

AMERICA'S STATE OF MIND

U.S. trends in medication use for depression, anxiety and insomnia



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RISING MENTAL HEALTH CONDITIONS TAKE A TOLL ON FAMILIES AND EMPLOYERS



As we publish this report, Americans are coping with the psychological, physical and financial toll of the COVID-19 pandemic. Using available data, we are tracking how this unprecedented event is impacting the mental health of the people we serve. **See p3 for preliminary observations.**

Mental health conditions disrupt thinking, mood and behavior. From mild stress to psychiatric illness such as depression, anxiety and insomnia, these disorders can be a great source of distress for people experiencing symptoms, and for those close to them.

Just as physical health conditions can degrade our mental health, mental health conditions can worsen our physical health. In fact, the World Health Organization has identified **depression as the leading cause of poor health and disability worldwide.**¹

The rising prevalence of mental health conditions is having a negative impact on your plan members and their families. These conditions cause more days of lost work and work impairment than many other common chronic conditions, including diabetes, asthma and arthritis. **They also cost the U.S. health care system more than \$200 billion annually, tops among all chronic conditions.**^{1,2}

While the mind and body connection is clear, social stigma and inadequate access to care create **barriers to effective treatment of mental health conditions.** At Express Scripts, we are chipping away at the stigma by starting conversations that lead to proper treatment and support, but there is more work to be done.

This report is an important step in that direction. It shares critical insights on America's state of mind by taking a close look at trends in the use of medication for three of the most common mental health conditions: depression, anxiety and insomnia.

Express Scripts is taking on the growing mental health challenge by **improving the care we provide to members living with mental health conditions.**

- Through our Neuroscience Therapeutic Resource Center®, **we provide health coaches, pharmacists, nurses and social workers** who specialize in caring for members with complicated and costly mental health conditions, including depression, anxiety and insomnia.
- Using RationalMed®, our award-winning medication safety program, **we warn prescribers and pharmacists, when appropriate, about the patient's potential use of more than 200 medications** that may cause or exacerbate depression or the risk of suicide.
- The Express Scripts Digital Health Formulary®, which **makes access to digital health solutions easy and affordable for patients and plans who need them**, includes solutions for patients with anxiety, depression, insomnia and other mental health conditions.

Through this work, **we are supporting patients on their personal mental health journeys** and helping providers and payers better recognize, treat and care for people with mental health needs.

Glen Stettin, MD
Senior Vice President & Chief Innovation Officer

HOW TO USE THIS REPORT

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COVID-19 AND MENTAL HEALTH MEDICATION USE

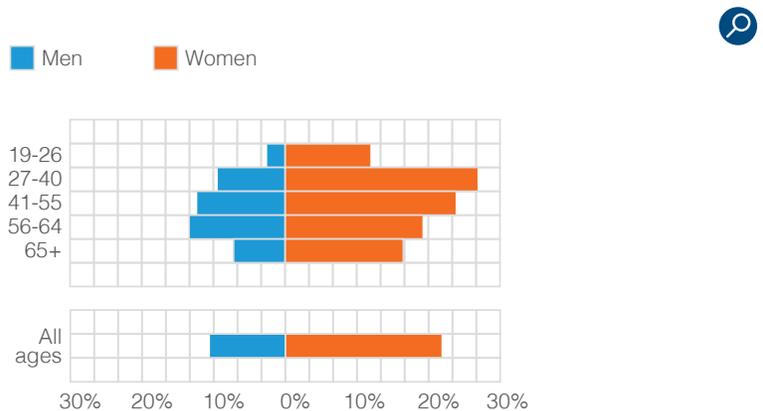
As COVID-19 began to significantly impact the U.S., we observed an increase in the use of prescription drugs that treat mental health conditions, particularly commonly used anti-anxiety medications known as benzodiazepines.

An early analysis by Express Scripts shows that the number of prescriptions filled for antidepressant, anti-anxiety and anti-insomnia medications rose 8.3% between March 8 and March 15, with use of anti-anxiety medications rising 17.7% during that 7-day period.

