

Kaiser Permanente Research Brief

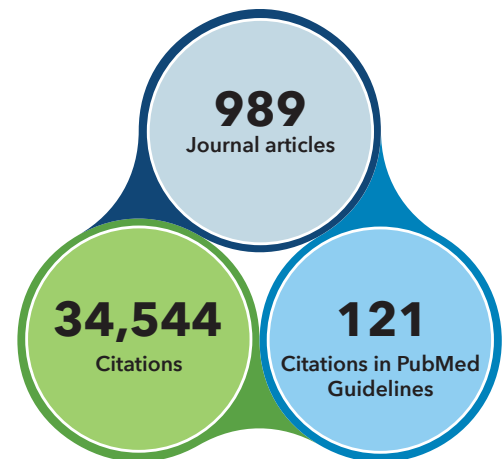
Mental health

This brief summarizes the contributions of Kaiser Permanente Research since 2007 on the topic of mental health, including depression, anxiety, and other affective and stress disorders.

The Centers for Disease Control and Prevention defines mental health conditions as those characterized by alterations in thinking, feeling, mood, or behavior associated with distress or impaired functioning.¹ Anxiety disorders and depressive disorders are the first and second most common mental health conditions in the United States.² The CDC estimates that more than 50% of people in the United States will have a mental health condition at some point in their lifetime, and that 1 in 25 people lives with a serious mental illness such as schizophrenia, bipolar disorder, or major depression.¹ Suicide was the 12th leading cause of death in 2020, accounting for nearly 46,000 deaths in the United States.^{1,3}

Mental health is an important area of study for Kaiser Permanente Research. Scientists across the organization have used our rich and comprehensive data to advance knowledge in the areas of understanding risk, improving patient outcomes, and translating research findings into policy and practice. We have published nearly 1,000 articles related to mental health conditions since 2007; together, these articles have been cited almost 35,000 times.⁴ These articles are the product of observational studies, randomized controlled trials, meta-analyses, and other studies led by Kaiser Permanente scientists. Our unique environment – a fully integrated care and coverage model in which our research scientists, clinicians, medical groups, and health plan leaders collaborate – lets us contribute generalizable knowledge about mental health, and many other research topics.

Kaiser Permanente publications related to mental health since 2007



Source: Kaiser Permanente Publications Library and Scite metrics, as of February 28, 2022.

This brief summarizes a selection of the publications contained within the Kaiser Permanente Publications Library, which indexes journal articles and other publications authored by individuals affiliated with Kaiser Permanente. The work described in this brief originated from across Kaiser Permanente's 8 regions and was supported by a wide range of funding sources including internal research support as well as both governmental and nongovernmental extramural funding.

Understanding Risk

Who is at risk for developing mental health conditions?

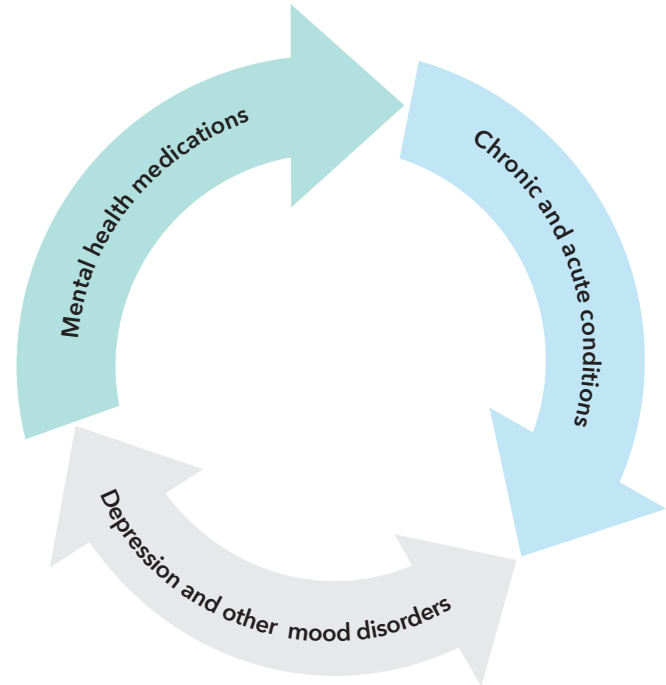
Kaiser Permanente researchers have contributed to understanding risk factors for developing mental health conditions, including family history,⁵⁻⁹ adverse life experiences (such as abuse, neglect, intimate partner violence),¹⁰⁻¹⁸ and life course events (for example, childbirth, menopause).¹⁹⁻²¹ For youth, depression risk has also been linked to parental depression.^{22,23} Some severe medical conditions have also been linked to depression and suicidality (suicidal ideation, suicide plans, and suicide risk), such as eating disorders,²⁴ autism spectrum disorder,²⁵ psoriasis,²⁶⁻³⁰ active dialysis,³¹ chronic obstructive pulmonary disease (COPD),³² and acute coronary syndrome events.³³ Recent analyses from the Mental Health Research Network also found that sleep disorders, HIV and AIDS, traumatic brain injuries, and multiple physical health problems increased the risk of suicide.^{34,35} Kaiser Permanente scientists have also found higher levels of anxiety in children, greater depression and anxiety among adults, and increased use of mental health services during the COVID-19 pandemic,³⁶⁻³⁹ though the implications of these mental health symptoms are unclear.⁴⁰ Other recent research has found increases in depression symptoms among adults during periods of economic recession.⁴¹

There is emerging evidence that some prenatal exposures may contribute to risk of mental health conditions for children. Our research has tentatively linked both maternal tobacco use during pregnancy⁴² and maternal influenza⁴³ to bipolar disorder. Other studies have found associations between schizophrenia spectrum disorders in male offspring and perinatal exposure both to maternal stress⁴⁴ and to elevated maternal homocysteine (an amino acid) levels.⁴⁵

What other health risks do people with mental health conditions face?

People with mental health conditions experience a range of health risks, including medication-related risks. Our research has demonstrated that people with bipolar disorders or schizophrenia

Reinforcing risks between select physical and mental health conditions



have greater odds of having medical comorbidities (2 or more co-occurring chronic conditions) and higher rates of cardiovascular mortality than people without these serious mental illnesses.⁴⁶⁻⁴⁸ People with serious mental illnesses also experience greater risk of obesity and diabetes, both independently and because of the side effects of medications.^{49,50} Recent Kaiser Permanente research has also found that patients with depression and unmet needs for mental health care use psychoactive medications, including opioids, more heavily than patients without mental health symptoms.⁵¹⁻⁵³ Other work has found that patients with major depression or bipolar disorder (though not patients diagnosed with schizophrenia) are more likely to be diagnosed with chronic non-cancer pain and to be prescribed opioid medications.⁵⁴

There is also some evidence of a link between depression or anxiety and worse outcomes for some chronic conditions, including diabetes,⁵⁵⁻⁵⁸ COPD,⁵⁹⁻⁶¹ and others.^{62,63} These associations may reflect the impact of these mental health conditions on patients' abilities to complete self-management activities, such as taking medications as prescribed.^{55,62}

Kaiser Permanente researchers have documented risks for fetuses exposed to some mental health medications in utero.^{64,65} Understanding the risks of medication use during pregnancy has become increasingly important because the number of pregnancies exposed to some classes of mental health medications has been growing over time.⁶⁶

Particularly among youth, there has been substantial controversy about the appropriateness and safety of some mental health medications.⁶⁷ There is evidence of a small increase in suicidality risk associated with certain medications,⁶⁸ although a large study involving Kaiser Permanente scientists found that reduced prescribing of antidepressants was associated with increased suicidal behavior among adolescents and young adults.⁶⁷ These findings have led to changes in the prescribing of these drugs to youth,⁶⁹ and have also prompted studies comparing effectiveness of different treatment pathways for youth who are not responsive to their initial prescribed treatment.⁷⁰

Kaiser Permanente research scientists have also authored studies evaluating the risks of suicide and non-suicidal self-injury⁷¹⁻⁷⁵ and assessing screening methods for suicidality.⁷⁶ There is evidence of elevated suicide risk for adolescents following their initial diagnosis with a psychotic disorder,⁷⁷⁻⁷⁹ as well as for adults with psychotic disorders and histories of suicidal ideation.⁸⁰ Our researchers have also demonstrated that patients with prior suicide attempts,⁸¹ adolescents with treatment-resistant depression,⁷¹ patients with chronic pain,⁸² people treated for bipolar disorder,⁷³ patients with substance use disorders^{83,84} or heavy alcohol use,⁸⁵ and elderly people experiencing depression⁸⁶ – among others – are at high risk for self-injury outcomes. Recent research has employed artificial intelligence methods to develop more accurate tools for monitoring depression treatment,^{87,88} and to identify people at high risk for suicide attempts or death by suicide.^{84,89-91} Our scientists have also explored genetic factors associated with risk for suicidal behavior.⁹²

Improving Patient Outcomes

What strategies are effective in preventing mental health conditions?

