



Expert Views

A New Underwriting Solution

Helping to assess anxiety and depression in
Australia & New Zealand

SCOR
The Art & Science of Risk

October 2022



Table of Contents

Introduction.....	3
Mental Health epidemic – burden of disease	3
Challenges for the Underwriter	3
Vitae Mental Health - a summary	4
Vitae Mental Health in practice – what Vitae Mental Health changes.....	5
Vitae Mental Health detailed model and risk factors.....	6



Introduction

Over the past few years, the impact of mental health conditions has been of increasing concern for society. The COVID-19 pandemic has further exacerbated this concern with some studies suggesting an increase in the prevalence of depressive and anxiety conditions by as much as 25%.¹

While awareness of the impacts of mental health conditions is growing, challenges remain. For example, it has traditionally been very difficult to diagnose anxiety and depressive disorders, meaning the diagnosis may change over time. Additionally, the presence of many differing factors and scenarios, can make the insurance assessment of depressive and anxiety conditions complicated for the underwriter.

Vitae Mental Health, launching in October 2022, delivers a way to ease the complex classification of these risks, while ensuring the circumstances of the individual customer are considered. This new solution is backed by the most up to date and relevant evidence, and includes new features organised around differing scenarios that will assist the underwriter to provide more individualised assessments.

Mental Health epidemic – burden of disease

Mental health conditions are affecting an ever-growing share of the population. In Australia, according to the Institute of Health and Welfare², **45% of the population is expected to develop some level of mental health condition during their lifetime**, with a significant risk of recurrence. Among these mental health conditions, anxiety and depression are by far the most widespread:

- **Depressive conditions** are characterised by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration³

- **Anxiety conditions** are characterised by feelings of fear, panic, phobias, social anxiety disorder, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD)

Depressive and anxiety conditions are the **13th leading cause of disability-adjusted years of life lost (DALYs⁴)** in 2019– this represents a 61% overall increase in the number of DALYs from 1990 data.

Challenges for the Underwriter

Depressive and anxiety conditions already have a significant impact on life and health insurers and have become a **leading and complex cause of claims**, on disability portfolios. A significant challenge facing our industry is how to underwrite these risks effectively and objectively. With an increasing share of people suffering from depressive and anxiety conditions on the one hand and social stigma and under diagnosis on the other, **depression and anxiety present a true challenge for underwriters.**

These conditions can significantly interfere with an individual's cognitive, emotional, occupational, or social abilities. These terms represent a wide range of conditions with varying symptoms. The aetiology of mental health conditions is largely unknown; this makes risk assessment challenging compared to some other insurable conditions.

Depressive and anxiety conditions are highly recurrent and subjective conditions. The underwriter must assess applications based on the disclosed conditions and inherent characteristics, all while identifying potential indirect risk factors and past events that can contribute to the overall assessment outcome. In other words, **the assessment is not based solely on an applicant's level of symptomatology at one point in time but should include and consider those historic and concurrent risks that can potentially lead to exacerbation of symptoms or worse long-term outcomes.**



There are several diagnostic challenges, including under-diagnosis, diagnostic uncertainty and inconsistency and change in diagnosis over time. Depressive and anxiety conditions are strongly associated with other conditions (co-morbidity) and there are a range of treatment challenges, including at times limited access to regular and appropriate care, both of which could impact mortality or morbidity. The wide variety of these risk factors makes the assessment of depressive and anxiety conditions complex and time consuming for underwriters.

Combined, these challenges mean the exact condition, severity, and whether there has been appropriate treatment may be uncertain; therefore, a specific mental health exclusion (say for depression in someone who has declared an episode of depression) may not be effective. This highlights the need for insurers to consider comprehensive mental health exclusions to manage this uncertainty.

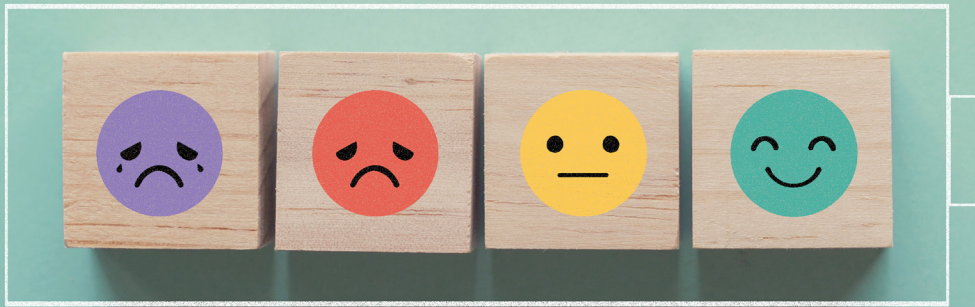
Vitae Mental Health - a summary

SCOR has developed a new solution, **Vitae Mental Health, dedicated to the assessment of depression and anxiety conditions in Australia and New Zealand**. This new solution, based on state-of-the-art science, helps underwriters better assess these risks based on the specific history of each applicant:

