

CLINICAL

Bedson, J., Hill, J., White, D., Chen, Y., Wathall, S., Dent, S., ... & van der Windt, D. (2019). Development and validation of a pain monitoring app for patients with musculoskeletal conditions (The Keele pain recorder feasibility study). *BMC medical informatics and decision making*, 19(1), 24.

- **OBJECTIVE:** Assessing daily change in pain and related symptoms help in diagnosis, prognosis, and monitoring response to treatment. However, such changes are infrequently assessed, and usually reviewed weeks or months after the start of treatment. *Authors* therefore developed a smartphone application (Keele Pain Recorder) to record information on the severity and impact of pain on daily life. Specifically, the study goal was to assess face, content and construct validity of data collection using the Pain Recorder in primary care patients receiving new analgesic prescriptions for musculoskeletal pain, as well as to assess its acceptability and clinical utility.
- **METHOD:** The app was developed with Keele's Research User Group (RUG), a clinical advisory group (CAG) and software developer for use on Android devices. The app recorded pain levels, interference, sleep disturbance, analgesic use, mood and side effects. In a feasibility study, patients aged > 18 attending their general practitioner (GP) with a painful musculoskeletal condition were recruited to use the app twice per day for 28 days. Face and construct validity were assessed through baseline and post-study questionnaires (Spearman's rank correlation coefficient). Usability and acceptability were determined through post-study questionnaires, and patient, GP, RUG and CAG interviews.
- **RESULTS:** An app was developed which was liked by both patients and GPs. It was felt that it offered the opportunity for GPs to discuss pain control with their patients in a new way. All participants found the app easy to use (it did not interfere with their activities) and results easy to interpret. Strong associations existed between the first 3 days (Spearman $r = 0.79$) and last 3 days ($r = 0.60$) of pain levels and intensity scores on the app with the validated questionnaires.
- **DISCUSSION:** Collaborating with patient representatives and clinical stakeholders, *authors* developed an app which can be used to help clinicians and patients monitor painful musculoskeletal conditions in response to analgesic prescribing. Recordings were accurate and valid, especially, for pain intensity ratings, and it was easy to use. Future work needs to examine how pain trajectories can help manage changes in a patient's condition, ultimately assisting in self-management.

Link: <https://bmcmedinformdecismak.biomedcentral.com/articles/10.1186/s12911-019-0741-z>

Santoft, F., Axelsson, E., Öst, L. G., Hedman-Lagerlöf, M., Fust, J., & Hedman-Lagerlöf, E. (2019). Cognitive behaviour therapy for depression in primary care: Systematic review and meta-analysis. *Psychological Medicine*, ePUB ahead of print, 1-9.

- **OBJECTIVE:** Depression is common in primary care, and most patients prefer psychological treatment over pharmacotherapy. Cognitive behaviour therapy (CBT) is an effective treatment, but there are gaps in current knowledge about CBT in the primary care context, especially with regard to long-term effects and the efficacy of specific delivery formats. This is an obstacle to the integration of primary care and specialist psychiatry. *The authors proposed to conduct a systematic review and meta-analysis to synthesize the extant literature on the efficacy of CBT for depression in primary care settings.*

- **METHOD:** *Authors* conducted a systematic review and meta-analysis of randomised controlled trials of CBT for primary care patients with depression to investigate the effect of CBT for patients with depression in primary care.
- **RESULTS:** A total of 34 studies, with 2543 patients in CBT and 2815 patients in control conditions, were included. CBT was more effective than the control conditions [$g = 0.22$ (95% confidence interval (CI) 0.15–0.30)], and the effect was sustained at follow-up [$g = 0.17$ (95% CI 0.10–0.24)]. CBT also led to a higher response rate [odds ratio (OR) = 2.47 (95% CI 1.60–3.80)] and remission rate [OR = 1.56 (95% CI 1.15–2.14)] than the control conditions. Heterogeneity was moderate. The controlled effect of CBT was significant regardless of whether patients met diagnostic criteria for depression, scored above a validated cut-off for depression, or merely had depressive symptoms. CBT also had a controlled effect regardless of whether the treatment was delivered as individual therapy, group therapy or therapist-guided self-help.
- **DISCUSSION:** *Authors* conclude that CBT appears to be effective for patients with depression in primary care, and recommend that patients with mild to moderate depression be offered CBT in primary care