The rise in utilization of anti-anxiety medications was higher in women (22.2%) than men (10.7%), with the largest increase among women ages 27-40 (27.3%), followed by women ages 41-55 (24.2%). [The increase in use of anti-anxiety medications during this time is in sharp contrast to the 12.1% decline in the use of benzodiazepines over the past five years.](#)

INCREASE IN ANTI-ANXIETY MEDICATION PRESCRIPTIONS FILLED

By age group and gender, March 8-15, 2020



Prescriptions for anti-anxiety medication rose **17.7%** in one week

The second week of March marked a significant change in the public's understanding of the COVID-19 impact, as the World Health Organization proclaimed it a pandemic and the U.S. declared a national emergency in response to the crisis.

KEY FINDINGS 2015-2019

15% RISE

in antidepressant use since 2015

Used for depression, anxiety, chronic pain, obsessive-compulsive disorder, post-traumatic stress disorder and other indications

38% RISE

in antidepressant use for adolescents since 2015

Often prescribed for depression, anxiety and eating disorders; increased from 57 to 79 per 1,000

12.1% DECLINE

in use of benzodiazepine drugs for anxiety since 2015

11.3% decline in use of sedative hypnotic drugs for insomnia since 2015

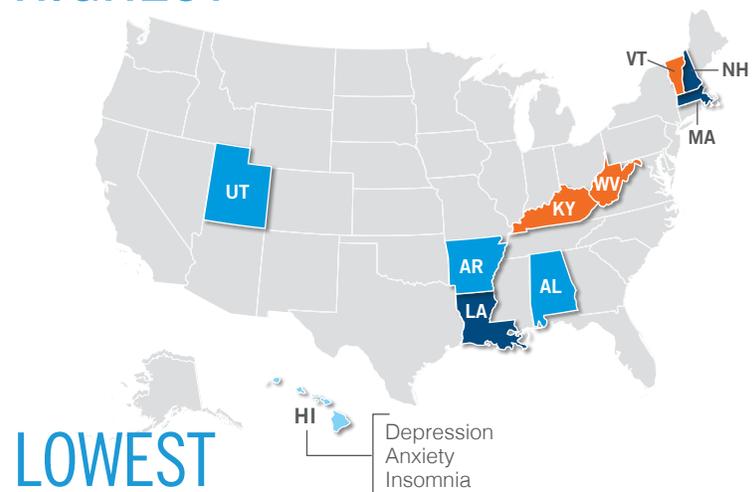
WOMEN AGES 45-64

have highest medication use for depression, anxiety and insomnia

Depression (21.6%)
Anxiety (10.4%)
Insomnia (6.2%)

MENTAL HEALTH MEDICATION USE AMONG STATES HIGHEST

■ Depression ■ Anxiety ■ Insomnia



COVID-19

KEY FINDINGS

BACKGROUND

UTILIZATION TRENDS

WHAT'S NEXT

METHODOLOGY/REFERENCES

BACKGROUND

America is in the grip of a mental health crisis. Nearly 1 in 5 U.S. adults experienced a mental health condition in 2018³, and the rate of psychological disorders has risen dramatically among younger people in the past decade.⁴ From 2008-2018, the overall prevalence of mental illness increased 8%, from 177 to 191 per 1,000, and potentially disabling mental illness by 24%, from 37 to 46 per 1,000.⁵

Mental health conditions are the costliest health conditions in the U.S., costing the health care system more than \$200 billion annually^{6,16}, and more than \$193 billion in lost earnings per year.⁷ They're the most common cause of hospitalizations for people ages 45 and younger, and 13% of mental health discharges are readmitted to the hospital within a month.⁸

Not only do mental health conditions affect a person psychologically, they also negatively impact their physical health. People with mental health conditions are at higher risk for a wide range of diseases, including heart disease, diabetes and Alzheimer's disease.⁹ People who have both a mental health condition and a chronic disease have two to three times higher health care costs than those with only a chronic disease.¹⁰ Mental illness is also highly associated with substance abuse disorders, with almost 1 in 5 Americans impacted by both¹¹.

In this report, we examine medication usage for three of the most common mental health conditions in the nation – depression, anxiety and insomnia – as many people suffer from a combination of all three.

