CHCS

Center for
Health Care Strategies, Inc.

ROI Evidence Base:
Studies on Depression

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This set of studies is part of the *ROI Evidence Base*, which was developed by the Center for Health Care Strategies and Mathematica Policy Research, Inc. to help policymakers identify intervention strategies with the potential to both improve quality and reduce health care costs. For the full *ROI Evidence Base*, visit **www.chcs.org**.

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Depression Studies Reporting No Changes or Increases in Cost/Utilization - Summary Table

Clinical Focus	Author/Year	Target Population	Intervention Strategies	Evaluation Timeframe	Cost/Utilization Outcomes	Quality of Evidence
Depression	Capoccia, 2004	Adults	Collaborative care intervention employed in the primary care clinic where a clinical pharmacist or pharmacy resident in conjunction with the primary care physician and study psychiatrist followed-up with patient	12 months	No statistically significant differences between treatment groups in number of emergency room visits	A
Depression	Katon, 2002	Adults	Multifaceted intervention targeting patient, physician, and process of care, using collaborative management by a psychiatrist and a primary care physician	28 months	No significant differences in total ambulatory costs between treatment groups	A
Depression	Schoenbaum, 2001	Adults	Local practice teams were trained in 2-day workshop for enhanced educational and assessment resources, and patients were followed-up either by 1) nurses, or 2) trained local psychotherapists	24 months	No statistically significant difference in average total health care costs	A
Depression	Simon, 2006	Adults	Nurse case managers collaborated with patient's mental health provider to provide 2-year systematic intervention involving telephone monitoring and medication adherence	24 months	19% increase (unadjusted) in mental health treatment costs	A
Depression	Simon, 2006	Adults	Three-session telephone-based care management program conducted by trained registered nurses	6 months	No statistically significant difference in number of visits for mental health treatment	A

Detail for Selected Study - Capoccia, 2004

Characteristic	Description
Author and Year of Publication	Capoccia 2004
Clinical Focus	Depression
Target Population	Patients >18 y.o. diagnosed with a new episode of depression and started on an antidepressant medication.
Intervention Strategies	Pharmacists collaborated with primary care providers to facilitate patient education, the initiation and adjustment of antidepressant dosages, the monitoring of patient adherence to the regimen, the management of adverse reactions, and the prevention of relapse. Patients received follow-up phone calls from the clinical pharmacist or pharmacy resident, in conjunction with the PCP and study psychiatrist on a weekly basis for the first four weeks, then every two weeks for the duration of the study.
Additional Targeting Criteria	Spoke English; excluded if pregnant or nursing; had 2 or more suicide attempts; recent alcohol or substance abuse.
Opt-in/opt-out, if available	Opt-in
Enrollment rate, if available	70% (74/106 eligible were randomly assigned)
Geographic Location	Washington State
Type of Community	Unclear.
Health Care Setting	University of Washington Family Medical Center (UWFMC)
Health Insurance	11% Medicaid or Medicare, 78% private or managed care, 4% other, 7% uninsured
Quality of Evidence	A
Study Design	Randomized controlled trial
Sample Size	37 in intervention group, 30 in control group
Evaluation Timeframe	12 months
Cost/Utilization Outcomes	No statistically significant differences in the number of visits to all health care providers (Median: T = 9; C = 9; p = 0.99), physicians (T = 4; C= 5; p = 0.88), psychiatrists or psychologists (T = 0; C = 0; p = 0.99), emergency rooms (T = 0; C = 0; p = 0.27), counselors or other mental health providers (T = 0; C = 1; p = 0.30), and alternative medicine providers (T = 0; C = 0; p = 0.45); No statistical difference between groups during follow-up period in mean SCL-20 score (p = 0.92), mean SF-12 mental health score (p = 0.46), and mean SF-12 physical health score (p = 0.18).
Full Citation	Capoccia, K L. D M. Boudreau, D K. Blough, A J. Ellsworth, D R. Clark, N G. Stevens, W J. Katon, and S D. Sullivan. "Randomized trial of pharmacist interventions to improve depression care and outcomes in primary care." *Am J Health Syst Pharm*, vol. 61, no. 4, 2004, pp. 364-72.