Link: <https://www.ncbi.nlm.nih.gov/pubmed/30688184>

Zaheer, S., Garofalo, V., Rodie, D., Perivolaris, A., Chum, J., Crawford, A., ... & Sunderji, N. (2018). Computer-aided telephone support for primary care patients with common mental health conditions: randomized controlled trial. *JMIR Mental Health*, 5(4), e10224.

- **OBJECTIVE:** Depression, anxiety, and at-risk drinking are highly prevalent in primary care settings. Many jurisdictions experience geographical barriers to accessing mental health services, necessitating the development and validation of alternative models of care delivery. Existing evidence supports the acceptability and effectiveness of providing mental health care by telephone. This analysis assesses patient's acceptability of computer-aided telephone support delivered by lay providers to primary care patients with depression, anxiety, or at-risk drinking
- **METHOD:** The Primary care Assessment and Research of a Telephone intervention for Neuropsychiatric conditions with Education and Resources study is a randomized controlled trial comparing a computer-aided telephone-based intervention to usual care enhanced by periodic assessments in adult primary care patients referred for the treatment of depression, anxiety, or at-risk drinking; no part of the study involves in-person contact. For this analysis, the following data were obtained: reasons provided for declining consent; reasons provided for withdrawing from the study; study retention rate; and a thematic analysis of a satisfaction survey upon study completion.
- **RESULTS:** During the consent process, 17.1% (114/667) patients referred to the study declined to participate and 57.0% of them (65/114) attributed their refusal to research-related factors (ie, randomization and time commitment); a further 16.7% (19/114) declined owing to the telephone delivery of the intervention. Among the 377 participants who were randomized to the 1-year intervention, the overall retention rate was 82.8% (312/377). Almost no participants who withdrew from the study identified the telephone components of the study as their reason for withdrawal. Analysis of a qualitative satisfaction survey revealed that 97% (38/39) of comments related to the telephone components were positive with key reported positive attributes being accessibility, convenience, and privacy.
- **DISCUSSION:** Our results suggest that a computer-aided telephone support is highly acceptable to primary care patients with depression, anxiety, or at-risk drinking. In particular, these patients appreciate its accessibility, flexibility, and privacy.

Link: <https://tinyurl.com/y4nc5wfm>

IMPLEMENTATION

Piñeiro, B., Vidrine, D. J., Wetter, D. W., Hoover, D. S., Frank-Pearce, S. G., Nguyen, N., ... & Vidrine, J. I. (2018). Implementation of Ask-Advise-Connect in a safety net healthcare system: quitline treatment engagement and smoking cessation outcomes. *Translational Behavioral Medicine*, *iby108*.

- **OBJECTIVE:** Ask-Advise-Connect (AAC) was designed to link smokers in primary care settings with evidence-based tobacco treatment delivered via state quitlines. AAC involves training medical staff to Ask about smoking status, Advise smokers to quit, and offer to immediately Connect smokers with quitlines through an automated link within the electronic health record. *The authors* evaluated the efficacy of AAC in facilitating treatment engagement and smoking abstinence in a 34 month implementation trial conducted in a large, safety-net health care system.
- **METHOD:** AAC was implemented from April 2013 through February 2016 in 13 community clinics that provided care to low-income, predominantly racial/ethnic minority smokers. Licensed vocational nurses were trained to implement AAC as part of standard care. Outcomes included (a) treatment engagement (i.e., proportion of identified smokers that enrolled in treatment) and (b) self-reported and biochemically confirmed abstinence at 6 months.
- **RESULTS:** Smoking status was recorded for 218,915 unique patients, and 40,888 reported current smoking. The proportion of all identified smokers who enrolled in treatment was 11.8%. Self-reported abstinence at 6 months was 16.6%, and biochemically confirmed abstinence was 4.5%. AAC was successfully implemented as part of standard care. Treatment engagement was high compared with rates of engagement for more traditional referral-based approaches reported in the literature.
- **DISCUSSION:** Although self-reported abstinence was in line with other quitline-delivered treatment studies, biochemically confirmed abstinence, which is not routinely captured in quitline studies, was dramatically lower. This discrepancy challenges the adequacy of self-report for large, population-based studies. A more detailed and comprehensive investigation is warranted.