DEPRESSION

Depression is common, with approximately 17.3 million American adults having experienced major depressive disorder (MDD) in 2017.¹² Depression differs from the typical fluctuations in mood or the short-lived emotional responses we all have to the challenges of everyday life. People with depression can experience serious negative effects on their performance at work, at school and their social interactions. Depression is also a leading cause of suicide.¹³

Depression costs employers an estimated \$44 billion each year in lost productivity¹¹ due to absenteeism (missing work) and presenteeism (being at work but unable to perform to expectations). Those workplace costs account for 50% of the total economic impact. Direct medical costs represent 45% and 5% are related to suicide.¹⁴

Nearly 17.3 million American adults experienced a major depressive disorder in 2017

Anxiety disorders
affect **40 million**
Americans every year

Clinical guidelines for managing depression involve a broad array of non-drug and pharmaceutical interventions. The American Psychiatric Association (APA) Practice Guideline for the Treatment of Patients with Major Depressive Disorder recommends use of antidepressant medications or psychotherapy as an initial treatment for patients with mild-to-moderate depression.

More than 80% of people with clinical depression can be treated successfully with either non-drug or drug therapies, or a combination of both.¹⁵ Outcomes improve when patients receive early diagnosis, intervention and support. Conversely, suboptimal treatment of depression can lead people to self-medicate with harmful and addictive substances, such as alcohol, opioids and illicit drugs.

ANXIETY

Anxiety is the most prevalent mental health condition in the U.S., affecting 40 million American adults, many of who also suffer from other mental health conditions.¹⁶

Most people feel anxious from time to time. However, for people with an anxiety disorder, a group of psychiatric disorders characterized by extreme feelings of worry or fear, that anxious feeling does not go away and can worsen over time. Anxiety disorders often interfere with the ability to function in daily activities, such as work and school, and to disengage in social relationships.¹⁷ People with anxiety disorders are also more prone to depression.¹⁸

Although anxiety may cause sleep problems or exacerbate existing insomnia, new research suggests that sleep deprivation can also lead to developing an anxiety disorder.¹⁹

People with an anxiety disorder are three to five times more likely to go to the doctor and six times more likely to be hospitalized for psychiatric disorders than those without an anxiety disorder.²⁰

Treatment options for anxiety disorders include psychological therapy such as cognitive behavioral therapy (CBT), drug therapy or both. Most people who obtain treatment experience significant improvement in their mental health and quality of life.

**50 to 70 million
people in the U.S.
suffer from a sleep
disorder**

INSOMNIA

Sleep disorders are abnormal sleep patterns that interfere with physical, mental and emotional functioning. The Centers for Disease Control and Prevention (CDC) report that sleep disorders are so pervasive in the U.S. that they constitute a public health epidemic.²¹ Insomnia is the clinical term for people who have trouble falling asleep, difficulty staying asleep, waking too soon or waking up feeling unrefreshed.

The National Institutes of Health (NIH) estimates that 50 to 70 million Americans suffer from a sleep disorder.²² Experts agree lack of sleep is associated with injuries, chronic diseases and mental health conditions, which can increase health care costs and decrease productivity.

According to the most recent CDC data, when compared to adults who slept more than 7 hours per night, those who did not get enough sleep were more likely to report one or more of ten chronic health conditions, including arthritis (28.8%), depression (22.9%), asthma (16.5%), diabetes (11.1%) and cancer (10.2%).²³

More than 23% of Americans (almost 50 million people) reported problems concentrating during the day due to the lack of sleep.²⁴ More than 8% (18 million) reported that sleep deficiency affected their job performance.²⁵ And those numbers are on the rise; the prevalence of adults experiencing inadequate sleep rose from 30.9% in 2010 to 35.6% in 2018.²⁶

The primary treatment for insomnia is sleep hygiene. Medication may be prescribed for 10 to 14 days or less, if at all.

76% of Americans believe mental health is just as important as physical health

DRIVERS AND BARRIERS TO PROPER, EFFECTIVE CARE

The demand for mental health services is greater than ever, with 56% of Americans seeking or wanting to seek mental health services for either themselves or a loved one.²⁷ This rise in interest may be attributable, at least in part, to current shifts in attitudes and acceptance regarding mental health, with 76% of Americans believing mental health is just as important as physical health.²⁸

Public awareness campaigns may also be helping to destigmatize mental health conditions and change negative perceptions that have been obstacles to diagnosis and treatment. Despite anti-stigma campaigns, multiple studies have found that the stigma associated with mental illness often prevents people from accessing treatment. Nearly one-third of Americans (31%) have worried about being judged when they told others they were seeking mental health services and more than a fifth of the population (21%) have lied to avoid telling people they were seeking services.²⁹

Given rising demand, current mental health services are not adequate, with many Americans being unable to find or afford quality mental health care. More than 42% of Americans cite cost and poor insurance coverage as the top barriers for accessing mental health care.³⁰

