MENTAL HEALTH DISORDERS ARE SEEN TO RISE DUE TO THE COVID-19 PANDEMIC

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Executive Summary *The COVID-19 pandemic left serious, long-term effects on society – Dr. Regina Rosace and Dr. Richard Braun at SCOR provide the latest background information on the acceleration in the rise of mental health disorders, primarily depression and anxiety. They also outline the potential consequences for the insurance industry along with possible solutions.*

As we approach the second-year anniversary of the COVID-19 pandemic, the collateral population health damage is becoming clearer. The most significant among these effects appears to be to overall mental health. The trends showed increasing issues with depression and anxiety before COVID-19 arrived on the scene. But the fear of COVID-19 infection, the social isolation, and the contentious rhetoric around public safety measures appear to have added fuel to these already expanding disorders.

Global estimates of mental health disorders are difficult to assess and are affected by multiple factors. Some of these include the data available for study, the number of mental health professionals available in each location, the economic prosperity of a region, and cultural stigma associated with disorders of mental health. One way to measure the overall burden of a disease is disability-adjusted life-years (DALY). This measure combines the mortality of a disease with the disability associated with a disease by calculating the sum of years of life lost due to premature mortality and the years of healthy life lost due to disability. Some conditions cause mortality without prior disability (drowning, measles), while others may cause more disability (blindness, traumatic spinal injury).

According to the Global Burden of Disease Study - 2019,[1] depressive disorders were the 13th leading cause of disability-adjusted life-years (DALYs), causing 1.8% of all DALYs out of 369 diseases studied. This was a 61% overall increase in the number of DALYs from 1990 data. Most of the increase was seen in the 25-49 age band, where depressive disorders were the sixth leading cause of DALYs, contributing 3.5% of all DALYs, with a 53.2% increase since 1990. In the 50-74 age band, depressive disorders were the 14th leading cause of DALYs contributing 1.7% of DALYs, but had the most increase over 1990 at 107%.

That same study estimated that anxiety disorders for all ages moved from the 34th leading cause of DALYs in 1990 to the 24th leading cause, with an overall increase in the number of DALYs due to anxiety disorders of 53.7% from 1990 to 2019. In 2019, anxiety disorders were estimated to be the sixth leading cause of DALYs (3.3%) in the 10-24 age group, the 15th leading cause (2%) in the 25-49 age group, while falling out of the top 25 causes at ages 50 and above.

Unfortunately, COVID-19 has most likely increased the prevalence of major depressive disorders and anxiety disorders in many countries.[2] Global estimates are that an additional 53.2 million cases of major depression and 76.2 million cases of anxiety disorder increased the prevalence of these disorders by 27.6% and 25.6%, respectively. Two contributing factors appeared to be high daily SARS-CoV-2 infection rates and limitations of mobility (lockdowns). Younger age groups were more affected than older age groups, and females were slightly more affected than males.

Three illustrations from reference 2 may be helpful in visualizing the changes due to COVID-19.

Figure 1. Change in the Prevalence of Major Depressive Disorder After Adjustment for (ie, During) the COVID-19 Pandemic, 2020