Link: <https://academic.oup.com/tbm/advance-article/doi/10.1093/tbm/iby108/5198988>

OPERATIONAL

Serrano, N., Prince, R., Fondow, M., & Kushner, K. (2018). Does the Primary Care Behavioral Health Model Reduce Emergency Department Visits?. *Health Services Research*, *53*(6), 4529-4542.

- **OBJECTIVE:** To examine the impact of integrating behavioral health services using the primary care behavioral health (PCBH) model on emergency department (ED) utilization.
- **METHOD:** Utilization data from three Dane County, Wisconsin hospitals and four primary care clinics from 2003 to 2011. *The researchers* used a retrospective, quasi-experimental, controlled, pre-post study design. Starting in 2007, two clinics began integrating behavioral health into their primary care practices with a third starting in 2010. A fourth, nonimplementing, community clinic served as control. Change in emergency department and primary care utilization (number of visits) for patients diagnosed with mood and anxiety disorders was the outcomes of interest. Retrospective data were obtained from electronic patient records from the three main area hospitals along with primary care data from participating clinics.
- **RESULTS:** Following the introduction of the PCBH model, one clinic experienced a statistically significant ($p < .01$, 95 percent CI 6.3-16.3 percent), 11.3 percent decrease in the ratio of ED visits to primary care encounters, relative to a control site, but two other intervention clinics did not.

- **DISCUSSION:** The PCBH model may be associated with a reduction in ED utilization, but better-controlled studies are needed to confirm this result.

Link: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/1475-6773.12862>

Shepardson, R. L., Johnson, E. M., Possemato, K., Arigo, D., & Funderburk, J. S. (2018). Perceived barriers and facilitators to implementation of peer support in Veterans Health Administration Primary Care-Mental Health Integration settings. *Psychological Services, Advanced Online Edition*.

- **OBJECTIVE:** Peer support is increasingly recognized as consistent with the goals of integrated primary care and is being implemented in primary care settings as a patient-centered approach that increases patient activation and access to care. Within the Veterans Health Administration (VHA), peer support specialists (PSSs) have traditionally worked in specialty mental health settings and only recently started working in Primary Care-Mental Health Integration (PC-MHI) settings. Prior research has identified implementation challenges, such as role confusion, when integrating peer support into new settings. *Using qualitative methods, researchers examined implementation barriers and facilitators for utilizing peer support in PC-MHI settings.*
- **METHOD:** In this qualitative descriptive study, *researchers* conducted semistructured interviews on perceived barriers and facilitators to implementing peer support in PC-MHI with 25 key stakeholders (7 PSSs, 6 PSS supervisors, 6 PC-MHI providers, and 6 primary care providers). We used conventional content analysis to code responses within four a priori implementation categories: barriers, initial facilitators, long-term facilitators, and leadership support.
- **RESULTS:** Perceived barriers included poor program functioning, inadequate administrative support, role confusion, and negative stakeholder attitudes. Key perceived facilitators of initializing and maintaining peer support were similar; administrative support was emphasized followed by program functioning and team cohesion. Stakeholder buy-in and access/visibility were perceived to facilitate initial implementation, whereas evidence of success was believed to facilitate maintenance. Stakeholder buy-in and administrative support were considered key elements of leadership support.
- **DISCUSSION:** Results were consistent with prior research from specialty mental health settings, but identified unique considerations for PC-MHI settings, particularly clarifying the PSS role based on local PC-MHI needs, obtaining buy-in, and facilitating integration of PSSs into the primary care team.

Link: <https://psycnet.apa.org/record/2018-54392-001>

POLICY

Drummond, N., McCleary, L., Freiheit, E., Molnar, F., Dalziel, W., Cohen, C., ... & Silvius, J. (2018). Antidepressant and antipsychotic prescribing in primary care for people with dementia. *Canadian Family Physician, 64*(11), e488-e497.