Adding to the financial barrier is a lack of access to mental health professionals due to a shortage of mental health counselors and social workers, psychiatrists and psychologists. According to the U.S. Department of Health and Human Services, approximately 111 million Americans live in areas with a shortage of mental health professionals.³¹ A study by the University of Michigan's School of Public Health Behavioral Health Workforce Research Center found that a majority of the 3,135 counties in the U.S. have no psychiatrists. The shortage is especially severe in rural areas where inpatient and community service centers are rapidly closing.³²

Primary care providers (PCPs) may be able to help fill that void as many are well-equipped to provide mental health services and manage the care of patients with mental health conditions.³³ However, PCPs have ever-increasing patient loads and may find it challenging to carve out the time needed to offer comprehensive mental health care to their patients.³⁴

COVID-19

KEY FINDINGS

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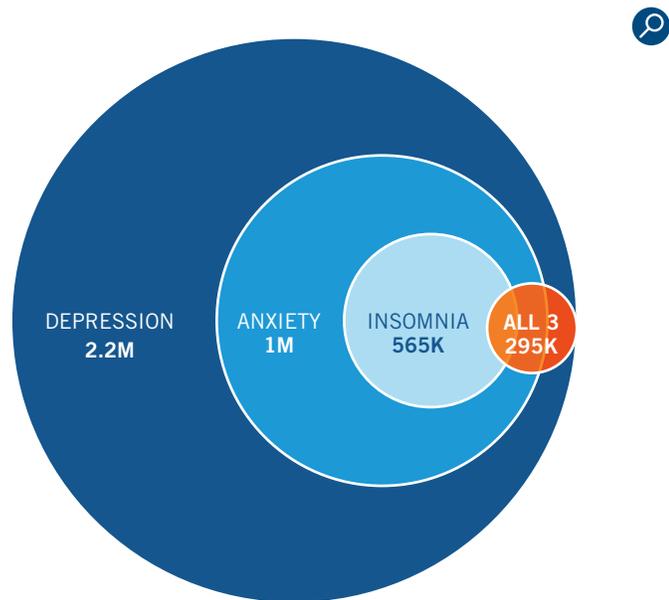
METHODOLOGY/REFERENCES

MENTAL HEALTH DRUG UTILIZATION TRENDS

Effective treatment of mental health conditions often requires a combination of medication and non-drug approaches, such as psychotherapy. The proper use of drug therapies is a key factor for managing these conditions.

Our research examined de-identified pharmacy claims of more than 3.4 million patients who filled at least one prescription for management of depression, anxiety or insomnia in 2019. Nearly 300,000 patients took at least one medication for all three conditions.

NUMBER OF PATIENTS TAKING AT LEAST ONE MEDICATION FOR A MENTAL HEALTH CONDITION



ANTIDEPRESSANT MEDICATION

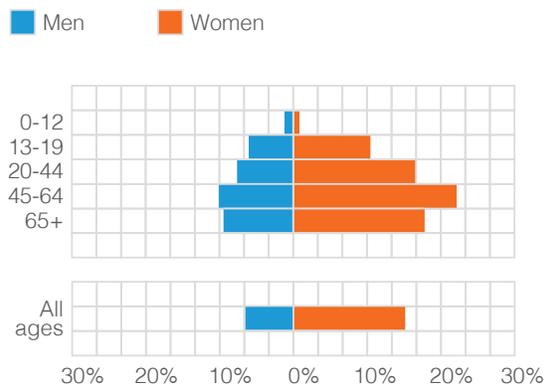
Antidepressants are typically the first line of therapy for patients experiencing depression, and several antidepressants are also used as first-line treatment for anxiety disorders.

The most commonly used antidepressants include serotonin reuptake inhibitors (SSRIs), best known by the brand names Prozac® (fluoxetine), Zoloft® (sertraline) and Paxil® (paroxetine); serotonin-norepinephrine reuptake inhibitors (SNRIs) such as Effexor® (venlafaxine) and Cymbalta® (duloxetine); and the heterocyclic or unclassifiable antidepressants, including Wellbutrin® (bupropion), Remeron (mirtazapine) and Trintellix® (vortioxetine).

In 2019, 11.1% of the population was taking an antidepressant, a 15% increase from 2015. Women's use of antidepressants (15.1%) was more than twice that of men's (7.0%). Women 45-64 years old had the highest prevalence of antidepressant use (21.6%).