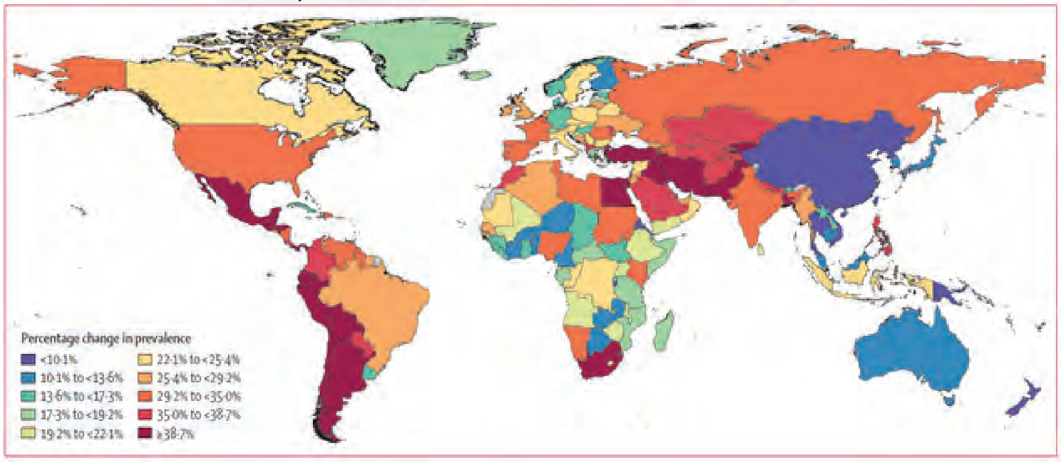


Figure 2. Change in the Prevalence of Anxiety Disorders After Adjustment for (ie, During) the COVID-19 Pandemic, 2020

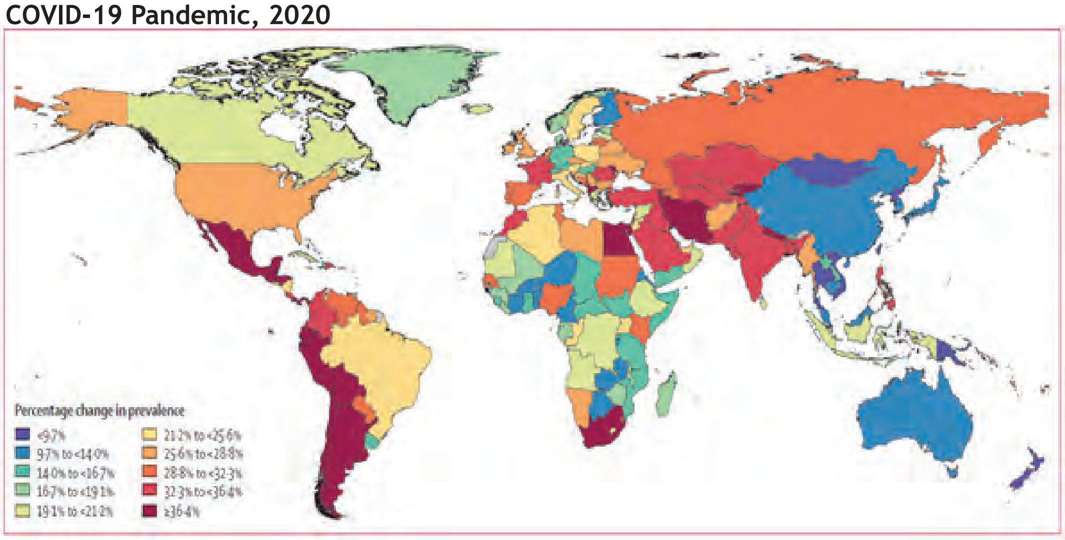
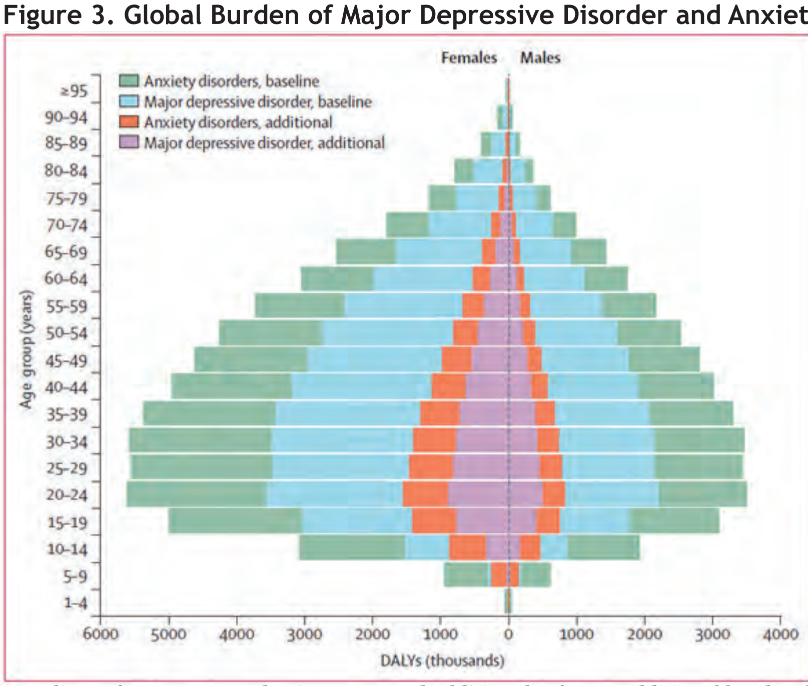


Figure 3. Global Burden of Major Depressive Disorder and Anxiety Disorders by Age and Sex, 2020



Baseline refers to pre-pandemic DALYs and additional refers to additional burden due to the COVID-19 pandemic. DALYs=disability-adjusted life-years.