Although opportunities for primary prevention of mental health conditions are limited, Kaiser Permanente researchers have assessed some prevention strategies for high-risk populations.

For example, recent studies demonstrated a decrease in newly-occurring depression among at-risk adolescents who participated in group cognitive behavioral therapy.^{23;93-95} Researchers have also completed a meta-analysis of studies focused on the “Coping With Depression” psychoeducational intervention, which they found was effective as a preventive strategy to reduce the risk of major depression.⁹⁶ The link between environmental exposures (such as adverse childhood experiences or perinatal exposures) and mental health outcomes may offer an opportunity to prevent mental health conditions.⁹⁷ An ongoing randomized trial will evaluate “Guiding Good Choices,” a parenting program aimed at preventing depression in adolescents.⁹⁸

A meta-analysis found that participants in a prevention-oriented psychoeducational intervention using the “Coping With Depression” course had 38% LOWER RISK of developing a depressive disorder than controls.⁹⁶

How does early identification of mental health conditions affect outcomes?

Screening for mental health conditions is essential to timely diagnosis. Our researchers have assessed the evidence for screening in studies focused on specific populations and conditions, including child and adolescent depression,^{68;99} adult depression,¹⁰⁰ perinatal and postpartum depression,^{19;101;102} suicidality,⁷⁶ and others.

A Kaiser Permanente clinical trial compared the effectiveness of 3 early intervention staffing models for adolescents reporting substance use and depression symptoms, and found that offering a behavioral clinician within primary care settings was the most effective model for controlling the progression of depression symptoms.¹⁰³ Early recognition of mental health

conditions is also important because of the risk of self-harm for patients with mood disorders.

Research including Kaiser Permanente and other integrated health organizations has demonstrated that most patients were seen in at least one health care setting in the year before suicide, but half did not receive a mental health diagnosis.¹⁰⁴ Simple questionnaires may identify people at high risk for suicide.^{105;106} Kaiser Permanente researchers have collaborated with clinical leaders to implement systematic screening for suicide risk,¹⁰⁷ and have undertaken new efforts to explore and improve members' experience of screening.¹⁰⁸⁻¹¹⁰

What are the key factors in effective treatment of people with mental health conditions?

Access to and engagement in treatment – An essential factor in treating mental health conditions is to engage individuals in treatment.¹¹¹ Many patients who might benefit from treatment do not receive it.

A recent Kaiser Permanente study assessed treatment initiation patterns for adults with depression. Researchers found low rates of treatment entry among patients for whom it was recommended (35.7% of newly diagnosed patients overall), with disparities among racial and ethnic groups.¹¹² Some of those disparities may reflect patients' treatment preferences, but some may reflect differing treatments provided by clinicians.¹¹³ One study conducted by Kaiser Permanente scientists found that costs were a common barrier to use of mental health medications, while physician recommendations were helpful for increasing medication adherence.¹¹⁴ Other work conducted by our scientists has suggested that use of marijuana may negatively impact engagement with psychiatric care in patients with depression,^{115;116} and that patients living in rural areas experience greater challenges in access to mental health services.¹¹⁷

For adolescents, system-level barriers to accessing care have been described by our researchers, and include provider payment models, clinical linkages across disciplines, and confidentiality policies limiting information-sharing between disciplines.¹¹⁸ Even among patients



Only 36% of patients newly diagnosed with depression initiated treatment within 90 days.¹¹²



47% of patients with depression receiving treatment in primary care experienced improvement in their depression symptoms after 6 months.¹¹⁹



Standard telephone, video-conferencing, and web-based **interventions are effective** for treating a range of mental health conditions.¹²³

who seek treatment, outcomes are not consistent. For example, in one study of response to depression treatment in primary care, only 47% of patients experienced a large improvement in their symptoms after 6 months.¹¹⁹

Stigma associated with mental health treatment can be a barrier to entry for some populations.^{120;121} Recent research suggests that health information technologies may extend access to mental health care in many ways, including by offering treatment methods that patients may find more acceptable.^{122;123} A qualitative study focused on youth with schizophrenia, schizoaffective disorder, bipolar disorder, or affective psychosis suggested several recommended themes for better engaging patients in treatment.¹²⁴

Person-centered treatment with psychotherapy and medications – Many psychotherapeutic approaches are widely proven to be valuable – either alone or in combination with medications – for treating an array of specific populations and

Internet-delivered care management can help improve outcomes for patients with recurrent or chronic depression¹³⁴

Patients randomized to 12-month treatment for recurrent or chronic depression		
	Usual care and e-care (N=51)	Usual care alone (N=52)
Depression-free at 24 months	42%	30%
Satisfaction with psychiatric care [5=most]	4.42	4.19
	p=0.003	
Learned new coping skills [5=most]	4.26	3.72
	p<0.001	
Gained confidence in coping ability [5=most]	3.82	3.52
	p=0.06	

conditions.¹²⁵⁻¹³⁰ In recent years, this has included web- and smartphone-based programs that show great promise.^{122;131-137} Kaiser Permanente studies have also contributed to our understanding of the many complexities of medication treatment including combining medications, switching medications, and adjusting dosages.^{70;138-141}

Ensuring that treatment is person-centered is an important issue for mental health care. Disparities in mental health treatment have been documented by our researchers.^{112;142-145} However, it is not always clear whether these differences reflect variation in patient preferences for treatment; more research is needed in this area.

A recent Kaiser Permanente study that sought to better characterize patients' recovery objectives concluded that patients' goals are varied and change over time, and that services must be flexible to accommodate each patient's current

priorities.¹⁴⁶ Recognizing progress in treatment through feedback-informed care – in which patient-reported symptoms are tracked over time and used to inform treatment decisions – is an example of partnering with patients to make shared decisions.

Overall health and wellness – The management of co-occurring health conditions and maintenance of general wellness is also essential to the care of people with mental health conditions. This includes addressing harmful health behaviors, such as smoking or problematic alcohol use, through screening and intervention programs.¹⁴⁷⁻¹⁵²

Our researchers have found some evidence of more complete use of recommended preventive services and better cardiometabolic risk-factor control among individuals with serious mental illnesses than in the general population,^{153;154} possibly reflecting strong connectivity to care, and we have conducted studies of delivery system factors that can increase preventive care engagement among these patients.^{155;156} Other work has offered encouraging results about the feasibility of engaging people with serious mental illnesses in self-management programs. Several Kaiser Permanente studies have described the development and testing of health promotion programs adapted specifically for people with serious mental illnesses, and found that the programs can successfully lead to weight loss and decreased cardiovascular risk.^{49;157;158}

Translating Research Into Policy and Practice

Kaiser Permanente is a learning health care organization that works to systematically use research to inform and improve practice both within Kaiser Permanente and beyond. Kaiser Permanente researchers help lead the Mental Health Research Network, which is funded by the National Institute of Mental Health to improve mental health care by connecting research, practice, and policy.^{159;160} The MHRN includes participating research centers from 14 health care systems, including 7 of Kaiser Permanente's regional entities.

