Research Brief
Commonwealth Institute of Kentucky | University of Louisville October 2022

Depressive and Anxiety Disorders Among Medicaid Beneficiaries in Kentucky

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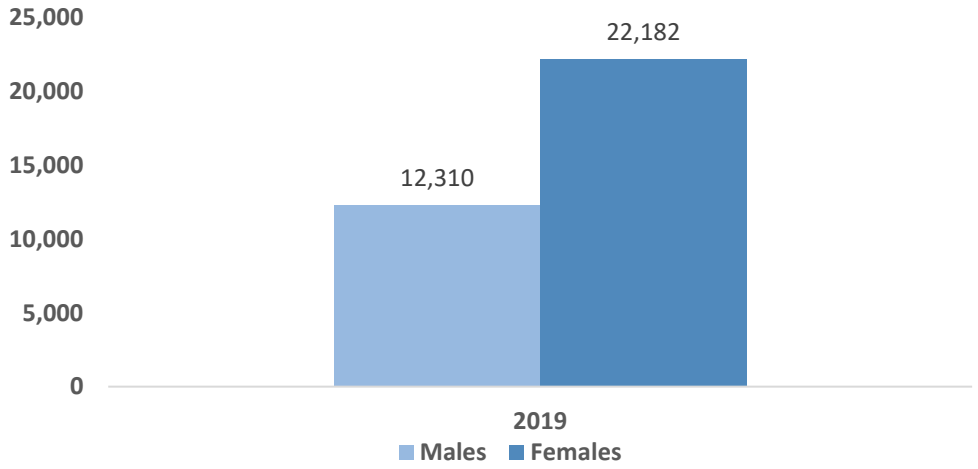
BACKGROUND

Anxiety and depression are among the most common behavioral health disorders worldwide and have been associated with higher health care costs, increased risk for diseases such as cardiovascular illnesses, and an overall reduction in quality of life.[1] Globally, depression is a leading cause of disability, affecting 5% of the adult population.[2] It is estimated that, in 2019, Kentucky lost 25,241 disability-adjusted life years (DALYs) as a result of anxiety disorders and 34,491 DALYs due to major depressive disorder. The loss of DALYs was much higher for females than males (Figure 1).[3]

Note: DALY is a measure used to assess the overall burden of diseases that do not necessarily cause death, such as anxiety and depression. One DALY is equivalent to the loss of one year of full health.[4]

Figure 1. Disability Adjusted Life Years for Major Depression by Sex, Kentucky, 2019



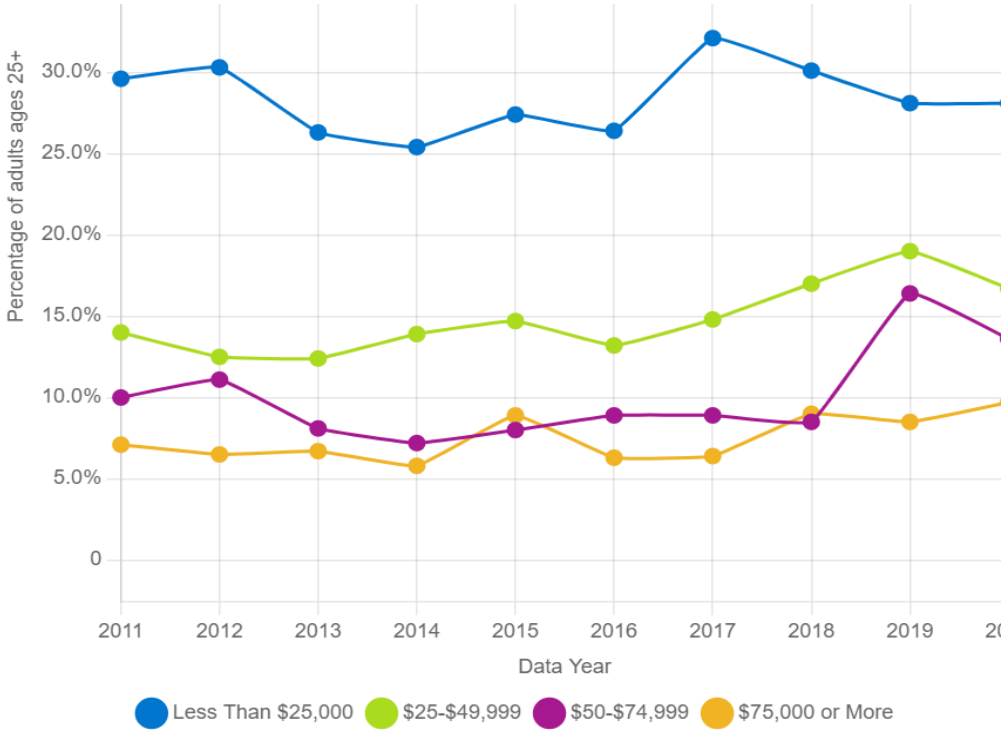
Source: Global Burden of Disease (GBD), The Institute for Health Metrics and Evaluation (IHME), University of Washington.[5]