- Vitae Mental Health proposes a **new way of underwriting depression and anxiety for all types of benefits** by looking at a much wider range of objective risk factors compared to traditional approaches. It considers the various interactions between these risk factors, including the **risk of relapse, treatment type, work and life impacts and the severity of symptoms**

- The new solution is the outcome of **extensive research from our teams**, including underwriters, physicians, psychologists, and actuaries working collaboratively from various parts of the world. The analysis of more than 100 medical studies has been necessary to build this solution and update our underwriting philosophy. The solution is designed to consider **insurance risk specifically**, acknowledging that a medical appraisal of severity and the insurance risk presented can differ. As an example, mild clinical disease may still result in major occupational disability when considering depressive and anxiety conditions and unlike clinical practice, insurers have only one opportunity to make a risk assessment.
- It currently focuses on **Australia and New Zealand**, with a set of questions and corresponding ratings appropriate for the features of the products.
- Just like other Vitae solutions (Cardio and Breast Cancer), **Vitae Mental Health is built as an API**, and can therefore power any type of Underwriting solutions, from traditional underwriting manuals to E-UW solutions and can be directly plugged into client rules engines.





Loading

Vitae Mental Health in practice – what Vitae Mental Health changes

- An underwriting approach based on a set of science-backed, tangible, objective factors

Vitae Mental Health helps the underwriter to assess the severity of depressive and anxiety conditions by focusing on a set of criteria and factors that are as objective as possible and that can be easily captured by the underwriter. For example, Vitae Mental Health puts more emphasis on the number of episodes or the number of total admissions to hospital than on more subjective factors such as the assessed impact on social life, where there is more room for interpretation.

- An underwriting approach that takes into account the complexities and potential correlations between different risk factors, allowing a more granular and tailored assessment of individual risks

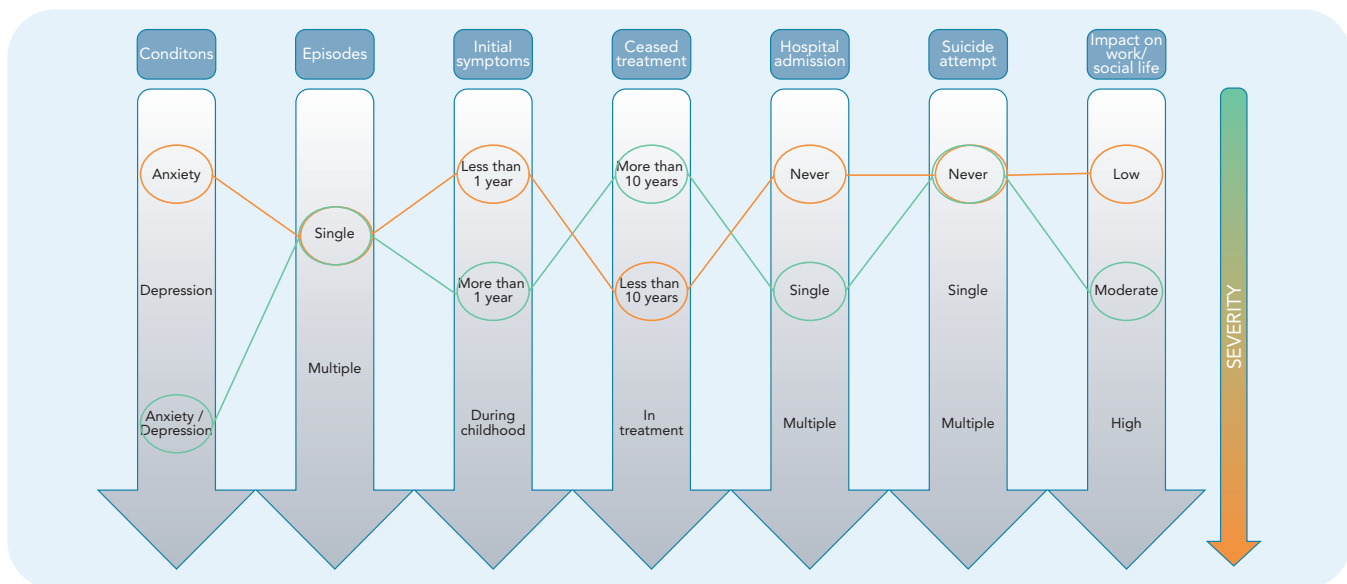
One of the key values of Vitae Mental Health is that it assists the underwriter to consider a wide set of factors based on the information from the application and any additional medical evidence.