MHRN has collaborated with health systems to

understand the relationship between suicidal ideation, depression, and subsequent suicide attempts.^{72;105;161} Its collaborative response to evidence of persistent suicide risk for patients reporting thoughts of suicide on the standard screening tool (the PHQ-9) is an example of the impact possible from partnerships between researchers and health care organizations.^{72;80;107} MHRN members put in place both practice changes and complementary research plans to address the previously unrecognized sustained suicide risk in this population.¹⁰⁷ The Joint Commission issued a recommendation that all patients be screened for suicidal ideation, based in part on the MHRN findings.¹⁶²

Research, clinical, and operational partners within Kaiser Permanente have tested a range of interventions to identify and treat mental health conditions or improve outcomes for people with mental health conditions. These have includ-

ed guideline-concordant cognitive behavioral therapy,¹⁶³ web- and smartphone-based psychotherapy methods,^{134;164} telemonitoring of depression,^{165;166} use of our electronic health record system to monitor depression treatment outcomes,¹⁶⁷ universal perinatal depression screening,¹⁰¹ screening for depression among patients with cancer,¹⁶⁸ brief behavioral therapy,¹⁶⁹⁻¹⁷¹ reducing high-risk medication regimens,^{69;70;172;173} web-based resources for suicide prevention,¹⁷⁴ use of telehealth technologies to enhance pediatric mental health referrals,¹⁷⁵ and using models of integrated care and collaborative care.¹⁷⁶⁻¹⁸¹ Work related to the launch, spread, and scale of the collaborative care model exemplifies Kaiser Permanente's ability to link research and clinical operations.^{178;181-187} Implementation and evaluation of suicide screening and prevention programs is an ongoing focus in our organization.^{106;188-190} Research conducted by our scientists has identified racial disparities in the accuracy of

Feedback-informed care: patients and therapists use patient-reported symptom information to track progress and improve outcomes



suicide-risk prediction models, suggesting a need to improve screening practices in minority patient populations.¹⁹¹ During the early stages of the COVID-19 pandemic, the rapid shift to virtual care delivery allowed Kaiser Permanente to expand screening and detection of suicidal ideation.¹⁹²

Our research contributes not only to changes in policy and practice within Kaiser Permanente, but has also advanced national understanding of mental health and wellness. Since 2007, Kaiser Permanente's research articles on mental health have been cited 121 times within recent statements and clinical practice guidelines. Our scientists also participated in a recent Banbury Forum on digital mental health treatment.¹⁹³

In addition, our scientists have directly authored several practice guidelines and systematic reviews, including screening for and treatment of depression during pregnancy and the postnatal period,^{19;194;195} screening for suicidality in primary care,⁷⁶ and screening for depression in primary care¹⁰⁰ and after acute coronary syndrome events.¹⁹⁶ We have also contributed to reviews and practice guidelines for adolescent depression screening and treatment in primary care,^{68;197;198} as well as a recent statement on ketamine pharmacotherapy from the American Psychiatric Association.¹⁹⁹

Kaiser Permanente's 185 research scientists and 1,530 support staff members are based at 9 research centers. There are currently 2,355 studies underway, including clinical trials. Since 2007, our research scientists have published more than 20,000 articles in peer reviewed journals. Kaiser Permanente currently serves 12.5 million members in 8 states and the District of Columbia.

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References

1. Centers for Disease Control and Prevention. Learn About Mental Health. 2018; <https://www.cdc.gov/mental-health/learn/index.htm>. Accessed 28 February, 2018.
2. Substance Abuse and Mental Health Services Administration (SAMHSA). Mental and Substance Use Disorders. 2017; <https://www.samhsa.gov/disorders>. Accessed March 28, 2018.
3. Centers for Disease Control and Prevention. Facts About Suicide. 2022; <https://www.cdc.gov/suicide/facts/index.html#:~:text=Suicide%20affects%20all%20ages,%2D14%20and%2025%2D34>. Accessed October 6, 2022.
4. Kaiser Permanente Publications Library (KPPL) Search Strategy. Search conducted 28 February 2022 using search term: (dc.title:antidepress* OR dc.title:anxiety OR dc.title:depress* OR dc.title:"mental disorder" OR dc.title:"mental disorders" OR dc.title:"mental health" OR dc.title:"mental illness" OR dc.title:"mental illnesses" OR dc.title:"mentally ill" OR dc.title:mood OR dc.title:psychotic OR dc.title:psychosis OR dc.title:PTSD OR dc.title:schizophren* OR dc.title:"stress disorder" OR dc.title:"stress disorders" OR dc.subject.mesh:"affective disorders" OR dc.subject.mesh:antidepress* OR dc.subject.mesh:anxiety OR dc.subject.mesh:"bipolar disorder" OR dc.subject.mesh:"depression" OR dc.subject.mesh:"depressive" OR dc.subject.mesh:"dysphoric disorder" OR dc.subject.mesh:"dysthymic disorder" OR dc.subject.mesh:"mental disorders" OR dc.subject.mesh:"mental health" OR dc.subject.mesh:"mood disorders" OR dc.subject.mesh:paranoid OR dc.subject.mesh:psychotic OR dc.subject.mesh:schizophren* OR dc.subject.mesh:"stress disorders" OR dc.subject.mesh:"stress, psychological") AND (dc.type:"Journal Article") AND (dc.date.issued:[2007 2022]).
5. Risch N, Herrell R, Lehner T, et al. Interaction between the serotonin transporter gene (5-HTTLPR), stressful life events, and risk of depression: a meta-analysis. *JAMA*. 2009;301(23):2462-2471.
6. Direk N, Williams S, Smith JA, et al. An Analysis of Two Genome-wide Association Meta-analyses Identifies a New Locus for Broad Depression Phenotype. *Biol Psychiatry*. 2017;82(5):322-329.
7. Wray NR, Ripke S, Mattheisen M, et al. Genome-wide association analyses identify 44 risk variants and refine the genetic architecture of major depression. *Nat Genet*. 2018;50(5):668-681.
8. Power RA, Tansley KE, Butterschön HN, et al. Genome-wide Association for Major Depression Through Age at Onset Stratification: Major Depressive Disorder Working Group of the Psychiatric Genomics Consortium. *Biol Psychiatry*. 2017;81(4):325-335.
9. Bigdeli TB, Ripke S, Peterson RE, et al. Genetic effects influencing risk for major depressive disorder in China and Europe. *Transl Psychiatry*. 2017;7(3):e1074.
10. Larkin H, Shields JJ, Anda RF. The health and social consequences of adverse childhood experiences (ACE) across the lifespan: an introduction to prevention and intervention in the community. *J Prev Interv Community*. 2012;40(4):263-270.
11. Ireland R, Weisbart C, Dubowitz H, et al. When family drawings reveal vulnerabilities and resilience. *J Dev Behav Pediatr*. 2009;30(5):474-477.
12. Read J, Fink PJ, Rudegeair T, et al. Child maltreatment and psychosis: A return to a genuinely integrated bio-psycho-social model. *Clin Schizophr Relat Psychoses*. 2008;2(3):235-254.
13. Glass NE, Perrin NA, Hanson GC, et al. The Longitudinal Impact of an Internet Safety Decision Aid for Abused Women. *Am J Prev Med*. 2017;52(5):606-615.
14. Flanagan T, Alabaster A, McCaw B, et al. Feasibility and Acceptability of Screening for Adverse Childhood Experiences in Prenatal Care. *J Womens Health (Larchmt)*. 2018;27(7):903-911.
15. Young-Wolff KC, Sarovar V, Klebaner D, et al. Changes in Psychiatric and Medical Conditions and Health Care Utilization Following a Diagnosis of Sexual Assault: A Retrospective Cohort Study. *Med Care*. 2018;56(8):649-657.
16. Young-Wolff KC, Alabaster A, McCaw B, et al. Adverse Childhood Experiences and Mental and Behavioral Health Conditions During Pregnancy: The Role of Resilience. *J Womens Health (Larchmt)*. 2019;28(4):452-461.
17. Negri S. ACEs are not equal: Examining the relative impact of household dysfunction versus childhood maltreatment on mental health in adolescence. *Soc Sci Med*. 2020;245:112696.
18. Negri S. Childhood adversities and mental health outcomes: Does the perception or age of the event matter? *Dev Psychopathol*. 2021;33(3):778-791.
19. O'Connor E, Rossom RC, Henninger M, et al. Primary Care Screening for and Treatment of Depression in Pregnant and Postpartum Women: Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA*. 2016;315(4):388-406.
20. Alexander JL, Dennerstein L, Woods NF, et al. Role of stressful life events and menopausal stage in wellbeing and health. *Expert Rev Neurother*. 2007;7(11 Suppl):S93-113.
21. Alexander JL. Mood, depression, and the menopausal transition. *Manag Care*. 2008;17(3 Suppl 2):10-14.
22. Beardslee WR, Brent DA, Weersing VR, et al. Prevention of Depression in At-Risk Adolescents: Longer-term Effects. *JAMA Psychiatry*. 2013;70(11):1161-1170.