The COVID-19 pandemic exacerbated already high rates of depression and anxiety. Among adults in Kentucky, self-reported frequent mental distress, characterized by 14 or more days of poor mental health in the past month, increased 26% from 13.8% to 17.4% between 2015 and 2020.[6] Rates differed across income, with those in the lowest income range reporting the highest levels of frequent mental distress (Figure 2). Low household income has also been associated with more suicide

attempts and, generally, a heavier burden of mental health challenges.[7]

The United States Preventive Services Task Force recently released draft recommendations guiding providers to routinely screen for anxiety, depression, and suicide for all Americans between the ages of 19 and 64.[8] Delays in diagnoses of mental health conditions, some of which can be prevented by routine screening, are a significant barrier to receiving treatment. A 2007 study found that 23 years was the average duration of time that passed from onset to diagnosis of an anxiety disorder.[9]

Figure 2. Frequent Mental Distress Among Adults in Kentucky by Income



Source: United Health Foundation. America's Health Rankings.[10]

OBJECTIVE

This research brief summarizes the findings of a study to assess the prevalence and treatment utilization for depressive and anxiety disorder (DAD) among Medicaid beneficiaries in Kentucky.

The second objective of this study was to assess the association between alcohol use disorder (AUD) and DAD. A report summarizing the findings of the AUD-related study objectives can be found here.

METHODS

This study used Kentucky Medicaid claims data from January 1, 2012, through December 31, 2019. To assess the prevalence and treatment utilization of DAD, a sample of beneficiaries was created that consisted of patients over the age of fourteen. To assess the association between AUD and DAD, a cohort of patients over the age of fourteen who had DAD but not AUD in 2013 and had an annual follow-up visit each year from 2013 to 2019 was constructed. The sample included 70,740 patients. The follow-up visit is important because it allows an opportunity to identify whether a patient

with DAD, a potential precursor for AUD, developed AUD over time. A patient was determined to have a major depressive disorder and/or anxiety disorder if they had diagnoses of major depressive disorder, anxiety disorder, or both. International Classification of Disease Codes versions 9 and 10 (ICD-9/ICD-10) and the Healthcare Common Procedure Coding System (HCPCS) were used to identify whether a patient had received individual psychotherapy or group psychotherapy, and drug codes were used to identify medication-based treatment. County-level maps were used to visualize the geographic distributions and risk factors associated with patients with DAD, as well as the types of treatment received. Risk factors associated with DAD were assessed using multinomial logistic regression models.

KEY FINDINGS

Demographic Differences in DAD Diagnoses

Since 2012, the prevalence of DAD among Kentucky Medicaid beneficiaries has increased significantly. In 2012, 31% of Medicaid beneficiaries had a DAD diagnosis compared to the 2019 prevalence of 36% (Figure 3). There were differences in the demographics among those with a DAD diagnosis (Figure 4). Females had higher rates of DAD than males for all years of the study (Figure 4B1). DAD varied across age groups though, generally, it increased over time in all ages. DAD was highest among adults ages 45-54 though DAD among individuals over the age of 65 was similarly high (Figure 4B2). Tobacco users and patients with AUD also had a much higher prevalence of DAD (Figures 4B3 and 4B4). For instance, patients with AUD had a 30% higher prevalence of DAD than those without AUD (63.3% vs. 35.2%). Racial differences were also found in the prevalence of DAD (Figure 5).