- **OBJECTIVE:** To use data from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) to evaluate the prevalence of antidepressant and antipsychotic prescriptions among patients with no previous depression or psychosis diagnoses, and to identify the factors associated with the use of these drugs in this population.
- **METHOD:** Retrospective cohort study using data derived from CPCSSN. *The setting included* primary care practices associated with CPCSSN. Participants *were* patients who were born before 1949; who were associated with a CPCSSN primary care practitioner between October 1, 2007, and September 30, 2013; and whose electronic medical records contained data from at least 6 months before and 12 months after the date of dementia diagnosis. Main Outcome Measures *included* prescription for an antidepressant or

antipsychotic medication in the absence of a depression or psychosis diagnosis. Multivariable models were fitted to determine estimated odds ratios (ORs) and were adjusted for age and sex.

- **RESULTS:** Of the 3252 patients without a depression diagnosis, 8.5% received a new prescription for an antidepressant in the 12 months following their diagnosis of dementia. Prescribing was reduced in association with older age (OR of 0.86 per 5-year age increase, $P=.001$) and male sex (OR=0.77, $P=.056$), and prescribing increased in association with prescription of cholinesterase inhibitor medications (OR=1.57, $P=.003$). Of the 4262 patients without a diagnosis of psychosis, 6.1% received a new prescription for an antipsychotic in the 12 months following their diagnosis of dementia. Higher rates of antipsychotic prescriptions were reported in men (OR=1.31, $P=.046$), those receiving a prescription for steroids (OR=1.90, $P=.037$), and those diagnosed with Parkinson disease (OR 1.58, $P=.051$).
- **DISCUSSION:** A substantial number of patients with dementia are being prescribed antidepressant or antipsychotic medications by their primary care practitioners without evidence of depression or psychosis in their electronic medical records.

EDUCATION & TRAINING

Jones-Bourne, C., & Arbuckle, M. R. (2019). Psychiatry Residents' Perspectives of Primary Care in the Psychiatric Setting. *Academic Psychiatry, 43*(2), 196-199.

- **OBJECTIVE:** Given the growing interest in integrated care, this study sought to investigate the perception of psychiatry residents towards managing general medical conditions in their psychiatric patients.
- **METHOD:** Between July–October 2017, all 46 residents at an adult psychiatry program were asked to complete an online survey.
- **RESULTS:** Sixty-seven percent responded. Most residents (81%) indicated they were knowledgeable and/or comfortable in managing medical conditions with supervision/consultation from a primary care provider. Residents also indicated that they would 'like to' (48%) and/or 'should' be able to (71%) manage the general medical conditions of their patients in the future with supervision/consultation from a primary care provider. An additional 26% indicated that they would like to and/or should be able to independently manage both conditions.
- **DISCUSSION:** Psychiatry residents were generally interested in managing basic medical issues. Opportunities to expand residency training in integrated care should be considered. With new models of integrated care emerging, future studies should explore how resident attitudes might evolve over time, as well as the attitudes and opinions of practicing psychiatrists and supervisors on this topic.

Lauria-Horner, B., Beaulieu, T., Knaak, S., Weinerman, R., Campbell, H., & Patten, S. (2018). Controlled trial of the impact of a BC adult mental health practice support program (AMHPSP) on primary health care professionals' management of depression. *BMC Family Practice, 19*(1), 183.

- **OBJECTIVE:** Depression affects over 400 million people globally. The majority are seen in primary care. Barriers in providing adequate care are not solely related to physicians' knowledge/skills deficits, but also time constraints, lack of confidence/avoidance, which need to be addressed in mental health-care redesign. *The authors* hypothesized that family physician (FP) training in the Adult Mental Health Practice Support Program (AMHPSP) would lead to greater improvements in patient depressive symptom ratings (a priori primary outcome) compared to treatment as usual.
- **METHOD:** From October 2013 to May 2015, in a controlled trial 77 FP practices were stratified on the total number of physicians/practice as well as urban/rural setting, and randomized to the British Columbia AMHPSP—a multi-component contact-based training to enhance FPs' comfort/skills in treating mild-