23. Weersing VR, Shamseddeen W, Garber J, et al. Prevention of Depression in At-Risk Adolescents: Predictors and Moderators of Acute Effects. *J Am Acad Child Adolesc Psychiatry*. 2016;55(3):219-226.
24. Ridout SJ, Ridout KK, Kole J, et al. Comparison of eating disorder characteristics and depression comorbidity in adolescent males and females: An observational study. *Psychiatry Res*. 2021;296:113650.
25. Davignon MN, Qian Y, Massolo M, Croen LA. Psychiatric and Medical Conditions in Transition-Aged Individuals With ASD. *Pediatrics*. 2018;141(Suppl 4):S335-S345.
26. Koo J, Marangell LB, Nakamura M, et al. Depression and Suicidality in Psoriasis: Review of the Literature Including the Cytokine Theory of Depression. *J Eur Acad Dermatol Venereol*. 2017;31(12):1999-2009.
27. Lebwohl MG, Papp KA, Marangell LB, et al. Psychiatric adverse events during treatment with brodalumab: Analysis of psoriasis clinical trials. *J Am Acad Dermatol*. 2018;78(1):81-89.
28. Wu JJ, Penfold RB, Primates P, et al. The risk of depression, suicidal ideation and suicide attempt in patients with psoriasis, psoriatic arthritis or ankylosing spondylitis. *J Eur Acad Dermatol Venereol*. 2017;31(7):1168-1175.
29. Wu JJ, Feldman SR, Koo J, Marangell LB. Epidemiology of mental health comorbidity in psoriasis. *J Dermatolog Treat*. 2018;29(5):487-495.
30. Egeberg A, Thyssen JP, Wu JJ, Skov L. Risk of first-time and recurrent depression in patients with psoriasis - a population-based cohort study. *Br J Dermatol*. 2019;180(1):116-121.
31. Treadwell AA. Examining Depression in Patients on Dialysis. *Nephrol Nurs J*. 2017;44(4):295-307.
32. Fleehtart S, Fan VS, Nguyen HQ, et al. Prevalence and correlates of suicide ideation in patients with COPD: a mixed methods study. *Int J Chron Obstruct Pulmon Dis*. 2014;10:1321-1329.
33. Nieuwsma JA, Williams JW, Namdari N, et al. Diagnostic Accuracy of Screening Tests and Treatment for Post-Acute Coronary Syndrome Depression: A Systematic Review. *Ann Intern Med*. 2017;167(10):725-735.
34. Ahmedani BK, Peterson EL, Hu Y, et al. Major Physical Health Conditions and Risk of Suicide. *Am J Prev Med*. 2017;53(3):308-315.
35. Boggs JM, Beck A, Hubley S, et al. General Medical, Mental Health, and Demographic Risk Factors Associated With Suicide by Firearm Compared With Other Means. *Psychiatr Serv*. 2018;69(6):677-684.
36. Alves JM, Yunker AG, DeFendis A, et al. BMI status and associations between affect, physical activity and anxiety among U.S. children during COVID-19. *Pediatr Obes*. 2021;16(9):e12786.
37. Alves JM, Yunker AG, DeFendis A, et al. Prenatal exposure to gestational diabetes is associated with anxiety and physical inactivity in children during COVID-19. *Clin Obes*. 2021;11(1):e12422.
38. Young DR, Hong BD, Lo T, et al. The longitudinal associations of physical activity, time spent outdoors in nature and symptoms of depression and anxiety during COVID-19 quarantine and social distancing in the United States. *Prev Med*. 2022;154:106863.
39. Ridout KK, Alavi M, Ridout SJ, et al. Changes in Diagnostic and Demographic Characteristics of Patients Seeking Mental Health Care During the Early COVID-19 Pandemic in a Large, Community-Based Health Care System. *J Clin Psychiatry*. 2021;82(2):03.
40. Rossom RC, Penfold RB, Owen-Smith AA, et al. Suicide Deaths Before and During the Coronavirus Disease 2019 Pandemic: An Interrupted Time-series Study. *Med Care*. 2022.
41. Swift SL, Elfassy T, Bailey Z, et al. Association of negative financial shocks during the Great Recession with depressive symptoms and substance use in the USA: the CARDIA study. *J Epidemiol Community Health*. 2020;74(12):995-1001.
42. Talati A, Bao Y, Kaufman J, et al. Maternal smoking during pregnancy and bipolar disorder in offspring. *Am J Psychiatry*. 2013;170(10):1178-1185.
43. Parboosing R, Bao Y, Shen L, et al. Gestational Influenza and Bipolar Disorder in Adult Offspring. *JAMA Psychiatry*. 2013;70(7):677-685.
44. Fineberg AM, Ellman LM, Schaefer CA, et al. Fetal exposure to maternal stress and risk for schizophrenia spectrum disorders among offspring: Differential influences of fetal sex. *Psychiatry Res*. 2016;236:91-97.
45. Brown AS, Bottiglieri T, Schaefer CA, et al. Elevated prenatal homocysteine levels as a risk factor for schizophrenia. *Arch Gen Psychiatry*. 2007;64(1):31-39.
46. Yood MU, DeLorenzo G, Quesenberry CP, Jr., et al. The incidence of diabetes in atypical antipsychotic users differs according to agent--results from a multisite epidemiologic study. *Pharmacoepidemiol Drug Saf*. 2009;18(9):791-799.
47. Bahorik AL, Satre DD, Kline-Simon AH, et al. Serious mental illness and medical comorbidities: Findings from an integrated health care system. *J Psychosom Res*. 2017;100:35-45.
48. Daumit GL, Dalcin AT, Dickerson FB, et al. Effect of a Comprehensive Cardiovascular Risk Reduction Intervention in Persons With Serious Mental Illness: A Randomized Clinical Trial. *JAMA Netw Open*. 2020;3(6):e207247.