PERCENT OF PATIENTS TAKING ANTIDEPRESSANTS

By age group and gender, 2019



Antidepressant use increased 15% from 2015-2019

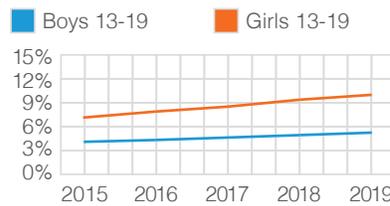
Nearly twice as many teenage girls take antidepressants vs. teenage boys

Steep rise among adolescents

While the prevalence of antidepressant use is higher among people ages 20 years and older, teens (ages 13-19) experienced the greatest increase in antidepressant use from 2015 through 2019, up a significant 38.3%, from 5.7 to 7.9. The prevalence of use was higher for teenage girls (10.2%) than boys the same age (5.7%).

PERCENT OF TEENAGERS TAKING ANTIDEPRESSANTS

By gender, 2015-2019



The mental health of young people has been particularly concerning in recent years. In 2017, the National Institute of Mental Health reported that about 3.2 million 12-17 year-olds had at least one major depressive episode over a 12-month period;³⁵ and according to another study, the number of youth with major depression rose 52% between 2005 and 2017.³⁶ Even more young people have anxiety, which is now the leading mental health condition among American youth, affecting 1 in 8 adolescents.³⁷

Poor medication adherence

Medication adherence is estimated based on the percent of days that patients had antidepressant medications in their possession within a defined period using pharmacy claims data. Nonadherence to medications is a significant burden on the U.S. health care system. Research has shown that nonadherence to antidepressants is associated with worsening clinical outcomes, increased emergency department visits and hospitalizations and greater economic costs.³⁸

While nonadherence is a problem related to most treatments of chronic conditions, drug therapies for depression present particular

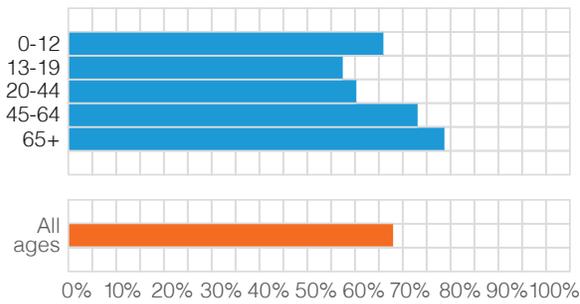
Adolescents struggle more with antidepressant medication adherence than other age groups

challenges. Antidepressants can take up to eight weeks to be fully effective. Over that time, patients can lose faith that the medication is working and terminate use prematurely. A mental health condition itself is another obstacle to adherence because it can undermine a person's understanding of the need for medication and reduce the motivation to stick with treatment. Some people can experience unpleasant side effects from antidepressants; and many newly treated patients may require a period of titrating doses and switching or adding medication before the right medications and dosing for an individual are determined.

This analysis found that **adolescents had the lowest antidepressant medication adherence rate (57.6%) compared to 68.0% for all age groups in 2019.**

PERCENT OF PATIENTS ADHERENT TO ANTIDEPRESSANTS

By age group, 2019



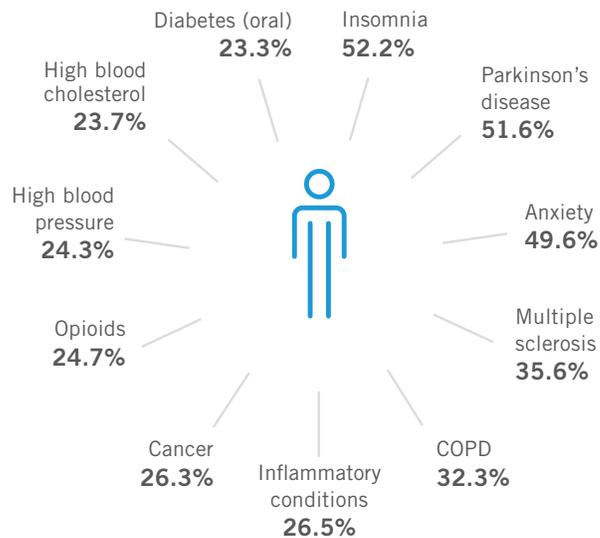
About half of patients who use a medication for anxiety or insomnia also use an antidepressant

