- **OBJECTIVE**: This qualitative study describes the structure and processes of providing care to U.S. Department of Veterans Affairs (VA) Home-Based Primary Care (HBPC) enrollees with mental health care needs; explains the role of the HBPC psychologist; and describes how mental health treatment is integrated into care from the perspective of HBPC team members.

- **METHOD**: HBPC programs were selected for in-person site visits based on initial surveys and low hospitalization rates. Programs varied in setting, geographic locations, and primary care model. *Site visits were completed at eight of the sixteen selected HBPC programs*. During visits, key informants including HBPC program directors, medical directors, team members, and other key staff involved with the HBPC program participated in semi-structured individual and group interviews. *Measurements included recorded interviews, focus groups, and field observation notes.*

- **RESULTS**: Qualitative thematic content analysis revealed four themes: 1) HBPC Veterans have not only complex physical needs but also co-occurring mental health needs; 2) the multi-faceted role of psychologists on HBPC teams, that includes providing care for Veterans and support for colleagues; 3) collaboration between medical and mental health providers as a means of caring for HBPC Veterans with mental health needs; and 4) gaps in providing mental health care on HBPC teams, primarily related to a lack of team psychiatrists and/or need for specialized medication management for psychiatric illness.

- **DISCUSSION**: Mental health providers are essential to HBPC teams. Given the significant mental health care needs of HBPC enrollees and the roles of HBPC mental health providers, HBPC teams should integrate both psychologists and consulting psychiatrists.

*Link: [https://www.ajgponline.org/article/S1064-7481(18)30527-X/pdf](https://www.ajgponline.org/article/S1064-7481(18)30527-X/pdf)*
IMPLEMENTATION


- **OBJECTIVE:** Collaborative care is an evidence-based program for treating depression in primary care. We sought to expand this model by recruiting clinics interested in incorporating community partners (i.e., community-based organizations (CBO) and/or family members) in the care team. Seven sites implemented evidence-based collaborative care programs with community partners while collecting information on costs of implementing and sustaining programs.

- **METHOD:** Sites retrospectively collected data on planning and implementation costs with technical assistance from study researchers. Sites also prospectively collected cost of care activities over a 1-month period once the program was implemented to determine resources needed to sustain programs. Personnel salary costs were adjusted, adding 30% for benefits and 30% for administrative overhead.

- **RESULTS:** The programs implemented varied considerably in staffing, involvement of care partners, and allocation of costs. Total planning and implementation costs varied from $39,280 to $60,575. The largest implementation cost category involved workflow development and ranged from $16,325 to $31,375 with the highest costs in this category attributed to the most successful implementation among clinic-CBO programs. Following implementation, cost per patient over the 1-month period ranged from $154 to $544. Ongoing strategic decision-making and administrative costs, which were included in cost of care, ranged from $284 to $2328 for the month.

- **DISCUSSION:** Sites implemented collaborative care through differing partnerships, staffing, and related costs. Costs to implement and sustain programs developed in partnership are often not collected but are crucial to understanding financial aspects of developing sustainable partnerships. Assessing such costs is feasible and can inform future partnership efforts.


**OBJECTIVE:** Integrating behavioral health (BH) services into primary care is an evidence-based intervention that can increase access to care, improve patient outcomes, and decrease costs. Digital technology, including smartphone apps, has the potential to augment and extend the reach of these integrated behavioral health services through self-management support impacting lifestyle behaviors. To date, the feasibility and acceptability of using mental health mobile apps within an integrated primary care setting has not yet been explored as part of routine clinical care. The objectives of this study were to (a) test the feasibility of using mental health applications to augment integrated primary care services; (b) solicit feedback from patients and providers to guide implementation, and (c) develop a mental health apps toolkit for system-wide dissemination.

**METHOD:** Cambridge Health Alliance (CHA) is a safety-net healthcare system that includes three community hospitals and 12 Primary Care (PC) clinics serving nearly 150,000 ethnically and socioeconomically diverse patients around Boston. To select and disseminate mental health apps, a four-phase implementation was undertaken: (1) Evaluation of mental health mobile applications (2) Development of an apps toolkit with stakeholder input, (3) Conducting initial pilot at six primary care locations, and (4) Rolling out the app toolkit across 12 primary care sites and conducting 1-year follow-up survey.