49. Yarborough BJ, Janoff SL, Stevens VJ, et al. Delivering a lifestyle and weight loss intervention to individuals in real-world mental health settings: Lessons and opportunities. *Transl Behav Med.* 2011;1(3):406-415.
50. Rosenblat JD, Simon GE, Sachs GS, et al. Treatment effectiveness and tolerability outcomes that are most important to individuals with bipolar and unipolar depression. *J Affect Disord.* 2019;243:116-120.
51. Liu M, McCurry SM, Belza B, et al. Effects of Pain, Insomnia, and Depression on Psychoactive Medication Supply in Older Adults With Osteoarthritis. *Med Care.* 2018;56(12):1024-1031.
52. Cruden G, Karmali R. Opioid misuse as a coping behavior for unmet mental health needs among U.S. adults. *Drug Alcohol Depend.* 2021;225:108805.
53. Scherrer JF, Salas J, Miller-Matero LR, et al. Long-term prescription opioid users' risk for new onset depression increases with frequency of use. *Pain.* 2021.
54. Owen-Smith A, Stewart C, Sesay MM, et al. Chronic pain diagnoses and opioid dispensings among insured individuals with serious mental illness. *BMC Psychiatry.* 2020;20(1):40.
55. Katon W, Russo J, Lin EH, et al. Diabetes and poor disease control: is comorbid depression associated with poor medication adherence or lack of treatment intensification? *Psychosom Med.* 2009;71(9):965-972.
56. Gilsanz P, Karter AJ, Beeri MS, et al. The Bidirectional Association Between Depression and Severe Hypoglycemic and Hyperglycemic Events in Type 1 Diabetes. *Diabetes Care.* 2018;41(3):446-452.
57. Gilsanz P, Schnaider Beeri M, Karter AJ, et al. Depression in type 1 diabetes and risk of dementia. *Aging Ment Health.* 2019;23(7):880-886.
58. Iturralde E, Chi FW, Grant RW, et al. Association of Anxiety With High-Cost Health Care Use Among Individuals With Type 2 Diabetes. *Diabetes Care.* 2019;42(9):1669-1674.
59. Eisner MD, Blanc PD, Yelin EH, et al. Influence of anxiety on health outcomes in COPD. *Thorax.* 2010;65(3):229-234.
60. Omachi TA, Katz PP, Yelin EH, et al. Depression and health-related quality of life in chronic obstructive pulmonary disease. *Am J Med.* 2009;122(8):778.e779-778.e715.
61. Omachi TA, Katz PP, Yelin EH, et al. The COPD Helplessness Index: a new tool to measure factors affecting patient self-management. *Chest.* 2010;137(4):823-830.
62. Grenard JL, Munjas BA, Adams JL, et al. Depression and medication adherence in the treatment of chronic diseases in the United States: a meta-analysis. *J Gen Intern Med.* 2011;26(10):1175-1182.
63. Baumgartner C, Fan D, Fang MC, et al. Anxiety, Depression, and Adverse Clinical Outcomes in Patients With Atrial Fibrillation Starting Warfarin: Cardiovascular Research Network WAVE Study. *J Am Heart Assoc.* 2018;7(8):04.
64. Davis RL, Rubanowicz D, McPhillips H, et al. Risks of congenital malformations and perinatal events among infants exposed to antidepressant medications during pregnancy. *Pharmacoepidemiol Drug Saf.* 2007;16(10):1086-1094.
65. Croen LA, Grether JK, Yoshida CK, et al. Antidepressant Use During Pregnancy and Childhood Autism Spectrum Disorders. *Arch Gen Psychiatry.* 2011;68(11):1104-1112.
66. Toh S, Li Q, Cheetham TC, et al. Prevalence and trends in the use of antipsychotic medications during pregnancy in the U.S., 2001-2007: a population-based study of 585,615 deliveries. *Arch Womens Ment Health.* 2013;16(2):149-157.
67. Lu CY, Zhang F, Lakoma MD, et al. Changes in antidepressant use by young people and suicidal behavior after FDA warnings and media coverage: quasi-experimental study. *BMJ.* 2014;348:g3596.
68. Williams SB, O'Connor EA, Eder M, Whitlock E. Screening for child and adolescent depression in primary care settings: a systematic evidence review for the US Preventive Services Task Force. *Pediatrics.* 2009;123(4):e716-735.
69. Clarke G, Dickerson J, Gullion CM, Debar LL. Trends in Youth Antidepressant Dispensing and Refill Limits, 2000 Through 2009. *J Child Adolesc Psychopharmacol.* 2012;22(1):11-20.
70. Brent D, Emslie G, Clarke G, et al. Switching to another SSRI or to venlafaxine with or without cognitive behavioral therapy for adolescents with SSRI-resistant depression: the TORDIA randomized controlled trial. *JAMA.* 2008;299(8):901-913.
71. Asarnow JR, Porta G, Spirito A, et al. Suicide attempts and nonsuicidal self-injury in the treatment of resistant depression in adolescents: findings from the TORDIA study. *J Am Acad Child Adolesc Psychiatry.* 2011;50(8):772-781.
72. Rossom RC, Coleman KJ, Ahmedani BK, et al. Suicidal ideation reported on the PHQ9 and risk of suicidal behavior across age groups. *J Affect Disord.* 2017;215:77-84.
73. Simon GE, Hunkeler E, Fireman B, et al. Risk of suicide attempt and suicide death in patients treated for bipolar disorder. *Bipolar Disord.* 2007;9(5):526-530.
74. Bommersbach TJ, Chock MM, Geske JL, Bostwick JM. Weren't Asked, Didn't Tell: Prevalence of Communication of Suicidal Ideation in Suicide Decedents During the Last Year of Life. *Mayo Clin Proc.* 2018;93(6):731-738.

75. Yeh HH, Westphal J, Hu Y, et al. Diagnosed Mental Health Conditions and Risk of Suicide Mortality. *Psychiatr Serv*. 2019;70(9):750-757.
76. O'Connor E, Gaynes BN, Burda BU, et al. Screening for and Treatment of Suicide Risk Relevant to Primary Care: A Systematic Review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2013;158(10):741-754.
77. Simon GE, Coleman KJ, Yarborough BJ, et al. First Presentation With Psychotic Symptoms in a Population-Based Sample. *Psychiatr Serv*. 2017;68(5):456-461.
78. Simon GE, Stewart C, Hunkeler EM, et al. Care Pathways Before First Diagnosis of a Psychotic Disorder in Adolescents and Young Adults. *Am J Psychiatry*. 2018;175(5):434-442.
79. Simon GE, Stewart C, Yarborough BJ, et al. Mortality Rates After the First Diagnosis of Psychotic Disorder in Adolescents and Young Adults. *JAMA Psychiatry*. 2018;75(3):254-260.
80. Simon GE, Yarborough BJ, Rossom RC, et al. Self-Reported Suicidal Ideation as a Predictor of Suicidal Behavior Among Outpatients With Diagnoses of Psychotic Disorders. *Psychiatr Serv*. 2019;70(3):176-183.
81. Prabhakar D, Peterson EL, Hu Y, et al. Serious Suicide Attempts and Risk of Suicide Death. *Crisis*. 2021;42(5):343-350.
82. Owen-Smith AA, Ahmedani BK, Peterson E, et al. The Mediating Effect of Sleep Disturbance on the Relationship Between Nonmalignant Chronic Pain and Suicide Death. *Pain Pract*. 2019;19(4):382-389.
83. Lynch FL, Peterson EL, Lu CY, et al. Substance use disorders and risk of suicide in a general US population: a case control study. *Addict Sci Clin Pract*. 2020;15(1):14.
84. Yarborough BJH, Stumbo SP, Ahmedani B, et al. Suicide Behavior Following PHQ-9 Screening Among Individuals With Substance Use Disorders. *J Addict Med*. 2021;15(1):55-60.
85. Richards JE, Shortreed SM, Simon GE, et al. Short-term risk of suicide attempt associated with patterns of patient-reported alcohol use determined by routine AUDIT-C among adults receiving mental healthcare. *Gen Hosp Psychiatry*. 2020;62:79-86.
86. Rossom RC, Simon GE, Coleman KJ, et al. Are wishes for death or suicidal ideation symptoms of depression in older adults? *Aging Ment Health*. 2019;23(7):912-918.
87. Lin Y, Huang S, Simon GE, Liu S. Data-based Decision Rules to Personalize Depression Follow-up. *Sci Rep*. 2018;8(1):5064.
88. Gong J, Simon GE, Liu S. Machine learning discovery of longitudinal patterns of depression and suicidal ideation. *PLoS ONE*. 2019;14(9):e0222665.
89. Simon GE, Johnson E, Lawrence JM, et al. Predicting Suicide Attempts and Suicide Deaths Following Outpatient Visits Using Electronic Health Records. *Am J Psychiatry*. 2018;175(10):951-960.
90. Simon GE. Big Data From Health Records in Mental Health Care: Hardly Clairvoyant But Already Useful. *JAMA Psychiatry*. 2019;76(4):349-350.
91. Ahmedani BK, Westphal J, Autio K, et al. Variation in patterns of health care before suicide: A population case-control study. *Prev Med*. 2019;127:105796.
92. Mullins N, Bigdeli TB, Børjglum AD, et al. GWAS of Suicide Attempt in Psychiatric Disorders and Association With Major Depression Polygenic Risk Scores. *Am J Psychiatry*. 2019;176(8):651-660.
93. Garber J, Clarke GN, Weersing VR, et al. Prevention of depression in at-risk adolescents: a randomized controlled trial. *JAMA*. 2009;301(21):2215-2224.
94. Garber J, Weersing VR, Hollon SD, et al. Prevention of Depression in At-Risk Adolescents: Moderators of Long-term Response. *Prev Sci*. 2018;19(Suppl 1):6-15.
95. Lynch FL, Dickerson JF, Clarke GN, et al. Cost-Effectiveness of Preventing Depression Among At-Risk Youths: Postintervention and 2-Year Follow-Up. *Psychiatr Serv*. 2019;70(4):279-286.
96. Cuijpers P, Munoz RF, Clarke GN, Lewinsohn PM. Psychoeducational treatment and prevention of depression: the 'Coping with Depression' course thirty years later. *Clin Psychol Rev*. 2009;29(5):449-458.
97. Easterlin MC, Chung PJ, Leng M, Dudovitz R. Association of Team Sports Participation With Long-term Mental Health Outcomes Among Individuals Exposed to Adverse Childhood Experiences. *JAMA Pediatr*. 2019;173(7):681-688.
98. Scheuer H, Kuklinski MR, Sterling SA, et al. Parent-focused prevention of adolescent health risk behavior: Study protocol for a multisite cluster-randomized trial implemented in pediatric primary care. *Contemp Clin Trials*. 2022;112:106621.
99. Ozer EM, Zahnd EG, Adams SH, et al. Are adolescents being screened for emotional distress in primary care? *J Adolesc Health*. 2009;44(6):520-527.
100. O'Connor EA, Whitlock EP, Beil TL, Gaynes BN. Screening for depression in adult patients in primary care settings: a systematic evidence review. *Ann Intern Med*. 2009;151(11):793-803.
101. Avalos LA, Raine-Bennett T, Chen H, et al. Improved Perinatal Depression Screening, Treatment, and Outcomes With a Universal Obstetric Program. *Obstet Gynecol*. 2016;127(5):917-925.
102. Flanagan T, Avalos LA. Perinatal Obstetric Office Depression Screening and Treatment: Implementation in a Health Care System. *Obstet Gynecol*. 2016;127(5):911-915.