Adherence and comorbidities

Adherence to antidepressants is also important for the overall health of those with depression. People with depression often have a number of mental and physical comorbidities. They have a 40% higher risk of developing cardiovascular and metabolic diseases than the general population.³⁹ Research has shown that when an individual is adherent to their antidepressants, they are more likely to also be adherent to their other disease treatments.⁴⁰

PERCENT OF PATIENTS TAKING MEDICATION FOR THEIR CONDITION AND AN ANTIDEPRESSANT

By condition, 2019



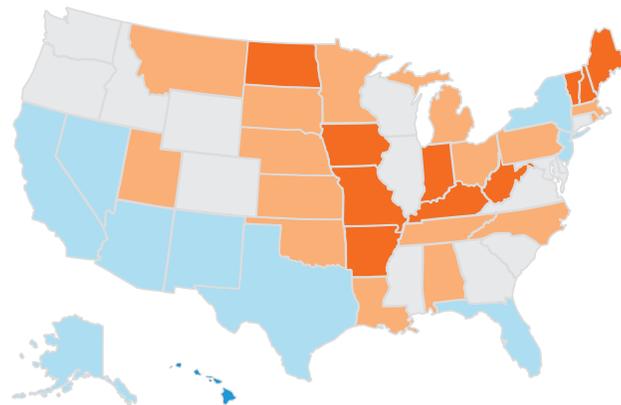
West Virginia, Kentucky and Vermont have the highest rates of antidepressant use in the country

Antidepressant use by U.S. state

Mental health conditions span the nation, but according to this analysis, the prevalence of antidepressant use is highest in West Virginia, with 16.4% of the population taking an antidepressant, followed by Kentucky (15.3%), Vermont (14.7%) and New Hampshire (14.5%). Hawaii has the lowest use of antidepressants (3.4%).

PERCENT OF PATIENTS TAKING ANTIDEPRESSANTS

By U.S. state, 2019



Antidepressant medication prevalence

Lowest Highest

ANTI-ANXIETY MEDICATION

For the treatment of anxiety disorders, physicians prescribe antidepressants or anti-anxiety medications, or both in combination, especially for people who suffer anxiety and depression. In our data, half (49.6%) of people who take anti-anxiety medication also take an antidepressant. Among those taking an antidepressant, 21.7% are also taking an anti-anxiety drug.

The best known benzodiazepine anti-anxiety medications are Xanax® (alprazolam), Klonopin® (clonazepam), Ativan® (lorazepam) and Valium® (diazepam). These medications are sometimes used for their sedating properties.

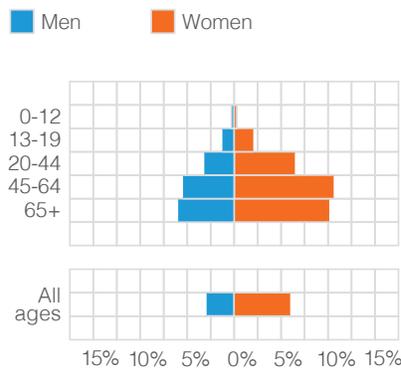
Prescribing of controlled substances like anti-anxiety medications is regulated by the Drug Enforcement Agency (DEA), reflecting their addictive nature and the potential for misuse, abuse or diversion by patients. With their sedating effects, using anti-anxiety drugs with alcohol, opioids, tricyclic antidepressants and barbiturates can be extremely dangerous and even fatal. According to a report by the Substance Abuse and Mental Health Services Administration (SAMHSA), benzodiazepine abuse treatment admissions tripled from 1998 to 2008.⁴¹

The use of anti-anxiety medication has **dropped 12.1%** over the last five years

This analysis shows that recent efforts to better control the use of these medications, along with increased awareness of the potential dangers of using these medications inappropriately, have had some success. The prevalence of anti-anxiety medication use dropped to 4.9% in 2019, a 12.1% decrease from 2015. Women had higher rates of use than men. The highest prevalence of use was seen among women ages 45-64, with 10.4% filling at least one prescription for an anti-anxiety medication in 2019, twice the rate seen in men in the same age group (5.2%).