Mental health disorders are diagnosed subjectively, which means that there are no diagnostic laboratory tests, no scans and no X-rays to confirm a diagnosis although laboratory testing can be used to rule out other disease states that may mimic depression or anxiety.

Depressive Disorders - Diagnosis

Depression can be a catchall label describing anything from a mood state to a distinct clinical condition. Depression can be secondary to a medical illness like cancer or neurological disease. A depressed mood can be normal and situational, such as after the loss of a loved one, but it should gradually resolve. Depression can be caused by medications and can also be associated with other mental health conditions such as anxiety, bipolar disorder, substance abuse and schizophrenia. To cause disability, depression is more likely to be major. The clinical definition of a unipolar major depression requires five or more of nine criteria to be present for 2 or more weeks (representing a change from previous functioning). Also, either criteria #1 or #2 must be present. The criteria are:

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observations made by others (e.g., appears tearful). (NOTE: In children and adolescents, can be irritable mood.)
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).
3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month) or decrease or increase in appetite nearly every day. (NOTE: In children, consider failure to make expected weight gain.)
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

If the patient has a history of mania or hypomania, then bipolar depression is more likely. As an alternative, studies using just five criteria (1, 2, 7, 8 & 9) and requiring three of five to be present show a high correlation to those using nine criteria.

Typically, major unipolar depression will resolve within 2 years, even untreated, but may recur multiple times over a lifespan.

There is also a minor depression that uses the same nine criteria as above, but requires only two to four to be positive for the diagnosis. This reveals that depression is a spectrum of symptoms with varying levels of dysfunction.

Chronic major depression is now called persistent depressive disorder and is defined as three or more of the following symptoms lasting 2 years or longer:

- Depressed mood most of the day, more days than not.
- Decreased or increased appetite.
- Insomnia or hypersomnia.
- Low energy or fatigue.
- Low self-esteem.
- Impaired concentration or decision making.
- Hopelessness.

Anxiety Disorders - Diagnosis

Generalized anxiety disorder (GAD) is likely the most common anxiety disorder in adults, with an increased prevalence in women vs. men. It is characterized by excessive worry and anxiety that are difficult to control and cause significant distress and impairment.

Many factors contribute to the development of anxiety and/or depression. Biologic factors include genetics, neurotransmitter and other metabolic disturbances, and changes in brain metabolism, while cognitive, psychological and developmental factors such as the processing of emotional information and developmental and personality factors also play a part. GAD in adult life is associated with a higher-than-average number of adverse childhood experiences (ACEs) such as abuse, neglect and household dysfunction. Toxic stress from ACEs can change brain development and affect how the body responds to stress.

Diagnostic criteria - The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) diagnostic criteria for GAD require the presence of:

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The individual finds it difficult to control the worry.
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months).

Note: Only one item is required in children.
1. Restlessness or feeling keyed up or on edge.
2. Being easily fatigued.
3. Difficulty concentrating or mind going blank.
4. Irritability.
5. Muscle tension.
6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

D. The anxiety, worry or physical symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning.
E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).
F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder (OCD), separation from attachment figures in separation anxiety disorder, reminders of traumatic events in post-traumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder). Because the majority of the anxiety symptoms are not specific to GAD, it is important to exclude the other anxiety disorders before making the diagnosis.

GAD typically has a gradual onset with the full syndrome emerging later. It is a chronic illness with fluctuating symptoms, and is associated with poor cardiovascular health, coronary artery disease and cardiovascular mortality. Those living in the community requiring only outpatient treatment tend to fare better than those requiring hospitalization.

A commonly used screening tool is the GAD-7 Anxiety scale in adults.