103. Sterling S, Kline-Simon AH, Weisner C, et al. Pediatrician and Behavioral Clinician-Delivered Screening, Brief Intervention and Referral to Treatment: Substance Use and Depression Outcomes. *J Adolesc Health*. 2018;62(4):390-396.
104. Ahmedani BK, Simon GE, Stewart C, et al. Health Care Contacts in the Year Before Suicide Death. *J Gen Intern Med*. 2014;29(6):870-877.
105. Simon GE, Coleman KJ, Rossom RC, et al. Risk of suicide attempt and suicide death following completion of the Patient Health Questionnaire depression module in community practice. *J Clin Psychiatry*. 2016;77(2):221-227.
106. Richards JE, Boggs JM, Rowhani-Rahbar A, et al. Patient-Reported Firearm Access Prior to Suicide Death. *JAMA Netw Open*. 2022;5(1):e2142204.
107. Rossom RC, Simon GE, Beck A, et al. Facilitating Action for Suicide Prevention by Learning Health Care Systems. *Psychiatr Serv*. 2016;67(8):830-832.
108. Richards JE, Hohl SD, Whiteside U, et al. If You Listen, I Will Talk: the Experience of Being Asked About Suicidality During Routine Primary Care. *J Gen Intern Med*. 2019;34(10):2075-2082.
109. Richards JE, Whiteside U, Ludman EJ, et al. Understanding Why Patients May Not Report Suicidal Ideation at a Health Care Visit Prior to a Suicide Attempt: A Qualitative Study. *Psychiatr Serv*. 2019;70(1):40-45.
110. Yarborough BJH, Stumbo SP. Patient perspectives on acceptability of, and implementation preferences for, use of electronic health records and machine learning to identify suicide risk. *Gen Hosp Psychiatry*. 2021;70:31-37.
111. Simon GE, Shortreed SM, Johnson E, et al. Between-visit changes in suicidal ideation and risk of subsequent suicide attempt. *Depress Anxiety*. 2017;34(9):794-800.
112. Waitzfelder B, Stewart C, Coleman KJ, et al. Treatment Initiation for New Episodes of Depression in Primary Care Settings. *J Gen Intern Med*. 2018;33(8):1283-1291.
113. Merced K, Imel ZE, Baldwin SA, et al. Provider Contributions to Disparities in Mental Health Care. *Psychiatr Serv*. 2020;71(8):765-771.
114. Rosenblat JD, Simon GE, Sachs GS, et al. Factors That Impact Treatment Decisions: Results From an Online Survey of Individuals With Bipolar and Unipolar Depression. *Prim Care Companion CNS Disord*. 2018;20(6):11.
115. Bahorik AL, Campbell CI, Sterling SA, et al. Adverse impact of marijuana use on clinical outcomes among psychiatry patients with depression and alcohol use disorder. *Psychiatry Res*. 2018;259:316-322.
116. Satre DD, Bahorik A, Zaman T, Ramo D. Psychiatric Disorders and Comorbid Cannabis Use: How Common Is It and What Is the Clinical Impact? *J Clin Psychiatry*. 2018;79(5):06.
117. Kirby JB, Zuvekas SH, Borsky AE, Ngo-Metzger Q. Rural Residents With Mental Health Needs Have Fewer Care Visits Than Urban Counterparts. *Health Aff (Millwood)*. 2019;38(12):2057-2060.
118. Sterling S, Weisner C, Hinman A, Parthasarathy S. Access to treatment for adolescents with substance use and co-occurring disorders: challenges and opportunities. *J Am Acad Child Adolesc Psychiatry*. 2010;49(7):637-646.
119. Rossom RC, Solberg LI, Vazquez-Benitez G, et al. Predictors of Poor Response to Depression Treatment in Primary Care. *Psychiatr Serv*. 2016;67(12):1362-1367.
120. Meredith LS, Stein BD, Paddock SM, et al. Perceived barriers to treatment for adolescent depression. *Med Care*. 2009;47(6):677-685.
121. Yarborough BJ, Yarborough MT, Cavese JC. Factors that hindered care seeking among people with a first diagnosis of psychosis. *Early Interv Psychiatry*. 2019;13(5):1220-1226.
122. Clarke G, Yarborough BJ. Evaluating the promise of health IT to enhance/expand the reach of mental health services. *Gen Hosp Psychiatry*. 2013;35(4):339-344.
123. Mohr DC, Burns MN, Schueller SM, et al. Behavioral Intervention Technologies: Evidence review and recommendations for future research in mental health. *Gen Hosp Psychiatry*. 2013;35(4):332-338.
124. Green CA, Wisdom JP, Wolfe L, Firemark A. Engaging youths with serious mental illnesses in treatment: STARS study consumer recommendations. *Psychiatr Rehabil J*. 2012;35(5):360-368.
125. Dimidjian S, Goodman SH, Felder JN, et al. Staying Well During Pregnancy and the Postpartum: A Pilot Randomized Trial of Mindfulness-Based Cognitive Therapy for the Prevention of Depressive Relapse/Recurrence. *J Consult Clin Psychol*. 2016;84(2):134-145.
126. Dimidjian S, Goodman SH, Felder JN, et al. An open trial of mindfulness-based cognitive therapy for the prevention of perinatal depressive relapse/recurrence. *Arch Womens Ment Health*. 2015;18(1):85-94.
127. Dimidjian S, Goodman SH, Sherwood NE, et al. A pragmatic randomized clinical trial of behavioral activation for depressed pregnant women. *J Consult Clin Psychol*. 2017;85(1):26-36.
128. McCubbin T, Dimidjian S, Kempe K, et al. Mindfulness-based stress reduction in an integrated care delivery system: one-year impacts on patient-centered outcomes and health care utilization. *Perm J*. 2014;18(4):4-9.
129. Dickerson JF, Lynch FL, Leo MC, et al. Cost-effectiveness of Cognitive Behavioral Therapy for Depressed Youth Declining Antidepressants. *Pediatrics*. 2018;141(2):01.

