

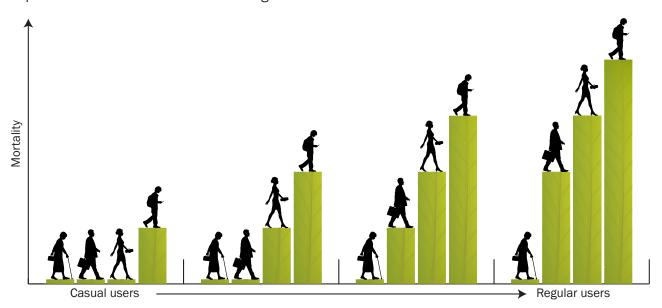
Underwriting Cannabis

White Paper Green



Introduction

The Cannabis genus contains over 500 compounds, approximately 100 of which are cannabinoids. There are two main ones that are essential to this discussion, namely Tetrahydrocannabinol (THC) and Cannabidiol (CBD). Both THC and CBD have medicinal properties which have been widely studied in the last decade and are now being more commonly prescribed. THC is also used recreationally due to its psychogenic properties. The rationale for this philosophy change at Optimum is that as of October 17, 2018, Canada legalized marijuana for recreational use. The United States presents unique challenges because federal laws and state laws do not align. Medicinal use is legal in all but three states and while 11 states have legalized recreational use, these same three states and the federal government still prohibit recreational use. Our guidelines were implemented in evidence-based fashion with attention to the evolving political landscape. Insurance applicant and general population data and mortality experience were used to determine ratings.





Our Studies

While no death can be directly attributed to marijuana intoxication, the use of marijuana in certain unfavorable settings has clear impact on morbidity and mortality. Prior to the large scale studies that influenced our guidelines, little data was available that clearly identified the morbidity and mortality impact of marijuana.

Through these studies, we observed that:

- 1. A significant amount of marijuana's mortality is linked to the concomitant use of tobacco.
- 2. There is notable mortality increase at younger ages that approaches standard mortality after age 60.
- 3. Mortality increases with the frequency of use, with daily users having higher mortality than more casual users, irrespective of age.
- 4. Mortality is impacted by those users that are prescribed medicinal marijuana but use it in a recreational fashion.
- 5. The converse is seen patients use recreationally obtained marijuana to mitigate medical symptoms; these patients with controlled use patterns may behave more favorably from a mortality experience.
- 6. There are applicants that are clear outliers to the mortality observations above, namely those with favorable and unfavorable social factors, and therefore better and worse mortality experiences respectively.
 - a. Favorable factors include age over 40, documented stable occupation or academic standing with financial stability, absence of mood disorder, stable family environment, civic involvement, absence of criminal history and the admission and quantification of marijuana use on applications.
 - b. Unfavorable factors include age less than 18, alcohol or other substance abuse or treatment history, health concerns related to use or documented overuse syndrome, mood disorder, schizophrenia, criminal history and disability.
- 7. Attention should be paid to those clients that have federal licenses requiring drug testing, especially those who test positively (ie. DOT, FAA, etc.).
- 8. Use in those with rated avocations or occupations should be considered individually.

Marijuana Industry Employees

In Canada, for the purposes of underwriting these employees, consideration should be based on third party financials of the individual and the company. Given the fact that companies are legally recognized business entities, individuals who lead or work in black or grey market companies should be engaged in with caution. The United States, federal and state discord poses challenges for both business and individual

Facts:

coverage for the time being.

- Both THC and CBD have medicinal properties which have been more widely studied in the last decade and are now more ubiquitously prescribed.
- THC is used recreationally due to its psychogenic properties.
- As of October 17, 2018, both medical AND recreational use of marijuana is legal in Canada.
- The United States presents unique challenges because federal laws and state laws do not align.
- There is an observed mortality increase at younger ages that approaches standard mortality after age 60.
- Mortality increases also with the frequency of use, with daily users having higher mortality at all ages compared to more casual users.

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