Figure 3. Prevalence of Mental Disorders Among Kentucky Medicaid Beneficiaries, 2012-2019

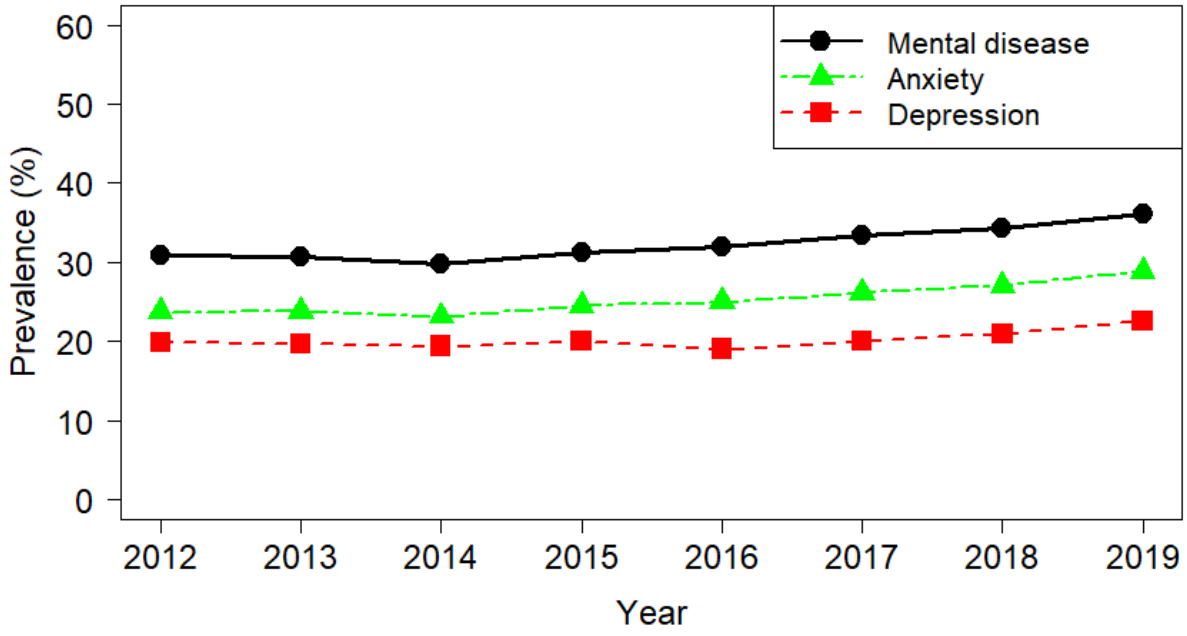


Figure 4. DAD Trends by Gender, Age, Tobacco Use, and AUD in Kentucky Medicaid Beneficiaries, 2012-2019