The graph below provides an example of the different risk factors that Vitae Mental Health considers.

- As a result, Vitae Mental Health supports the SCOR Philosophy of inclusive underwriting by considering appropriate terms based on an individual's circumstances

Life insurers in Australia aim to provide insurance to as large a section of the Australian population as possible. Evidence-based underwriting that considers an individual's risk profile ensures that the premiums paid, and cover offered for each policyholder reflect their risk relative to the whole pool. This is a fundamental principle of voluntary insurance and means that insurers necessarily assess an individual's application for life insurance based on a range of criteria.

The evidence tells us that there is an increased lifetime risk of recurrence, and it is important to apply a balanced approach to the sustainability of our industry and to the fairness to each individual customer. Vitae Mental Health considers this in its approach when calculating outcomes, to ensure it adheres to SCOR's philosophy of inclusive underwriting. There is a standard rates pathway for some with low insurance risk profiles for disability insurances and also a pathway to terms for many with higher insurance risk profiles (albeit with some mitigations).





For example, let us consider an individual who had a brief grief reaction for which they consulted their general practitioner. Some of these risks will be acceptable at standard rates for disability insurances once a year has passed since the last symptoms. A customer who experienced

treatment for a single episode of depression following a personal event may be acceptable at standard rates for disability insurance after five years.

Vitae Mental Health detailed model and risk factors

Vitae Mental Health is backed by analysis and research performed by SCOR experts. Below is a non-exhaustive list of risk factors or criteria that are used in our modelling that have been proven to increase the mortality and disability risk for insurance purposes.

severe it was likely to be and the higher the relapse risk. These impacts can be difficult to identify as some of them are properly diagnosed (e.g. agoraphobia) while others are more subjective (lack of motivation and/ or concentration, isolation¹¹...).

Factors impacting mostly the risk of relapse:

- **Number of conditions** – people with both depressive and anxiety conditions show an increased risk of severity compared to people with an isolated anxiety or depression^{5,6}.
- **Recurrence of episodes** - depression is usually highly recurrent, with at least 50% of those who recover from a first episode of depression having one or more additional episodes in their lifetime, and approximately 80% of those with a history of two episodes having another recurrence. The studies also show an increased risk of recurrence for anxiety, ranging from 2% to 35% depending on studies^{7,8,9}.
- **Time off work** - depressive and anxiety conditions are associated with a higher risk of disability and work absenteeism¹⁰.
- **Impact on work and social life of previous episodes** – the more a past episode had an impact on someone's social life, the more

Factors impacting the severity of relapses

- **Hospital admissions** – people having been admitted to hospital for depression and/ or anxiety have a higher mortality risk than the standard population. A study performed in Scotland has for example shown that people who have been admitted to hospital for depression had a 62% higher mortality rate compared to the standard population, over a period of 25 years¹³.
- **Number, duration, and date of suicide attempts** – people with anxiety and depression are overrepresented in the mortality statistics for suicide¹⁴.
- **History of drug abuse and alcoholism** – studies have shown that the co-occurrence of drug abuse or alcoholism and depressive conditions is associated with greater severity and worse prognosis for both depressive and anxiety conditions¹⁵.

In Brief

Vitae Mental Health provides underwriters with a tool to assess the risk of depressive and anxiety symptomology and conditions. Using knowledge from multiple recent medical publications and combined with actuarial, medical, and underwriting expertise, it assists in assessing these complex risks fairly from an insurance risk perspective to continue to protect overall sustainability and offer protection to customers, where it's possible to do so.