Detail for Selected Study - Katon, 2002

Characteristic	Description
Author and Year of Publication	Katon 2002
Clinical Focus	Depression
Target Population	Patients between the ages of 18 and 80 who received a new antidepressant prescription (no prescriptions within the last 120 days) from a primary care physician for the diagnosis of depression or anxiety.
Intervention Strategies	Each patient received an educational book and a companion videotape. Patients were also scheduled 2 sessions conducted in the primary care clinic with a psychiatrist who reported patient progress and consulted with patients' primary care provider.
Additional Targeting Criteria	Excluded if currently seeing a psychiatrist, pregnant or nursing, screened a score of 2 or more on the CAGE alcohol screening questionnaire, limited command of English, planned to disenroll from the Group Health insurance plan within the next 12 months, or had recently used lithium or antipsychotic medication.
Opt-in/opt-out, if available	Opt-in
Enrollment rate, if available	33% (228/694 eligible were randomly assigned)
Geographic Location	Western Washington
Type of Community	Unclear.
Health Care Setting	Primary care clinics of Group Health Cooperative of Puget Sound (GHC)
Health Insurance	Not stated
Quality of Evidence	A
Study Design	Randomized controlled trial
Sample Size	171 completed the 28-month follow-up
Evaluation Timeframe	28 months
Cost/Utilization Outcomes	No significant differences in total ambulatory costs between the treatment and control group (P = 0.40), total health care costs (P = 0.34), depression treatment costs (P= 0.10), or non-depression-related outpatient costs (P = 0.74); Significant treatment effect for moderate-severity strata in 28-month SCL-Depression Scores (T = 0.88 ± 0.52; C = 1.23 ± 0.62; P = 0.004); No statistical significant difference within high-severity strata for 28-month SCL-Depression Scores (T = 1.16 ± 0.85; C = 1.19 ± 0.72; P = 0.88).
Full Citation	Katon, W. J. Russo, M. Von Korff, E. Lin, G. Simon, T. Bush, E. Ludman, and E. Walker. "Long-term effects of a collaborative care intervention in persistently depressed primary care patients." *J Gen Intern Med,* vol. 17, no. 10, 2002, pp. 741-8.

Detail for Selected Study - Schoenbaum, 2001

Characteristic	Description
Author and Year of Publication	Schoenbaum 2001
Clinical Focus	Depression
Target Population	Patients >18 y.o. who screened positive for depression.
Intervention Strategies	2 interventions; QI-Meds and QI-Therapy. For both intervention groups, local practice teams were trained in a 2-day workshop to provide clinician education through lectures, academic detailing, or audit and feedback, and to supervise intervention staff and conduct team oversight. Practice teams were given patient education pamphlets and videotapes, patient tracking forms, and clinician manuals and pocket reminder cards and were encouraged to distribute them. Patient follow-up was either conducted by a nurse specialist trained to support medication adherence via telephone contacts or visits on a monthly basis for 6-12 months (QI-meds) or by a practice therapist trained to provide individual and group cognitive behavioral therapy for 6 months (QI-therapy).
Additional Targeting Criteria	Fluent in English or Spanish; insurance coverage for intervention therapists; intended to use the practice over the next 12 months.
Opt-in/opt-out, if available	Opt-in
Enrollment rate, if available	56% (1356/2417 eligible were enrolled, randomized at group level)
Geographic Location	Not stated
Type of Community	Unclear.
Health Care Setting	Primary care clinics in community-based managed care organizations
Health Insurance	Managed care
Quality of Evidence	A
Study Design	Randomized controlled trial
Sample Size	371 in QI-Meds group, 401 in QI-Therapy group, 386 in control group completed mail surveys at 24 months
Evaluation Timeframe	24 months
Cost/Utilization Outcomes	No statistically significant difference in average total health care costs (Percent increase QI-Med: 11% [P = 0.35]; QI-Therapy: 13% [P = 0.28]); Estimated costs per QALY gained were between $15,331 and $36,367 for QI-Meds and $9,478 and $21,478 for QI-Therapy; Decreased days with depression burden: 25 (QI-Meds: P = 0.19) and 47 (QI-Therapy: P= 0.01); Increased employed days: 17.9 (QI-Meds: P = 0.07) and 20.9 (QI-Therapy: P = 0.03).
Full Citation	Schoenbaum, M. J. Unutzer, C. Sherbourne, N. Duan, L V. Rubenstein, J. Miranda, L S. Meredith, M F. Carney, and K. Wells. "Cost-effectiveness of practice initiated quality improvement for depression: results of a randomized controlled trial." *JAMA*, vol. 286, no. 11, 2001, pp. 1325-30.