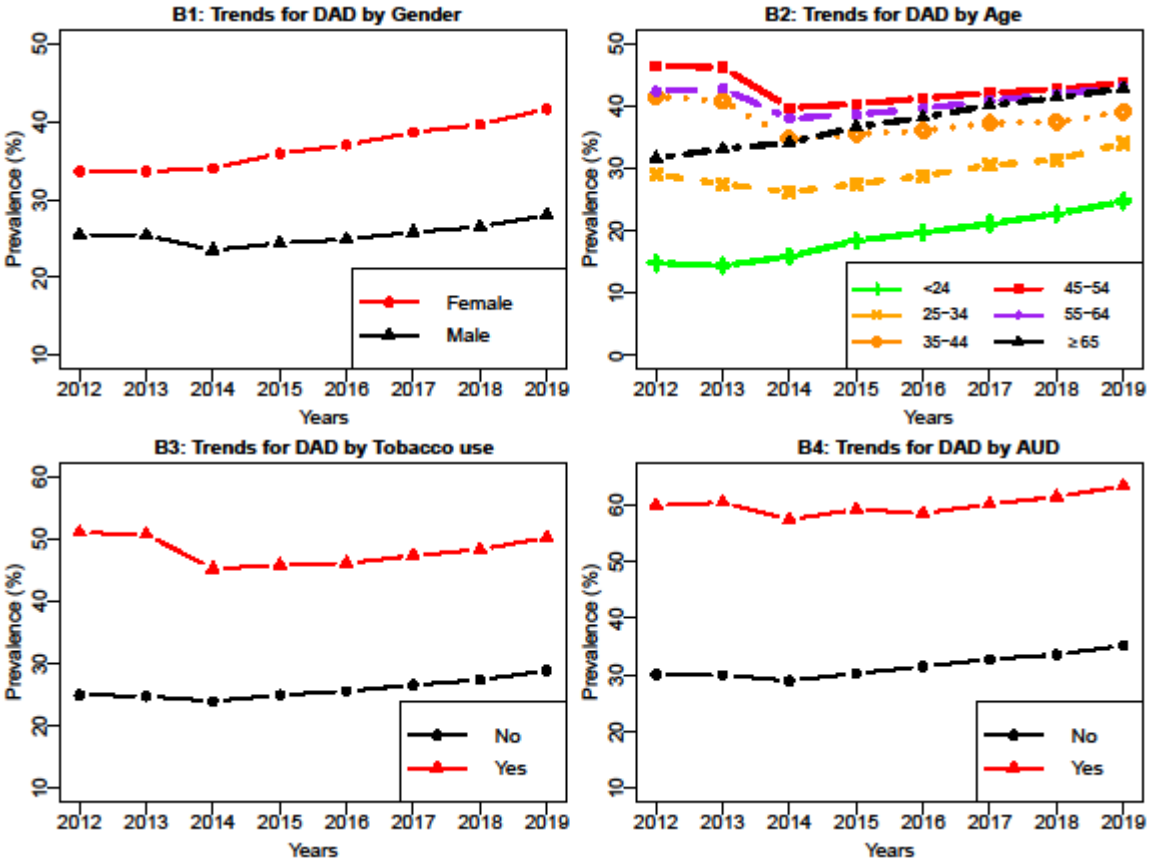
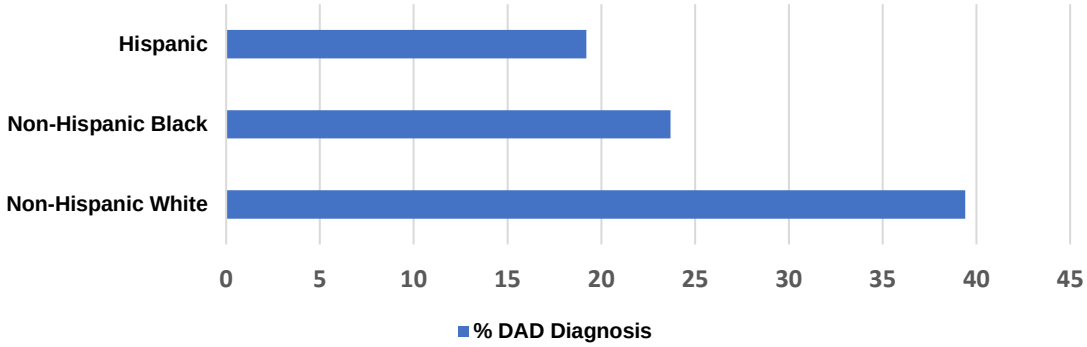