moderate depression (intervention), or no training (control) by an investigator not operationally involved in the trial. FPs with a valid license to practice in NS were eligible. FPs from both groups were asked to identify 3-4 consecutive patients > 18 years old, diagnosis of depression, Patient Health Questionnaire (PHQ-9) score ≥ 10 , able to read English, intact cognitive functioning. Exclusion Criteria *included* antidepressants within 5 weeks and psychotherapy within 3 months of enrollment, and clinically judged urgent/emergent medical/psychiatric condition. Patients were assigned to the same arm as their physician. Thirty-six practices recruited patients (intervention n = 23; control n = 13). The study was prematurely terminated at 6 months of enrollment start-date due to concomitant primary health-care transformation by health-system leaders which resulted in increased in-office demands, and recruitment failure. We used the PHQ-9 to assess between-group differences at baseline, 1, 2, 3, and 6 months follow-up. Outcome collectors and assessors were blind to group assignment.

- **RESULTS:** One hundred-and-twenty-nine patients (intervention n = 72; control n = 57) were analysed. A significant improvement in depression scores among intervention group patients emerged between 3 and 6 months, time by treatment interaction, likelihood ratio test (LR) $\chi^2(3) = 7.96$, $p = .047$.
- **DISCUSSION:** This novel skill-based program shows promise in translating increased FP comfort and skills managing depressed patients into improved patient clinical outcomes—even in absence of mental health specialists availability.

Link: <https://bmcfampract.biomedcentral.com/articles/10.1186/s12875-018-0862-y>

FINANCIAL

Holst, A., Ginter, A., Björkelund, C., Hange, D., Petersson, E. L., Svenningsson, I., ... & Möller, C. (2018). Cost-effectiveness of a care manager collaborative care programme for patients with depression in primary care: economic evaluation of a pragmatic randomised controlled study. *BMJ Open*, 8(11), e024741.

- **OBJECTIVE:** To evaluate the cost-effectiveness of a care manager (CM) programme compared with care as usual (CAU) for treatment of depression at primary care centres (PCCs) from a healthcare as well as societal perspective.
- **METHOD:** *This study used a cost-effectiveness analysis design. The setting was 23 PCCs in two Swedish regions. Participants were patients with depression (n=342). Main Outcome Measures* included a cost-effectiveness analysis, *which* was applied on a cluster randomised trial at PCC level where patients with depression had 3 months of contact with a CM (11 intervention PCCs, n=163) or CAU (12 control PCCs, n=179), with follow-up 3 and 6 months. Effectiveness measures were based on the number of depression-free days (DFDs) calculated from the Montgomery-Åsberg Depression Rating Scale-Self and quality-adjusted life years (QALYs). Results were expressed as the incremental cost-effectiveness ratio: $\Delta\text{Cost}/\Delta\text{QALY}$ and $\Delta\text{Cost}/\Delta\text{DFD}$. Sampling uncertainty was assessed based on non-parametric bootstrapping.
- **RESULTS:** Health benefits were higher in intervention group compared with CAU group: QALYs (0.357 vs 0.333, $p < 0.001$) and DFD reduction of depressive symptom score (79.43 vs 60.14, $p < 0.001$). The mean costs per patient for the 6-month period were €368 (healthcare perspective) and €6217 (societal perspective) for the intervention patients and €246 (healthcare perspective) and €7371 (societal perspective) for the control patients (n.s.). The cost per QALY gained was €6773 (healthcare perspective) and from a societal perspective the CM programme was dominant.
- The CM programme was associated with a gain in QALYs as well as in DFD, while also being cost saving compared with CAU from a societal perspective. This result is of high relevance for decision-makers on a

national level, but it must be observed that a CM programme for depression implies increased costs at the primary care level.

Link: <https://bmjopen.bmj.com/content/bmjopen/8/11/e024741.full.pdf>

Note: Text *in italics* was added by reviewers in order to clarify the text in the abstracts. All other text was pulled directly from the abstracts.