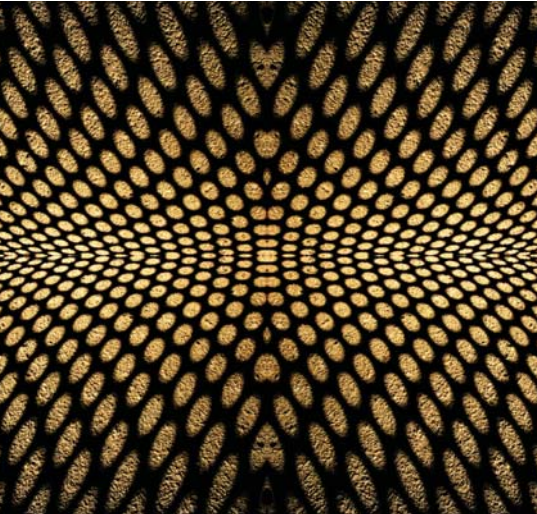


Risk Matters



Dear Reader,

In Risk Matters March 2007, we reviewed new evidence that clearly demonstrated the causative role played by cannabis in the development of psychosis. For many people who used the drug extensively, it was also associated with relapse of their illness and contributed significantly to their morbidity (Moore et al. 2007).

Key to our understanding of such evidence is translating research undertaken on large populations and using it as a guide for underwriting individuals. There are some difficulties, perhaps the most important of which is that the research populations are rarely the same as the insured population. Medical specialists who generate the most research see very different populations from those seen in primary care, which is where the bulk of the insured population will have its medical management.

In this issue of Risk Matters we consider why the research supports a cautious approach to underwriting those who use cannabis.

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Everyday Cannabis Use

Cannabis is a naturally occurring drug that contains an active hallucinogenic compound, tetrahydrocannabinol (THC). Available as a herbal (leaf), resin or oil, this drug is smoked as rolled cigarettes or in water pipes, brewed into a tea and even eaten. Although not strongly addictive, dependence can form partly from the drug itself and partly from the tobacco with which it is commonly mixed.

Cannabis promotes a general feeling of well-being and euphoria in users but also heightens anxiety and impairs motor function. Complications include bronchitis, lung cancer, cardiac risk with pre-existing heart disease, paranoia, schizophrenia with pre-existing psychotic illness, hallucinations and reduced fertility. Impaired reactions stemming from the effect of the drug increase accident risk. There is an even greater risk of psychotic complications with super-strong types grown through selective breeding techniques that are increasingly available and contain 2-3 times the amount of active THC.

Cannabis and Mental Health

The clinical reality of many secondary care practices is that cannabis use has a significant co-morbidity with psychotic illnesses, in particular, schizophrenia. The drug appeared to worsen the condition, but the argument about which was the chicken and which the egg was until recently unresolved. The secondary care research tells underwriters little about the much more common situation of those who use cannabis on an intermittent basis during their adolescence and have this recorded on their application forms or within their medical notes. However, information about this group has been patchy.

Degenhardt et al. (2010) are unable to identify more than a handful of relevant outcome studies. A small Californian study of 85 adolescents reported, somewhat counterintuitively, that those who experimented with cannabis before the age of 18 were a more psychologically adjusted group than those who waited until they were over 18 (Shelder & Block 1990). The balance was redressed in a more recent study (Tucker et al. 2006) who report that adolescent abstainers had better peer, family and school engagement and less "deviant behaviour" at the age of 23 than those who took the drug.

The Degenhardt study helps us to understand the implications of occasional cannabis use in a representative adolescent population. In Australia, they recruited 2,032 students of 13-14 years of age and were able to get follow-up data for 96% of them. The students were followed regularly from 1992 to 2001-2003, from adolescence into young adulthood. The researchers found that cannabis use was common. A third of the cohort (34%) used the drug in the six months before at least one of the “adolescent” follow up points. The majority of the users (63%) reported only occasional use (less than weekly), while the remainder used it more frequently. At the first of the young adult follow-up points (mean age 20.7), 60% reported cannabis use, of which 77% used it occasionally. By the age of 24, this had reduced to 33% using cannabis with 63% of those using the drug only occasionally.

During adolescence, those who used cannabis were more likely to have gone to a “metropolitan” school than non-users. Depressive and anxiety symptoms were more common amongst those who used the drug, as were alcohol use and cigarette smoking. Gender had little effect on these results but smoking did. Eighty-one percent of users were also smokers, and 59% of smokers used the drug.

The authors describe the participants “cannabis use trajectory”. Between the end of the adolescent phase of the trial and the age of 20, 42% of the non-users had become users, with 90% falling into the occasional category. Very few of the adolescent occasional users had stopped by the age of 20 (8%) whilst 20% had escalated to weekly use.

People using cannabis more than weekly in both adolescence and early adulthood had worse psychosocial outcomes, including poorer post-school qualifications, anxiety, depression or need of welfare benefits. There were no clear distinctions between the outcomes for other categories of use. The story was different when illicit drug use was investigated. Adolescent occasional users who progressed to adult weekly users at 20 were much more likely to meet the criteria for cannabis dependence and to use other drugs at the age of 24. Both alcohol and nicotine dependence at the age of 24 were more common amongst adolescent cannabis users than non-users, with the occasional users presenting an intermediate risk between the non-users, and weekly users.

The authors distil the messages from the study in their discussion. Those who were or became heaviest users had the greatest risk of developing later drug problems. Those who maintained a stable level of occasional use (by far the greatest group numerically) were still at risk of developing drug problems at 24 than non-users but at a lower level.

Taking cannabis has become normative in many societies with individuals using the drug for a variety of reasons. It can be that the person is socially competent and in search of new experiences and popularity, or that the user is not well engaged with their family and school and belong to a similarly disengaged group. It is likely that this second group has a worse outcome, and the associations in the study with adolescent cigarette smoking and later drug use bear this out. There is also some support in the study for cannabis being a “gateway” drug into more directly damaging drug use.

Assessing the Risk

The pattern of use, however, should give clues. For those whose use increases into early adulthood to a more than weekly level, care should be taken to explore their use of other drugs, including alcohol, as their risks are significant. Those who stop using the drug after occasional use in adolescence are much less likely to carry this risk. As in other areas of risk assessment, rather than a yes/no question of the traditional life application, the “trajectory” of use over time is important. Application forms or more specifically drugs questionnaires can be designed to meet this need. Tele-interview scripts can be developed to understand this better. Given the high levels of recreational use in individuals who never come anywhere near requiring support from the secondary care services and do not represent a significant risk for psychosis, there is an imperative to develop some subtlety in the underwriting of this risk.

Further Reading

Ball, C. (2007) *Cannabis usage. Risk Matters*. March. <http://www.genre.com/sharedfile/pdf/RiskMatters200703-en.pdf>.

Degenhardt, L. et al. (2010) *Outcomes of occasional cannabis use in adolescence: 10-year follow-up in Victoria Australia*. *British Journal of Psychiatry*. 196, 290-295.

Moore, T. et al. (2007) *Cannabis use and risk of psychotic or affective outcomes: a systematic review*. *Lancet*. 370. 319-28.

Shelder, J. & Block, J. (1990) *Adolescent drug use and psychological health: a longitudinal study*. *American Psychologist*. 45 612-30.

Tucker, J. et al. (2006) *Are drug experimenters better than abstainers? A longitudinal study of adolescent marijuana use*. *Journal of Adolescent Health*. 488-94.



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