Figure 5. DAD Prevalence by Race, 2019

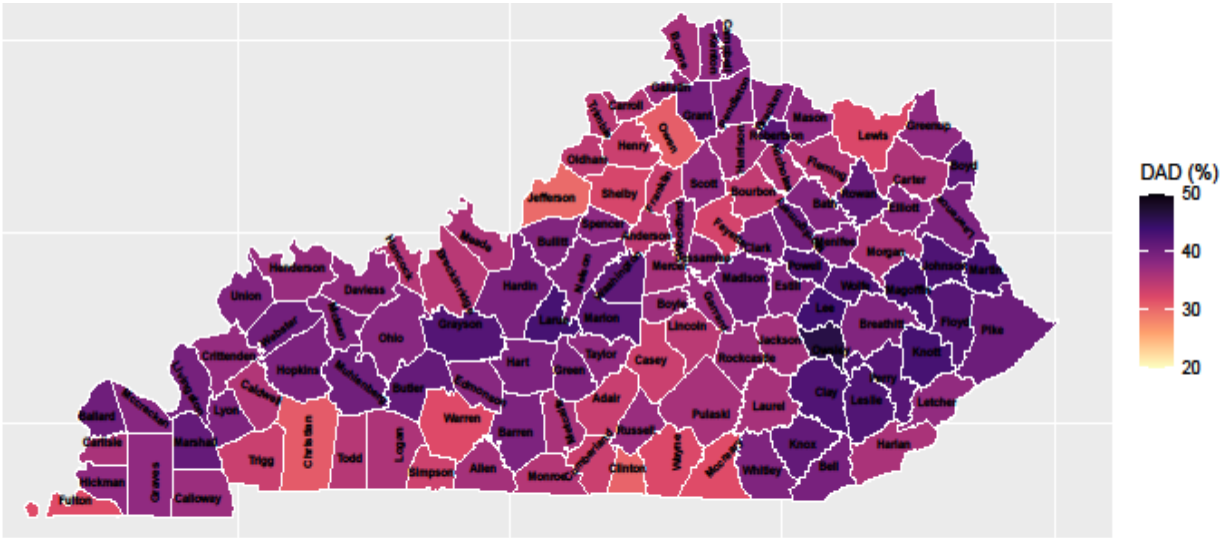


Geographic Differences in DAD Diagnoses

There were key differences in the geographic distribution of Medicaid beneficiaries with DAD diagnoses. Louisville had the lowest DAD rates, while counties in southeastern Kentucky had the highest rates (Figure 6). In particular, Jefferson, Fayette, and Franklin Counties had the lowest rates of DAD. The county-level prevalence of DAD increased over time in almost every county and, in

2019, ranged from 29.8% to 46.3%. Overall, rural counties were more impacted than urban counties (38.3% vs. 34.2%).

Figure 6. County-level variation in prevalence (%) of DAD among Kentucky Medicaid Beneficiaries, 2019



Treatment Utilization for DAD

The study assessed treatment use for group and individual psychotherapy and seven types of medications among those who had a DAD diagnosis. The overall use for either medication or psychotherapy-based treatment was maintained in the range of 70.6% to 73.4% between 2012 and 2019, except for a decrease to 61.8% in 2013.

Benzodiazepine (i.e., Valium, Xanax, Klonopin) was the top prescribed medication-based treatment for DAD though its use decreased over time from 40.3% in 2012 to 21.8% in 2019. Selective serotonin reuptake inhibitors (SSRIs) (i.e., Prozac, Celexa, Lexapro) were the second highest prescription medication treatment, with a prescription rate of 32.6% in 2012 and 38.4% in 2019. Overall, the use of medication-based treatments remained at 61.6% to 63.3% between 2012 and 2019—except a drop occurred in 2013 due to decreased use of benzodiazepine. At this time, the use of SSRIs surpassed the use of benzodiazepines. This decrease is likely associated with the Kentucky House Bill 1 (HB 1) passage in 2012, which is discussed below. Other medications assessed included hydroxyzine (i.e., Vistaril, Atarax), serotonin and norepinephrine reuptake inhibitors (SNRIs) (i.e., Cymbalta, Effexor), bupropion, and tetracyclic antidepressants.