PERCENT OF PATIENTS TAKING ANTI-ANXIETY MEDICATION

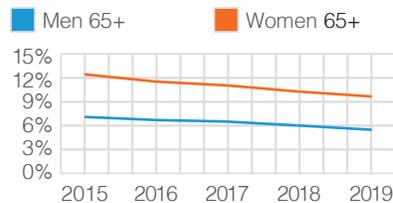
By age group and gender, 2019



The prevalence of anti-anxiety medication use declined in every age group, with the steepest drop (-20.1%) among those age 65 and older over the five-year period. The elderly are particularly prone to adverse drug reactions (ADRs) and are at greater risk of falls when using these medications.

PERCENT OF SENIORS TAKING ANTI-ANXIETY MEDICATION

By gender, 2015-2019



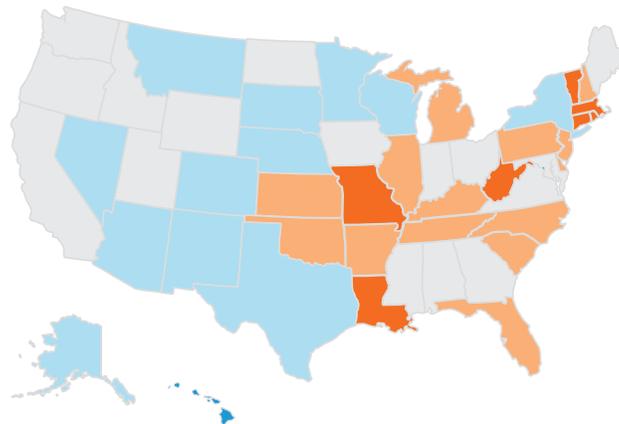
It's worth noting that 16.1% of people taking an anti-anxiety medication have also filled a prescription for an anti-insomnia drug.

Anti-anxiety medication use by U.S. state

The prevalence of anti-anxiety medication use is highest in Louisiana (7.0%), New Hampshire (6.9%), Massachusetts (6.3%) and West Virginia (6.3%). Hawaii has the lowest rate in the nation at 2.4%.

PERCENT OF PATIENTS TAKING ANTI-ANXIETY MEDICATION

By U.S. state, 2019



Anti-anxiety medication prevalence

Lowest Highest

ANTI-INSOMNIA MEDICATION

The most commonly prescribed anti-insomnia medications include Lunesta® (eszopiclone), Ambien® (zolpidem) and Sonata® (zaleplon). Prescription anti-insomnia drugs, also called sedative-hypnotics, are controlled substances initially intended for short-term use of between 2-4 weeks. Longer-term usage should warrant re-evaluation.

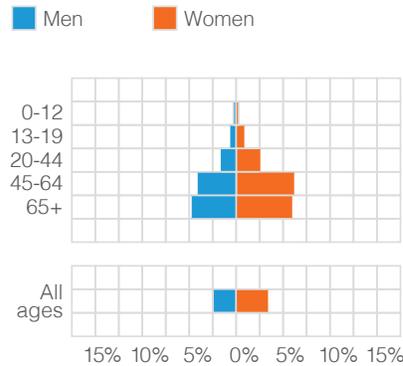
Taking an anti-insomnia drug at night can impair a person's ability to be alert and even drive safely the following day. Side effects from anti-insomnia medications can be more pronounced in the elderly, people with sleep apnea and when used in combination with alcohol. Taking anti-insomnia medications in combination with other medications that affect the central nervous system could result in serious adverse drug reactions.

Use of anti-insomnia treatments **declined 11.3%** over the past five years

With prescribers being more judicious about prescriptions for all controlled substances, the use of insomnia treatments declined 11.3% from 2015 through 2019. [The highest prevalence was among women ages 45-64 \(6.2%\), 60% higher than men in the same age range.](#)

PERCENT OF PATIENTS TAKING ANTI-INSOMNIA MEDICATION

By age group and gender, 2019

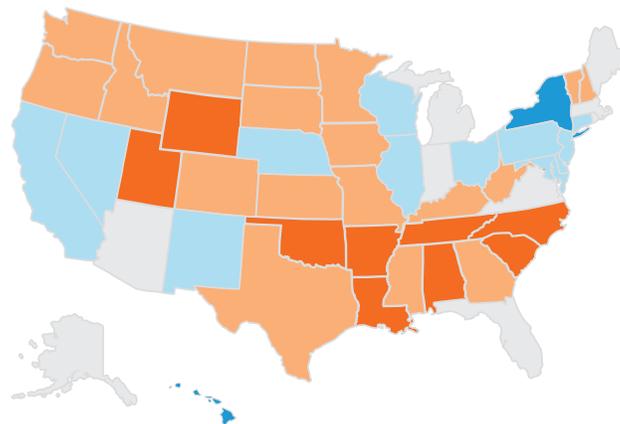


Anti-insomnia medication use by U.S. state

The use of anti-insomnia medication is most prevalent in Arkansas (4.4%), Alabama (4.2%), Utah (4.0%) and Louisiana (4.0%). Prevalence is lowest in Hawaii (1.8%).