Detail for Selected Study - Simon, 2006

Characteristic	Description
Author and Year of Publication	Simon 2006
Clinical Focus	Depression
Target Population	Patients >18y.o. having a diagnosis of bipolar spectrum disorder (bipolar disorder type I or type II, schizoaffective disorder, or cyclothymia) during prior 12 months.
Intervention Strategies	Nurse case managers provided 2-year systematic intervention program, including the following: a structured group psychoeducational program, monthly telephone monitoring of mood symptoms and medication adherence, feedback to treating mental health providers, facilitation of appropriate follow-up care, and as-needed outreach and crisis intervention.
Additional Targeting Criteria	Structured Clinical Interview for DSM-IV (SCID) used to confirm diagnosis of bipolar disorder type I or II.
Opt-in/opt-out, if available	Opt-in
Enrollment rate, if available	98% (441/450 of eligibles agreed to be randomized)
Geographic Location	Washington State
Type of Community	Unclear.
Health Care Setting	Mental health clinics of a group-model prepaid health plan, Group Health Cooperative
Health Insurance	Group-model prepaid health plan
Quality of Evidence	A
Study Design	Randomized controlled trial
Sample Size	156 in intervention group, 175 in control group included in cost analyses
Evaluation Timeframe	24 months
Cost/Utilization Outcomes	19% increase (unadjusted) in incremental mental health treatment costs ($1251 increase [adjusted]; 95% CI, $55-$2446, including approximately $800 for intervention program services and $500 increase in costs of other mental health services); Significantly reduced mean level of mani symptoms (P = 0.04); No significant intervention effect on mean level of depressive symptoms (P = 0.85).
Full Citation	Simon, G E. E J. Ludman, M S. Bauer, J. Unutzer, and B. Operskalski. "Long-term effectiveness and cost of a systematic care program for bipolar disorder." *Arch Gen Psychiatry*, vol. 63, no. 5, 2006, pp. 500-8.

Detail for Selected Study - Simon, 2006

Characteristic	Description
Author and Year of Publication	Simon 2006
Clinical Focus	Depression
Target Population	Patients >18y.o. who received a new antidepressant prescription from a psychiatrist (no antidepressant use in the past 90 days).
Intervention Strategies	Case managers who were registered nurses with a minimum of five years' experience in inpatient and outpatient mental health practice conducted a three-session telephone care management program that included assessment of depressive symptoms, medication adherence, and medication side effects with structured feedback to treating psychiatrists.
Additional Targeting Criteria	Received visit diagnosis of a depressive disorder in the past 30 days; no recorded diagnosis of bipolar disorder or schizophrenia in the past 2 years.
Opt-in/opt-out, if available	Opt-in
Enrollment rate, if available	95% (207/217 of eligibles agreed to be randomized)
Geographic Location	Washington State and northern Idaho
Type of Community	Unclear.
Health Care Setting	Mental health clinics of a group-model prepaid health plan, Group Health Cooperative
Health Insurance	Group-model behavioral health clinics of Group Health Cooperative
Quality of Evidence	A
Study Design	Randomized controlled trial
Sample Size	98 in intervention group, 97 in control group included in utilization analyses
Evaluation Timeframe	6 months
Cost/Utilization Outcomes	20% increase in the number of medication management visits to the specialty clinic (T = 2.4 ± 1.6; C = 2.0 ± 2.0; P = 0.035); No statistically significant difference in number of visits to nonprescribing therapist (T = 2.0 ± 3.3; C = 2.1 ± 3.3; P = 0.91); No statistically significant difference in number of visits to primary care with mental health diagnosis (T = 0.3 ± 0.7; C = 0.4 ± 0.7; P = 0.13).
Full Citation	Simon, G E. E J. Ludman, and B H. Operskalski. "Randomized trial of a telephone care management program for outpatients starting antidepressant treatment." *Psychiatr Serv,* vol. 57, no. 10, 2006, pp. 1441-5.