130. Simon GE. Review: In generalized anxiety disorder, network meta-analysis shows efficacy and tolerability of various drugs. *Ann Intern Med.* 2019;170(10):JC54.
131. Boggs JM, Beck A, Felder JN, et al. Web-based intervention in mindfulness meditation for reducing residual depressive symptoms and relapse prophylaxis: a qualitative study. *J Med Internet Res.* 2014;16(3):e87.
132. Dimidjian S, Beck A, Felder JN, et al. Web-based Mindfulness-based Cognitive Therapy for reducing residual depressive symptoms: An open trial and quasi-experimental comparison to propensity score matched controls. *Behav Res Ther.* 2014;63:83-89.
133. Felder J, Dimidjian S, Beck A, et al. Mindful Mood Balance: A Case Report of Web-Based Treatment of Residual Depressive Symptoms. *Perm J.* 2014;18(4):58-62.
134. Hunkeler EM, Hargreaves WA, Fireman B, et al. A Web-Delivered Care Management and Patient Self-Management Program for Recurrent Depression: A Randomized Trial. *Psychiatr Serv.* 2012;63(11):1063-1071.
135. Segal ZV, Dimidjian S, Beck A, et al. Outcomes of Online Mindfulness-Based Cognitive Therapy for Patients With Residual Depressive Symptoms: A Randomized Clinical Trial. *JAMA Psychiatry.* 2020;77(6):563-573.
136. Boggs JM, Ritzwoller DP, Beck A, et al. Cost-Effectiveness of a Web-Based Program for Residual Depressive Symptoms: Mindful Mood Balance. *Psychiatr Serv.* 2022;73(2):158-164.
137. Kubo A, Aghaee S, Kurtovich EM, et al. mHealth Mindfulness Intervention for Women with Moderate-to-Moderately-Severe Antenatal Depressive Symptoms: a Pilot Study Within an Integrated Health Care System. *Mindfulness (N Y).* 2021;12(6):1387-1397.
138. Asarnow JR, Emslie G, Clarke G, et al. Treatment of selective serotonin reuptake inhibitor-resistant depression in adolescents: predictors and moderators of treatment response. *J Am Acad Child Adolesc Psychiatry.* 2009;48(3):330-339.
139. Shamseddeen W, Clarke G, Keller MB, et al. Adjunctive Sleep Medications and Depression Outcome in the Treatment of Serotonin-Selective Reuptake Inhibitor Resistant Depression in Adolescents Study. *J Child Adolesc Psychopharmacol.* 2012;22(1):29-36.
140. Simon GE. Adding mirtazapine to ongoing SNRIs or SSRIs did not improve symptoms of treatment-resistant depression. *Ann Intern Med.* 2019;170(4):Jc20.
141. Boggs JM, Lindrooth RC, Battaglia C, et al. Association between suicide death and concordance with benzodiazepine treatment guidelines for anxiety and sleep disorders. *Gen Hosp Psychiatry.* 2019;62:21-27.
142. Satre DD, Campbell CI, Gordon NS, Weisner C. Ethnic disparities in accessing treatment for depression and substance use disorders in an integrated health plan. *Int J Psychiatry Med.* 2010;40(1):57-76.
143. Yamamoto A, McCormick MC, Burris HH. Disparities in antidepressant use in pregnancy. *J Perinatol.* 2015;35(4):246-251.
144. Kozhimannil KB, Trinacty CM, Busch AB, et al. Racial and ethnic disparities in postpartum depression care among low-income women. *Psychiatr Serv.* 2011;62(6):619-625.
145. Coleman KJ, Stewart C, Waitzfelder BE, et al. Racial-Ethnic Differences in Psychiatric Diagnoses and Treatment Across 11 Health Care Systems in the Mental Health Research Network. *Psychiatr Serv.* 2016;67(7):749-757.
146. Yarborough BJ, Yarborough MT, Janoff SL, Green CA. Getting By, Getting Back, and Getting On: Matching Mental Health Services to Consumers' Recovery Goals. *Psychiatr Rehabil J.* 2016;39(2):97-104.
147. Mertens JR, Chi FW, Weisner CM, et al. Physician versus non-physician delivery of alcohol screening, brief intervention and referral to treatment in adult primary care: the ADVISE cluster randomized controlled implementation trial. *Addict Sci Clin Pract.* 2015;10:26.
148. Ramo DE, Bahorik AL, Delucchi KL, et al. Alcohol and drug use, pain and psychiatric symptoms among adults seeking outpatient psychiatric treatment: Latent class patterns and relationship to health status. *J Psychoactive Drugs.* 2018;50(1):43-53.
149. Satre DD, Sterling SA, Mackin RS, Weisner C. Patterns of alcohol and drug use among depressed older adults seeking outpatient psychiatric services. *Am J Geriatr Psychiatry.* 2011;19(8):695-703.
150. Satre DD, Delucchi K, Lichtmacher J, et al. Motivational interviewing to reduce hazardous drinking and drug use among depression patients. *J Subst Abuse Treat.* 2013;44(3):323-329.
151. Satre DD, Leibowitz A, Sterling SA, et al. A Randomized Clinical Trial of Motivational Interviewing to Reduce Alcohol and Drug Use Among Patients With Depression. *J Consult Clin Psychol.* 2016;84(7):571-579.
152. Heffner JL, Watson NL, McClure JB, et al. "I Smoke Like This to Suppress These Issues That Are Flaws of My Character": Challenges and Facilitators of Cessation Among Smokers With Bipolar Disorder. *J Dual Diagn.* 2018;14(1):32-39.
153. Yarborough BJH, Perrin NA, Stumbo SP, et al. Preventive Service Use Among People With and Without Serious Mental Illnesses. *Am J Prev Med.* 2018;54(1):1-9.
154. Mangurian C, Schillinger D, Newcomer JW, et al. Comorbid Diabetes and Severe Mental Illness: Outcomes in an Integrated Health Care Delivery System. *J Gen Intern Med.* 2019;35(1):160-166.
155. Stumbo SP, Yarborough BJH, Yarborough MT, Green CA. Perspectives on Providing And Receiving Preventive Health Care From Primary Care Providers and Their Patients With Mental Illnesses. *Am J Health Promot.* 2018;32(8):1730-1739.