**RESULTS:** Among BH providers, 24 (75%) responded to the follow-up survey and 19 (83%) indicated they use apps as part of their clinical care. Anxiety was the most common condition for which app use was recommended by providers, and 10 (42%) expressed interest in further developing their knowledge of mental health apps. Among patients, 35 (65%) of participants provided feedback; 23 (66%) reported the tools to be helpful, especially for managing stress and anxiety.

**DISCUSSION:** Our findings indicate mental health apps are applicable and relevant to patients within integrated primary care settings in safety-net health systems. Behavioral health providers perceive the clinical value of using these tools as part of patient care but require training to increase their comfort-level and confidence applying these tools with patients. To increase provider and patient engagement, mobile apps must be accessible, simple, intuitive and directly relevant to patients' treatment needs.


**OBJECTIVE:** Cognitive impairment is a growing concern that is costly for individuals and health care systems and is often undiagnosed. Early recognition of cognitive impairment allows patients and families the opportunity to discuss long-term care planning and to arrange financial and legal affairs. Identification of cognitive impairment allows for better evaluation and accommodation of functional deficits. Most individuals with cognitive impairment receive care exclusively through primary care. Primary care providers are typically overburdened, and subsequently cognitive impairment may be unrecognized and untreated. Efficient methods of detecting cognitive impairment are needed in primary care.

**METHOD:** The present investigation examined the effect of a simple marketing strategy on the frequency of referral for cognitive screening in primary care. The frequency of referral for cognitive screening was measured for the 12 months prior to and following the marketing effort. Data for the period 2 years after the marketing effort were examined to determine if increases in referral for cognitive screening were maintained.

**RESULTS:** Results demonstrate that this modest marketing effort significantly increased the number of individuals who were referred for cognitive impairment screening, and this increase was maintained over time. Also, the majority of those who were evaluated screened positive for cognitive impairment.

**DISCUSSION:** This brief marketing effort increased the frequency of referral for cognitive screening and identified individuals with cognitive impairment in primary care. Implications for future research and for management of cognitive impairment in primary care are detailed.


**OBJECTIVE:** Screening and Brief Interventions (SBIs) for heavy drinking are an effective and cost-effective approach to reducing alcohol-related harm, yet delivery rates remain low. This study uses trial data to estimate the cost effectiveness of alternative strategies to increase SBI delivery.

**METHOD:** Data from a large cluster-randomised trial were combined with the Sheffield Alcohol Policy Model, a policy appraisal tool, to estimate the cost effectiveness of eight strategies to increase SBI delivery in primary care in England, Poland and the Netherlands: care as usual (control), training and support (TS), financial reimbursement (FR), referral of patients to an online intervention (eBI) and all combinations of TS, FR and eBI. Cost-effectiveness was assessed from a healthcare perspective by comparing health benefits (measured in Quality-Adjusted Life Years (QALYs)) with total implementation costs and downstream healthcare savings for each strategy over a 30-year horizon and calculating Incremental Cost-Effectiveness Ratios (ICERs).

**RESULTS:** All trialled strategies were cost-effective compared to control. TS combined with FR was the most cost-effective approach in England (more effective and less costly than control) and Poland (ICER €4632 vs. next-best strategy). This combination is not cost-effective in the Netherlands, where TS alone is the most cost-effective approach (ICER €3386 vs. next-best strategy).

**DISCUSSION:** Structured training and support, financial incentives and access to online interventions are all estimated to be cost-effective methods of improving delivery of alcohol brief interventions. TS and FR together may be the most cost-effective approach, however this is sensitive to country characteristics and alternative BI effect assumptions.

OBJECTIVE: One in four women Veterans who use the Veterans Health Administration (VA) screen positive for military sexual trauma and may need trauma-sensitive care and coordination. VA primary care providers (PCPs), women veterans' main source of care, need to be well-versed in trauma-sensitive approaches to care. Women veterans' numerical minority in the VA can make provider exposure to female patients inconsistent, which may impede PCP experience in providing appropriate care. To inform strategies for improving trauma-sensitive primary care, we sought to better understand PCPs' current approaches to providing care to women veterans with sexual trauma histories.