The questions are as follows:
Over the last 2 weeks, how often have you been bothered by the following problems?
1. Feeling nervous, anxious or on edge?
2. Not being able to stop or control worrying?
3. Worrying too much about different things?
4. Trouble relaxing?
5. Being so restless that it is hard to sit still?
6. Becoming easily annoyed or irritable?
7. Feeling afraid as if something awful might happen?

The possible responses and their attendant point values are:
- Not at all – 0
- Several days – 1
- More than half the days – 2
- Nearly every day – 3

Summing the points for each response results in a score.
- A score of 0-4 points is minimal or no anxiety.
- 5-9 points shows mild anxiety.
- 10-14 points is moderate anxiety.
- 15-21 points indicates severe anxiety.

Comorbid Anxiety and Depression
Individuals with concurrent anxiety and depression have generally shown greater levels of functional impairment, reduced quality of life and poorer treatment outcomes compared to patients with only one disorder. The risk factors noted for this include female gender, younger age, lower education level, unemployment, parental psychiatric history and childhood trauma. The presence of both disorders together increases the time to therapeutic onset for medications, significantly decreases the odds of recovery, is associated with a more chronic course, and has higher symptom severity and functional impairment.

Depression, Anxiety and Substance Abuse
Large numbers of substance abusers also have symptoms of depression and/or anxiety. It is a complex relationship with some individuals self-treating their symptoms with drugs or alcohol. Once substance abuse is established, the inability to quit often causes symptoms of anxiety and/or depression. This is important because studies have shown that the standardized mortality ratio (SMR) of substance abuse is more than twice as much as that for depressive disorders. It is notable that for the period May 2020 to May 2021, drug overdose deaths increased about 21% over the prior 12-month period.[3]

Depressive Disorders - Treatment

Treatment of depressive disorders takes time and is often less than successful. Some estimates are that only about 50% of patients with depression ever pursue professional help. And when treated, only 30-40% respond to therapy. The mainstays of treatment are medication and psychotherapy such as cognitive-behavioral therapy (CBT). The combination of treatments has been shown to be more effective but is often not started initially as medications are readily available and more convenient. An early response to treatment with clinical improvement in < 2 weeks is a good prognostic sign.

GAD Treatment

The main objective of treatment is to reduce symptoms and improve functioning. As with depression, the two mainstays are medications and cognitive behavioral therapy or counseling. Evidence suggests that the combination of medication and CBT are better than either alone.

Selective serotonin reuptake inhibitors (SSRIs) (also used for depression) are the preferred initial pharmacotherapy. Treatment is started at a low dose and gradually increased every 3-4 days. Like depression, it generally takes about 3-4 weeks to notice a clinical response.

Depression, GAD and Disability Insurance

In underwriting, depression or GAD may be easy to conceal, especially in the ~50% who have not sought treatment. One may want to consider the judicious use of screening questions to include current mood and family history of mental health disorders. If warranted, screening instruments to detect depressive or anxious symptoms or tendencies could follow. Special attention should be paid to work history and financial underwriting, as economic setbacks are known risk factors for depression and suicide.[4] Claims management can be difficult due to the long response time to treatment and the muted overall response rate.

In claims management, consideration should be given to developing timely, detailed forms to be completed by the treating physician to assess severity, overall functionality, current treatments and treatment plans. It might be effective to have an internal team trained to handle mental health claims. In some cases, it may be efficient for direct companies to hire third-party services to work with depressed, disabled clients to assure optimum treatment and timely progress to remission. Designing policies that encourage a gradual return to work could be another solution, as being productive can boost self-image and aid in recovery.

Depression, GAD and Life Insurance

Underwriting of life insurance already includes questions about medical conditions with depression and GAD being included for the most part. The COVID-19 pandemic has increased the prevalence of these disorders while possibly decreasing the access to treatment. Attention should be paid to any indication of substance abuse including gaps in work history, financial setbacks, liver function test abnormalities, and results of screens for drugs of abuse. Life claims handling already carefully considers claims within the contestable period, and special attention should be given to claims within the suicide exclusion period.

Suicide

Suicide is a complex public health issue with multiple components, including environmental, biologic and psychological aspects. In the US, suicide increased 35% from 1999 to 2018, before declining 2% in 2019, and was the 10th leading cause of death in 2019.