156. Yarborough BJH, Stumbo SP, Perrin NA, et al. Effects of primary care clinician beliefs and perceived organizational facilitators on the delivery of preventive care to individuals with mental illnesses. *BMC Fam Pract*. 2018;19(1):16.
157. Yarborough BJ, Leo MC, Stumbo S, et al. STRIDE: a randomized trial of a lifestyle intervention to promote weight loss among individuals taking antipsychotic medications. *BMC Psychiatry*. 2013;13:238.
158. Yarborough BJ. Health promotion coaching for obese individuals with serious mental illnesses produces clinically significant reductions in cardiovascular risks up to 18 months. *Evid Based Ment Health*. 2016;19(1):31.
159. Mental Health Research Network: Who we are. 2015; <http://hcsrn.org/mhrn/en/>. Accessed 6 March, 2018.
160. Health Care Systems Research Network. Mental Health Research Network. 2015; <http://www.hcsrn.org/en/Collaboration/Consortia/mhrn.html>. Accessed 6 March, 2018.
161. Rossom RC, Richards JE, Sterling S, et al. Connecting Research and Practice: Implementation of Suicide Prevention Strategies in Learning Health Care Systems. *Psychiatr Serv*. 2022;73(2):219-222.
162. The Joint Commission. Detecting and treating suicide ideation in all settings. *Sentinel Event Alert*. 2016;56:1-7.
163. Karlin BE, Brown GK, Jager-Hyman S, et al. Dissemination and Implementation of Cognitive Behavioral Therapy for Depression in the Kaiser Permanente Health Care System: Evaluation of Initial Training and Clinical Outcomes. *Behav Ther*. 2019;50(2):446-458.
164. Clarke G, Kelleher C, Hornbrook M, et al. Randomized effectiveness trial of an Internet, pure self-help, cognitive behavioral intervention for depressive symptoms in young adults. *Cogn Behav Ther*. 2009;38(4):222-234.
165. Bhat S, Kroehl ME, Trinkley KE, et al. Evaluation of a Clinical Pharmacist-Led Multidisciplinary Antidepressant Telemonitoring Service in the Primary Care Setting. *Popul Health Manag*. 2018;21(5):366-372.
166. Davidson AJ, Xu S, Oronce CIA, et al. Monitoring Depression Rates in an Urban Community: Use of Electronic Health Records. *J Public Health Manag Pract*. 2018;24(6):E6-E14.
167. Coley RY, Boggs JM, Beck A, Simon GE. Predicting outcomes of psychotherapy for depression with electronic health record data. *J Affect Disord Rep*. 2021;6:100198.
168. Hahn EE, Munoz-Plaza CE, Pounds D, et al. Effect of a Community-Based Medical Oncology Depression Screening Program on Behavioral Health Referrals Among Patients With Breast Cancer: A Randomized Clinical Trial. *JAMA*. 2022;327(1):41-49.
169. Weersing VR, Brent DA, Rozenman MS, et al. Brief Behavioral Therapy for Pediatric Anxiety and Depression in Primary Care: A Randomized Clinical Trial. *JAMA Psychiatry*. 2017;74(6):571-578.
170. Brent DA, Porta G, Rozenman MS, et al. Brief Behavioral Therapy for Pediatric Anxiety and Depression in Primary Care: A Follow-Up. *J Am Acad Child Adolesc Psychiatry*. 2020;59(7):856-867.
171. Lynch FL, Dickerson JF, Rozenman MS, et al. Cost-effectiveness of Brief Behavioral Therapy for Pediatric Anxiety and Depression in Primary Care. *JAMA Netw Open*. 2021;4(3):e211778.
172. Fung V, Price M, Busch AB, et al. Adverse Clinical Events Among Medicare Beneficiaries Using Antipsychotic Drugs: Linking Health Insurance Benefits and Clinical Needs. *Med Care*. 2013;51(7):614-621.
173. Penfold RB, Thompson EE, Hilt RJ, et al. Development of a Symptom-Focused Model to Guide the Prescribing of Antipsychotics in Children and Adolescents: Results of the First Phase of the Safer Use of Antipsychotics in Youth (SUAY) Clinical Trial. *J Am Acad Child Adolesc Psychiatry*. 2022;61(1):93-102.
174. Whiteside U, Richards J, Huh D, et al. Development and Evaluation of a Web-Based Resource for Suicidal Thoughts: NowMattersNow.org. *J Med Internet Res*. 2019;21(5):e13183.
175. Coker TR, Porras-Javier L, Zhang L, et al. A Telehealth-Enhanced Referral Process in Pediatric Primary Care: A Cluster Randomized Trial. *Pediatrics*. 2019;143(3):02.
176. Sterling S, Chi F, Hinman A. Integrating care for people with co-occurring alcohol and other drug, medical, and mental health conditions. *Alcohol Res Health*. 2011;33(4):338-349.
177. Wallace NT, Cohen DJ, Gunn R, et al. Start-Up and Ongoing Practice Expenses of Behavioral Health and Primary Care Integration Interventions in the Advancing Care Together (ACT) Program. *J Am Board Fam Med*. 2015;28 Suppl 1:S86-97.
178. Richardson LP, Ludman E, McCauley E, et al. Collaborative care for adolescents with depression in primary care: a randomized clinical trial. *JAMA*. 2014;312(8):809-816.
179. Unutzer J, Katon WJ, Fan MY, et al. Long-term cost effects of collaborative care for late-life depression. *Am J Manag Care*. 2008;14(2):95-100.
180. Katon W, Russo J, Lin EH, et al. Cost-effectiveness of a Multicondition Collaborative Care Intervention: A Randomized Controlled Trial. *Arch Gen Psychiatry*. 2012;69(5):506-514.
181. Solberg LI, Crain AL, Jaekels N, et al. The DIAMOND initiative: implementing collaborative care for depression in 75 primary care clinics. *Implement Sci*. 2013;8:135.
182. Solberg LI, Crain AL, Maciosek MV, et al. A Stepped-Wedge Evaluation of an Initiative to Spread the Collaborative Care Model for Depression in Primary Care. *Ann Fam Med*. 2015;13(5):412-420.

183. Whitebird RR, Solberg LI, Jaeckels NA, et al. Effective Implementation of collaborative care for depression: what is needed? *Am J Manag Care*. 2014;20(9):699-707.
184. Rossom RC, Solberg LI, Magnan S, et al. Impact of a national collaborative care initiative for patients with depression and diabetes or cardiovascular disease. *Gen Hosp Psychiatry*. 2017;44:77-85.
185. Coleman KJ, Magnan S, Neely C, et al. The COMPASS initiative: description of a nationwide collaborative approach to the care of patients with depression and diabetes and/or cardiovascular disease. *Gen Hosp Psychiatry*. 2017;44:69-76.
186. Coleman KJ, Hemmila T, Valenti MD, et al. Understanding the experience of care managers and relationship with patient outcomes: the COMPASS initiative. *Gen Hosp Psychiatry*. 2017;44:86-90.
187. Beck A, Boggs JM, Alem A, et al. Large-Scale Implementation of Collaborative Care Management for Depression and Diabetes and/or Cardiovascular Disease. *J Am Board Fam Med*. 2018;31(5):702-711.
188. Coleman KJ, Stewart CC, Brusckie C, et al. Identifying People at Risk for Suicide Implementation of Screening for the Zero Suicide Initiative in Large Health Systems. *Adv Psychiatry Behav Health*. 2021;1(1):67-76.
189. Beidas RS, Ahmedani BK, Linn KA, et al. Study protocol for a type III hybrid effectiveness-implementation trial of strategies to implement firearm safety promotion as a universal suicide prevention strategy in pediatric primary care. *Implement Sci*. 2021;16(1):89.
190. Simon GE, Shortreed SM, Rossom RC, et al. Effect of Offering Care Management or Online Dialectical Behavior Therapy Skills Training vs Usual Care on Self-harm Among Adult Outpatients With Suicidal Ideation: A Randomized Clinical Trial. *JAMA*. 2022;327(7):630-638.
191. Coley RY, Johnson E, Simon GE, et al. Racial/Ethnic Disparities in the Performance of Prediction Models for Death by Suicide After Mental Health Visits. *JAMA Psychiatry*. 2021;78(7):726-734.
192. Simon GE, Stewart CC, Gary MC, Richards JE. Detecting and Assessing Suicide Ideation During the COVID-19 Pandemic. *Jt Comm J Qual Patient Saf*. 2021;47(7):452-457.
193. Mohr DC, Azocar F, Bertagnolli A, et al. Banbury Forum Consensus Statement on the Path Forward for Digital Mental Health Treatment. *Psychiatr Serv*. 2021;72(6):677-683.
194. O'Connor E, Senger CA, Henninger ML, et al. Interventions to Prevent Perinatal Depression: Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA*. 2019;321(6):588-601.
195. Curry SJ, Krist AH, Owens DK, et al. Interventions to Prevent Perinatal Depression: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2019;321(6):580-587.
196. Frost JL, Rich RL, Robbins CW, et al. Depression Following Acute Coronary Syndrome Events: Screening and Treatment Guidelines from the AAFP. *Am Fam Physician*. 2019;99(12):Online.
197. Cheung AH, Zuckerbrot RA, Jensen PS, et al. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): II. Treatment and ongoing management. *Pediatrics*. 2007;120(5):e1313-1326.
198. Zuckerbrot RA, Cheung AH, Jensen PS, et al. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): I. Identification, assessment, and initial management. *Pediatrics*. 2007;120(5):e1299-1312.
199. Sanacora G, Frye MA, McDonald W, et al. A Consensus Statement on the Use of Ketamine in the Treatment of Mood Disorders. *JAMA Psychiatry*. 2017;74(4):399-405.