Factors Associated with DAD Treatment

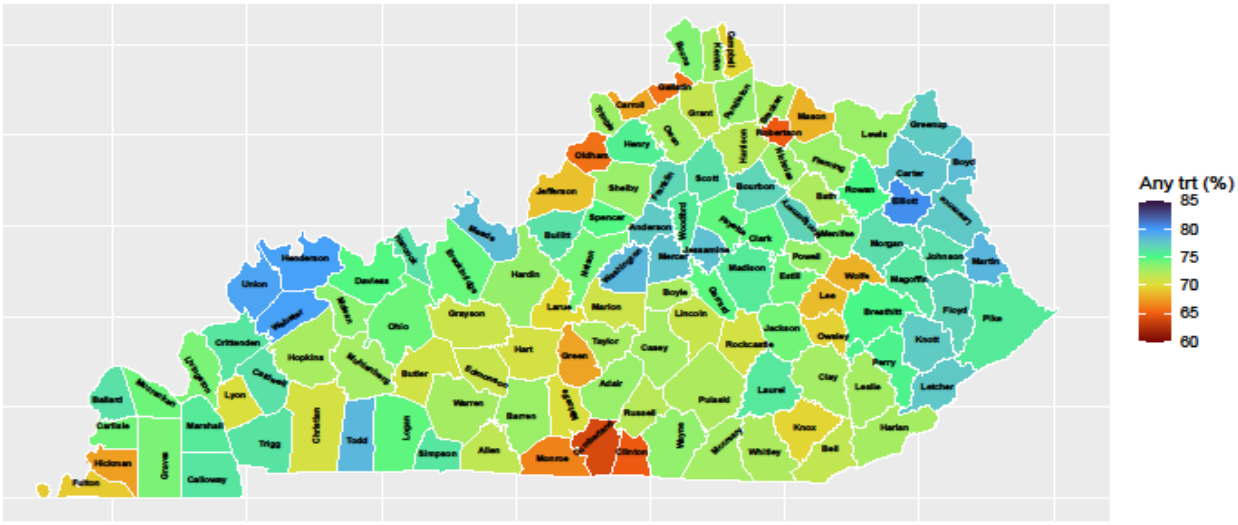
- Males had lower utilization of medication-based treatment (56.8%) than females (64.7%) but higher use of psychotherapy (39.4% vs. 35.2%)
- The use of medication-based treatment increased as age increased, with the highest usage in ages 35-54.
- Youth ages 14-24, those living in urban areas, and tobacco users were more likely to use psychotherapy as a treatment method.
- Non-Hispanic whites had the highest use of medication (63.5%) followed by non-Hispanic other (63.3%) and Hispanic (57.3%).

The overall use of psychotherapy increased from 24.4% in 2012 to 36.5% in 2019, which was mainly due to the use of individual psychotherapy. Group psychotherapy increased from 2.8% in 2014 to 6.2% in 2019.

Geographic Differences in DAD Treatment Use

There was a large variation in county-level use of psychotherapy, with individuals in rural areas less likely to use this method of treatment. This could be a result of the lack of availability of psychotherapy services in rural areas of the state. Jefferson, Fayette, and Kenton Counties had the highest use of psychotherapy and lowest use of medication-based treatment. Overall, county-level use of medication-based treatment for DAD in 2019 ranged from 47.4% to 71.2% (Figure 7).

Figure 7. County-level Utilization of Any Treatment for DAD among Medicaid Beneficiaries, 2019



POLICY IMPLICATIONS

The Kentucky All Schedule Prescription Electronic Reporting (KASPER) program started in 1999 and allowed prescribers, pharmacists, and law enforcement officials to request reports providing detailed information regarding the controlled substance prescription history for an individual. In 2005, KASPER moved to a fully online reporting system, allowing prescribers and pharmacists to view real-time reports.[11] In 2012, as part of the KASPER system, the Kentucky General Assembly passed House Bill 1 (HB 1), which regulated pain clinics and prescription drugs with the potential to be abused. A number of required regulations were put in place by HB 1, including mandatory prescribing and dispensing standards for controlled substances and a minimum requirement for continuing medical education related to pain management, addiction disorders, or electronic monitoring, among others.[12] The decrease in medication-based treatment for DAD that was identified in this study could have been associated with the implementation of HB 1, which regulated the prescription of highly utilized benzodiazepines. This finding is consistent with other studies of decreased usage of medications following the passage of HB 1.[13]

In 2021, Kentucky passed a revised statute, KRS 218A.182, which mandates electronic prescribing of controlled substances in the state, with few exceptions.[14] Future studies may explore the impact of KRS 218A.182 on treatment utilization for those diagnosed with DAD.

CONTACT INFORMATION

For more information about this research brief or to learn more about the Commonwealth Institute of Kentucky, please contact:

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This study was funded jointly by the Kentucky Cabinet for Health and Family Services and the University of Louisville, July 1, 2020-June 30, 2022.