METHOD: We conducted semistructured telephone interviews with PCPs (n = 28) practicing at 5 VA primary care clinics located within 3 of the 18 VA regional networks. Participants were asked about their experiences delivering trauma-sensitive care as well as best practices. Interviews were recorded, transcribed, and analyzed for major themes regarding barriers to and facilitators of trauma-sensitive care. Theoretical saturation was reached though coding of the 28 interviews.

RESULTS: Participants expressed challenges delivering care to women with sexual trauma histories, including 1) insufficient time, 2) lack of perceived proficiency and/or personal comfort (with general physical examinations as well as gender-specific care such as Pap, breast, and pelvic examinations), and 3) difficulties with fostering positive patient-provider relationships. Access to mental health resources was noted as a key facilitator of providing trauma-sensitive care. Participants also shared existing (and potential) best practices and recommendations, such as paying special attention to patient behavioral cues related to comfort.

DISCUSSION: PCPs delivering care to women in VA facilities may benefit from an increased awareness of best practices to facilitate the delivery of trauma-sensitive care.

Link: https://www.ncbi.nlm.nih.gov/pubmed/31027706
**EDUCATION & TRAINING**


- **OBJECTIVE**: Behavioral health issues like anxiety and depression negatively impact numerous aspects of primary care, including medical regimen adherence, communication, physical well-being, and engagement in beneficial health behaviors. This study aimed to examine internal and family medicine residents’ (1) patterns of addressing mental health concerns (e.g., frequency of referral for psychotherapy and/or medication), (2) self-perceptions of competency in assessment and treatment of specific mental health disorders, and (3) frequency of utilization of efficacious therapeutic strategies during clinical encounters.

- **METHOD**: Self-report surveys were administered to Family Medicine and Internal Medicine residents (N=39) at a rural teaching hospital in the northeastern US.

- **RESULTS**: Descriptive analyses indicated that 81% of the time, residents discussed mental health concerns when it was the presenting concern, and routinely offered medication and psychotherapy (71% and 68% of the time, respectively). Residents felt most competent in addressing major depressive disorder and generalized anxiety disorder, and least competent in addressing somatization disorder and bipolar disorder. Residents reported that they most often used motivational interviewing (MI), followed by Cognitive Behavioral Therapy, psychoeducation, and solution-focused strategies during medical encounters.

- **DISCUSSION**: These findings highlight a need to identify barriers to addressing mental health conditions in primary care and potential gaps in training that might address low levels of perceived competency among medical residents.

OBJECTIVE: Youth with type 1 diabetes (T1D) experiencing self-management difficulties are at risk of irreversible long-term health problems and consume a disproportionate amount of health care resources. Behavioral health interventions for this population have shown limited long-term effects, perhaps because of limited research on and intervention in relevant environments. To effectively intervene, providers must first thoroughly understand how risk factors interact with various contexts (e.g., school, home, hospital) to determine opportunities for the development of relevant interventions.

METHOD: This comprehensive, non-systematic review utilized an ecological systems framework to examine the state of the literature with regard to risk factors for poor T1D outcomes and associated intervention.

RESULTS: This review identified that, whereas risk factors in some systems (e.g., individual, family) have received disproportionate scrutiny, other environments and contexts (e.g., school, medical system) have been relatively neglected by researchers. Similarly, interventions that target understudied environments are lacking, and the majority of rigorously studied interventions only target a single context. Perhaps this accounts for the lack of interventions shown to have a long-term impact on glycemic control.

DISCUSSION: Our review demonstrates that researchers and funding agencies should prioritize efforts that (a) examine the influence of underexamined environments (e.g., primary care clinics, schools) and interactions (e.g., health care provider to parent, school nurse to youth) on T1D outcomes, (b) place increased emphasis on inclusion of understudied populations (e.g., families of minority racial/ethnic backgrounds), and (c) develop and evaluate interventions that specifically are tailored for these settings, interactions, and populations.

Link: https://psycnet.apa.org/record/2019-15651-002