Different demographic groups have been affected differently by the COVID-19 pandemic and that includes suicidality. A November 2021 Vital Statistics Rapid Release Report[5] by the CDC examined 99% of the 2020 suicide data and compared the results to 2019 data. Overall, the provisional number of suicides in 2020 was 3% lower than in 2019, as was the provisional age-adjusted suicide rate. The age-adjusted suicide rate for females was 8% lower in 2020 compared to 2019, while it was 2% lower for males.

Rates for those aged 10-34 years were higher in 2020 than in 2019, while rates for those aged 35 years and over were lower. Certain minority groups including African American, Native American or Alaska Native and Hispanic males also had rising rates in 2020, although only males aged 25-34 had a clinically significant increase.

A combination of factors is likely contributing to these changes. Early in the pandemic the improvement may be attributed to a general "pulling together phenomenon" which has been recognized during times of national crisis. The COVID-19 pandemic has been affiliated with risk factors associated with suicidal behavior (adverse mental health conditions, substance misuse and financial stress), with young adults and minority groups affected more than other demographic groups. This trend will need to be monitored with special attention to the at-risk groups.

Suicide is difficult to predict with accuracy, but risk factors for suicide include prior attempts, suicidal ideation, specific plans, chronic pain, substance abuse, traumatic brain injury history, family history of suicide and, of course, mental illness.

Conclusion

In 2019, nearly 50 million American adults experienced mental illness, while approximately half of them did not receive treatment.[6] Improved recognition of mental health importance by the medical community, the policy makers and the general public, the removal of cultural stigmatization, and improved access to mental health care are all needed at this time to counter the increase in depression, anxiety and suicidality in certain groups that has occurred as a result of this global pandemic. Life insurers can ameliorate risk by partnering with innovative groups and promoting healthful behaviors. We should all be mindful of danger signs and at-risk behaviors to try and mitigate the effects of the pandemic on mental illness.

Notes

1. "Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019," *Lancet* 2020;396:1135-59.
2. "Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic," *Lancet* 2021;398:1700-12.
3. www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm.
4. Nordt C, Warnke I, et al. "Modelling suicide and unemployment: a longitudinal analysis covering 63 countries, 2000-11," *Lancet Psychiatry* 2015;2(3):239-235.
5. Curtin, Sally C, Holly Hedegaard, and Farida B Ahmad. "Provisional numbers and rates of suicide by month and demographic characteristics: United States, 2020." NVSS-Vital Statistics Rapid Release (2021).
6. https://mhanational.org/research-reports/2022-state-mental-health-america-report.

About the Authors

Regina Rosace, MD, is Vice President and Medical Director at SCOR Global Life Americas since 2016. Prior to arriving at SCOR, she served as medical director to a small fraternal life insurance company for 4 years, as well as practicing medicine in the pediatric emergency room at Rainbow Babies and Children's Hospital in Cleveland, OH, for nearly 20 years, where she still resides. She is board-certified in Insurance Medicine as well as Pediatrics and is a fellow of the American Academy of Pediatrics. She is also a member of and serves on several committees with the American Academy of Insurance Medicine (AAIM). She is currently the President of the Midwestern Medical Directors Association (MMDA). In her spare time, she enjoys her nine children and three grandchildren. She can be reached at rrosace@scor.com.

Richard Braun, MD, is Vice President and Chief Medical Officer at SCOR Global Life Americas. As such, he leads the medical team in consulting on complex medical cases submitted on a facultative basis. The team also ensures that the SCOR OnLine Electronic Manual (SOLEM) for the Americas provides up-to-date guidance in medical risk classification for its clients as well as internal underwriters. In addition, the medical team provides education on insurance medical topics via webinars, industry presentations, publications and training sessions. Dr. Braun has more than 30 years of experience in the industry, starting at Life of Virginia and continuing to Lincoln Re, where he eventually became Chief Medical Director. He then spent almost 9 years at LabOne, which became ExamOne after being acquired by Quest Diagnostics. He joined the company (then Generali Life Re USA) in 2010. Following SCOR's acquisition of Generali in 2013, he became Vice President and Chief Medical Officer. He is board-certified in Internal Medicine and Insurance Medicine, a past president of the American Academy of Insurance Medicine and past chair of the ACLI Medical Section.