Sources

1. COVID-19 Mental Disorders Collaborators. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *Lancet*. 2021 Nov 6;398(10312):1700-1712. doi: 10.1016/S0140-6736(21)02143-7. Epub 2021 Oct 8. PMID: 34634250; PMCID: PMC8500697.
2. Mental health services in Australia, Prevalence, impact and burden of mental health - Australian Institute of Health and Welfare (aihw.gov.au)
3. Depression and Other Common Mental Disorders: Global Health Estimates. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.
4. As per WHO, "One DALY represents the loss of the equivalent of one year of full health. DALYs for a disease or health condition are the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population."
5. Plana-Ripoll, O., Pedersen, C. B., Holtz, Y., Benros, M. E., Dalsgaard, S., de Jonge, P., Fan, C. C., Degenhardt, L., Ganna, A., Greve, A. N., Gunn, J., Iburg, K. M., Kessing, L. V., Lee, B. K., Lim, C., Mors, O., Nordentoft, M., Prior, A., Roest, A. M., Saha, S., ... McGrath, J. J. (2019).
6. Bruce, S. E., Yonkers, K. A., Otto, M. W., Eisen, J. L., Weisberg, R. B., Pagano, M., Shea, M. T., & Keller, M. B. (2005). Influence of psychiatric comorbidity on recovery and recurrence in generalized anxiety disorder, social phobia, and panic disorder: a 12-year prospective study. *The American journal of psychiatry*, 162(6), 1179–1187. <https://doi.org/10.1176/appi.ajp.162.6.1179>
7. Scholten, W. D., Batelaan, N. M., van Balkom, A. J., Wjh Penninx, B., Smit, J. H., & van Oppen, P. (2013). Recurrence of anxiety disorders and its predictors. *Journal of affective disorders*, 147(1-3), 180–185.
8. Schopman, S. M., Ten Have, M., van Balkom, A. J., de Graaf, R., & Batelaan, N. M. (2021). Course trajectories of anxiety disorders: Results from a 6-year follow-up in a general population study. *The Australian and New Zealand journal of psychiatry*, 55(11), 1049–1057. <https://doi.org/10.1177/00048674211009625https://doi.org/10.1016/j.jad.2012.10.031>
9. Scholten, W., Ten Have, M., van Geel, C., van Balkom, A., de Graaf, R., & Batelaan, N. (2021). Recurrence of anxiety disorders and its predictors in the general population. *Psychological medicine*, 1–9. Advance online publication. <https://doi.org/10.1017/S0033291721002877>
10. KPMG and Mental Health Australia report (2018). Investing to Save: The economic benefits for Australia of investment in mental health reform
11. Cruwys, T., Dingle, G. A., Haslam, C., Haslam, S. A., Jetten, J., & Morton, T. A. (2013). Social group memberships protect against future depression, alleviate depression symptoms, and prevent depression relapse. *Social Science Medicine*, 98, 179–186. <https://doi.org/10.1016/J.SOCSCIMED.2013.09.013>
12. Batelaan, N. M., Bosman, R. C., Muntingh, A., Scholten, W. D., Huijbregts, K. M., & van Balkom, A. (2017). Risk of relapse after antidepressant discontinuation in anxiety disorders, obsessive-compulsive disorder, and post-traumatic stress disorder: systematic review and meta-analysis of relapse prevention trials. *BMJ (Clinical research ed.)*, 358, j3927. <https://doi.org/10.1136/bmj.j3927>
13. Ajetunmobi O, Taylor M, Stockton D, Wood R. Early death in those previously hospitalised for mental healthcare in Scotland: a nationwide cohort study, 1986-2010. *BMJ Open*. 2013 Jul 30;3(7):e002768. doi: 10.1136/bmjopen-2013-002768. PMID: 23901025; PMCID: PMC3731727.
14. GBD 2017 DALYs and HALE Collaborators (2018). Global, regional, and national disability-adjusted life-years (DALYs) for 359 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet (London, England)*, 392(10159), 1859–1922. [https://doi.org/10.1016/S0140-6736\(18\)32335-3](https://doi.org/10.1016/S0140-6736(18)32335-3)
15. Lazareck, S., Robinson, J. A., Crum, R. M., Mojtabai, R., Sareen, J., & Bolton, J. M. (2012). A longitudinal investigation of the role of self-medication in the development of comorbid mood and drug use disorders: findings from the National Epidemiologic

This article is written by:

Debra Pitcher

Chief Underwriter
SCOR Australia New Zealand

Eimear Smith

Technical Underwriting Manager
SCOR Australia and New Zealand

Valentine Sarrazin

Junior Data Analyst
SCOR

Antoine Moll

Senior Data Analyst
SCOR



SCOR
The Art & Science of Risk

October2022