PERCENT OF PATIENTS TAKING ANTI-INSOMNIA MEDICATION

By U.S. state, 2019



Anti-insomnia medication prevalence

Lowest Highest

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WHAT'S NEXT IN TREATMENT

Drug therapies continue to play a critical role in treating mental health conditions, making it possible for many with these diseases to lead productive and fulfilling lives. But substantial gaps in care exist. Patients are undiagnosed and undertreated; many do not have access to mental health practitioners; and a lack of education about their disease and treatments compromise outcomes.

BREAKING DOWN THE BARRIERS

The keys to opening the door to better mental health care are education, awareness and reducing stigma. If someone is unaware that something is wrong or feels ashamed to speak up, that person is less likely to seek treatment.

Unlike physical injuries or illnesses, mental health disorders can be harder to recognize. Often symptoms are subtle and may be dismissed as personality or attitude issues. Clinical anxiety may be masked as worrying too much, depression could be disguised as fatigue, and even serious conditions may not be obvious to the person suffering or to those around them.

Both education and access are critical for diagnosing and providing appropriate interventions for patients with a mental health condition. Some technological solutions are helping to address both.

Telehealth programs for the treatment of mental health have been on the rise and offer several advantages. They provide access to health care practitioners for mental health assessments, counseling, patient education and monitoring that might otherwise not be feasible. This is especially true in rural areas where few primary care practitioners, let alone mental health services professionals, are available. Telehealth programs also offer flexibility to patients who may find it difficult to fit in-person sessions into their schedule.⁴² And they can be far less costly than traditional psychiatric care.

Mental health disorders can be **more difficult to recognize** than physical illnesses

New technology is a **critical component** to treating behavioral health conditions

Digital behavioral health tools are also quickly expanding access to treatment and providing complementary care. These online programs and apps are particularly well-suited for cognitive behavioral therapy (CBT) approaches, which have become one of the first-line treatments for a variety of mental disorders. Evidence shows that these programs can be extremely effective in the treatment of anxiety, depression and insomnia, as well as suicide prevention.⁴³

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METHODOLOGY: COVID-19 DATA

COVID-19 data is based on an analysis of prescription claims for antidepressant, anti-anxiety and anti-insomnia medications filled between January 1, 2020 and March 15, 2020, among a sample of more than 31.5 million commercially insured individuals.

METHODOLOGY: 2015-2019 DATA

From a sample size of more than 21 million commercially insured individuals, including retirees with private health insurance, this research examined de-identified pharmacy claims of more than 3.4 million individuals who filled at least one prescription for management of depression, anxiety or insomnia in 2019. Beneficiaries of a government-sponsored benefit, such as Medicare, Medicaid or public health insurance exchange, were excluded.

Measures estimated during a five-year period were calculated for the period from Jan. 1, 2015 to Dec. 31, 2019. Measures for 2019 were calculated for the period from Jan. 1, 2019 to Dec. 31, 2019. Our analysis only included commercially insured plans and privately insured retiree plans that were continuously enrolled in the Express Scripts book of business for all five years. Prevalence of use was calculated by dividing the sum of people with pharmacotherapy by the sum of all people in the population. Geographic prevalence rates were age- and gender-adjusted to the U.S. population using the direct method.

People with depression were defined as members having one or more prescription claims for an antidepressant, including SSRIs, SSNIs, MAOIs, and atypical antidepressants. People with anxiety were defined as members having one or more prescription claims for benzodiazepines. Patients with insomnia were defined as members having one or more prescription claims for a sedative hypnotic.

Adherence was calculated using the medication possession ratio (MPR), which is the sum of the days' supply for all fills of an antidepressant in a particular period, divided by the number of days in the period for a patient having two or more fills of the antidepressant during the period. Patients with an MPR of more than 0.8 or 80% were considered adherent.

Data examined in this report was limited to Express Scripts commercially insured plan sponsors with no contractual limitations for data use.

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