

Attention Deficit Hyperactivity Disorder and Its Importance for Life Insurers

Attention deficit hyperactivity disorder (ADHD) might be the most controversial of psychiatric labels, and one that challenges many sectors of western society, including the insurance industry. The concept is muddled by the diagnostic imprecision that is shared by many psychiatric disorders – and that rely on subjective reports of patients and observers. There are no satisfactory objective tests that unequivocally identify the condition.

The disorder typically involves a disturbance of attentional focus and of impulse control, with a less consistent feature of physical hyperactivity. Resultant functional detriment is seen in academic and interpersonal function, asserting an adverse influence on educational and vocational progression, and impeding the development of appropriate behavioural skills. Antisocial behaviour and various forms of risk taking can be prominent. Other psychiatric comorbidities such as mood, substance and personality disorders may complicate the disorder into adulthood.

ADHD is a developmental disorder, that is to say one is born with it, and it cannot be subsequently acquired. The 2009 draft guidelines of the Royal Australasian College of Physicians (RACP)¹ note it to be heterogeneous in its manifestations, varying in its appearance from one patient to another. Predisposing and aetiological factors were said to include genetics, and antenatal influences like maternal stress, alcohol and cigarette exposure during the pregnancy, and psychosocial adversity. Levy et al.² noted the disorder to demonstrate heritability across the various diagnostic definitions.

Few medical treatments attract more emotive criticism than chemically altering the developing neurophysiology of children. This promotes the questioning of the veracity of the diagnosis, and beyond that, the necessity of introducing chemicals even when one may be convinced that a child has the diagnosis. While it is not the intent of this overview to address that debate, note that the likelihood of being prescribed stimulants in childhood has been shown to relate to that child's birth date relative to classroom peers, gender, postcode, and the attitudes of parents, teachers and clinicians.³ Levy² suggested that ADHD is best viewed as an extreme of behaviours that vary genetically across the community and that the degree to which it is problematic is a threshold issue, similar to anxiety or blood pressure.

Disordered dopamine transmission in the brain has been proposed to be pivotal to the disorder. MRI studies of the brain have identified frontostriatal pathway dysfunction in this group of children and adolescents. While neurobiological correlates have been identified, there is no confirmation of a usable biomarker for ADHD.



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Despite the publication of such findings in reputable journals, many mental health professionals deny the syndrome's existence, while others consider it dramatically over-diagnosed and treated. In the DSM-5,⁴ the American Psychiatric Association reports that 5% of children have the condition, while the U.S. Centers for Disease Control and Prevention reports higher figures, with the prevalence having risen from 7.8% in 2003 to 11% in 2011.⁵ In New South Wales, during the decade 1990-2000, the number of children commenced on stimulant medication for ADHD increased four- to sixfold. The most substantial increase was in children aged between 7 and 11 years; many of those would now be of an age to be applying for life or disability policies.

The RACP draft guidelines¹ provide a local prevalence of 5–15%. Significantly, this document reports that only two-thirds attain a degree of remission in adulthood, stating that the full disorder persists for approximately one in six sufferers. The NSW Department of Health data indicated a prevalence of first time prescriptions of stimulant in adults aged 25-34 in 2002 at around 16%.

Comorbid psychiatric illnesses are also strongly associated with ADHD in adults. McGough⁶ studied the ADHD-affected parents of children with the disorder; 87% had at least one Axis 1 disorder, and 56% had at least two, compared with 64% and 27% respectively in non-ADHD parents of children in treatment. The study found a clear association with anxiety and depression spectrum illnesses, substance issues, and a range of behavioural disorders.

Childhood ADHD has been shown to be a risk factor for the development of bipolar disorder. Tamam⁷ studied 159 adults with a history of bipolar disorder and found 16.3% with ADHD, and an additional 10.7% with a history of diagnosed childhood ADHD with residual symptoms insufficient to satisfy the criteria for the full syndrome in adulthood. That group had an earlier age of onset of bipolar disorder and more episodes. Unlike the non-ADHD bipolar patients, they also had an increased risk of disorders like panic disorder and alcohol abuse/dependence.



Insurance industry has suboptimal insights

An incomplete knowledge of ADHD continues to exist within the scientific and medical community, so it is not surprising then that the insurance industry has suboptimal insights into this phenomenon and the risks with which it is inextricably associated. Emerging research points to a need for the life insurance industry to develop a greater understanding of the impact of ADHD in adults, including the risk to individuals' competence and achievements, with a consequent impact on workplace productivity, absenteeism, workplace injuries and even premature death.

Health economist Professor J. Fletcher⁸ has analysed the impact of childhood ADHD on the adult labour market, identifying a 10–14% reduction in employment, a 33% reduction in earnings, and a significantly increased reliance on social assistance. He noted the differences to be greater than those attributable to racially or gender-based inequalities reported in the literature.

A world mental health survey funded by the World Health Organization (WHO)⁹ determined, via voluntary self-report surveys, that 3.5% (1.4–4.9%) of workers had ADHD, mostly undiagnosed; the non-responder group may include an over-representation of people with ADHD, so the real figures are likely higher. Comparing those identified with a matched cohort, the study found 22.1 more days out of role annually. This was associated with a higher rate of psychiatric illness and substance-related issues.

In regard to accidental injury, Woodward¹⁰ identified a clear association between attentional adversity at age 13 and the risk of motor accidents, and drunk driving infringement at age 21. Assessing the impact of ADHD-related accidents and injuries in the setting of a large manufacturing firm, Kessler¹¹ detected a 4–5% reduction in work performance, with a two-fold increased odds ratio of absence through illness, and also of accident/injury in the workplace. The capital value of lost work was estimated at USD4,336 per worker annually.

Perhaps the most concerning studies pertain to the mortality data. In a study of all 32,000 Danish people born between 1980 and 2011, and diagnosed with ADHD, a mortality risk ratio of 2.21 was demonstrated across the 13 years of the study.¹² This was mostly attributable to accidental death, and was particularly significant in the adult group (18 or older), where the risk rose to 4.25. Much of this was related to comorbidities, yet even when the statistic was reassessed with the comorbidities controlled, the mortality risk ratio (MRR) was 1.5. The risk was significantly greater for females, and associated with comorbidities and later diagnosis; this gender disparity may relate to the severity and nature of an ADHD, which remains undiagnosed in childhood yet is sufficiently severe as to attract clinical attention in adulthood. The findings of this study raise a lot of questions, and it is suggested that the high rate for females relates to the relative ease with which a more severe illness may go undetected in a young female,

whereas affected males with similar severity are more likely to demonstrate unacceptable behaviour.

The implications of ADHD for product design and underwriting are challenging. The data is concerning, yet no differentiation of outcomes has been made according to whether the individuals are medicated. A reasonable assumption is that chemicals (medications) would lessen or improve the deficits and the outcomes, but there is limited data, and we have inconsistent data regarding the risk of ADHD sufferers having a motor accident while using a stimulant medication.^{13,14} Management of claims related to affected individuals must incorporate an insight into the disorder, its management and the common comorbidities if outcomes are to be optimised. ■



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