



Marijuana

An underwriting perspective

The debate regarding marijuana use and its legalization rages on with little hope that the smoke will clear anytime soon. Marijuana, or cannabis – its international and scientific name – is the third most popular recreational drug in America, after alcohol and nicotine-containing products. As such, it presents a multitude of underwriting challenges.

Americans' perceptions regarding marijuana use have been changing, and support for its legalization has been growing over the past few decades. According to recent surveys, approximately 25 million Americans admit to having used marijuana in one form or another within the past year. Like tobacco use, it is quite likely that this figure underreports actual use, perhaps by as much as 25 percent.

Based on a recent survey by the National Survey on Drug Use and Health (NSDUH):

- 10.6 million users smoke marijuana about six times a year.
- 4 million users smoke marijuana once or twice a month (18 times a year).
- 2.3 million users smoke marijuana about once a week (52 times a year).
- 3.4 million users smoke marijuana about twice a week (104 times a year).
- 5.4 million users smoke marijuana almost daily (about 300 times a year).

The amount that these users consume and the potency of the marijuana is not quantified in any studies. Based on a comparison of samples confiscated by various law enforcement agencies, the concentration of THC (tetrahydrocannabinol, the principal psychoactive constituent of cannabis) averaged about 15 percent in 2012 compared to four percent in the 1980s.

A 2013 Gallup survey found 38 percent of Americans admit to trying marijuana, only a slight increase compared to 34 percent in 1999 and 33 percent in 1985. Other items of interest from the July 2013 Gallup survey include:

- Adults between the ages of 30 and 64 are the most likely age group to say they have tried marijuana.
- Adults between the ages of 18 and 29 are most likely to indicate they currently smoke marijuana.
- 47 percent of men versus 30 percent of women admit to trying marijuana.
- Adult cigarette smokers are twice as likely as non-smokers to admit trying marijuana and to continuing to smoke it.

What is marijuana? It is typically the dried leaves, flowers, stems and seeds of the hemp plant, *Cannabis sativa*. It contains THC as well as over a hundred other cannabinoids. THC is a psychoactive chemical. The usual form of delivery for those using marijuana recreationally is as smoke, in hand rolled "joints" or "nails," or in pipes/ water pipes or "bongs," or in "blunts," cigars in which the tobacco has been emptied and refilled with a mixture of marijuana and another drug, such as crack cocaine. It can also be mixed with food or brewed as a tea.

When THC is inhaled or ingested it passes into the blood stream and is then carried to the brain and other organs. If it is ingested it is absorbed more slowly and its effects persist longer than when it is smoked. THC acts on specific molecular targets in the brain cells – cannabinoid receptors – which are part of the neural communication network known as the endocannabinoid system, which plays an integral part in normal brain development and function. These cannabinoid receptors are found in parts of the brain, such as the hippocampus, cerebellum, basal

ganglia and cerebral cortex, that are responsible for pleasure, memory, thinking, concentration, sensory and time perception, as well as movement coordination.

Marijuana, or more specifically THC, over-activates the endocannabinoid system causing the high that is so typically described with marijuana use. This can lead to altered perceptions and mood, lack of coordination, impaired thinking and problem solving, and can impact memory and the ability to learn.

Marijuana smoke is also an irritant to the lungs. It is quite common to see heavy users experience the same problems as tobacco smokers, such as a daily cough with phlegm production along with acute respiratory illnesses and infections. It should, however, be noted that it is currently unknown if marijuana smoking is related to a heightened risk of lung cancer.

Marijuana use also raises the heart rate after smoking, an effect that can last for as long as three hours, raising the risk of a heart attack approximately fivefold in the first hour. This risk may actually be higher in older individuals and those whose cardiac system is already compromised.

Chronic marijuana use has also been associated with mental illness, such as temporary psychotic reactions, depression, anxiety, suicidal thoughts and personality disturbances. There is also an increased risk of injury or death for chronic users from motor vehicle accidents related to THC's effect on judgment and motor coordination.

Marijuana has been known to man for thousands of years and was likely introduced to the Americas by the Spaniards around the time of Columbus. It was a significant cash crop in Colonial times and both Washington and Jefferson were known to have grown it on their plantations. In the form of hemp, a less potent form of cannabis, it was and still is used in the manufacture of clothing and other products.

At one point, marijuana was sold over the counter as an ingredient in many medicinal products and as an alternative to alcohol during periods of prohibition. With the introduction of the Pure Food and Drug Act in 1906, any product containing cannabis had to be appropriately labelled as such. The actual criminalization of marijuana in the U.S. did not occur until the 1930s. The 1970 Controlled Substance Act classified marijuana as a Schedule 1 drug – the most restrictive of five groups that also includes heroin, LSD, peyote and Ecstasy – which means it has a heightened potential for abuse and no known medicinal use. Under federal guidelines, marijuana remains a Schedule 1 drug today.

To date, four states, Colorado, Washington, Alaska and Oregon, as well as the District of Columbia have legalized the recreational use of marijuana. In 2016, ballot initiatives will appear in Arizona, California, Maine, Massachusetts and Nevada, while Missouri, Montana and Florida are considering similar ballot measures.

As of October 2014, the legal medicinal use of marijuana is more widespread, with the following jurisdictions legalizing marijuana for specific medical purposes: Alaska, Arizona, California, Colorado, Connecticut, District of Columbia, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New York, Oregon, Rhode Island, Vermont and Washington. California was the first state to legalize medicinal marijuana with the passage of Proposition 215 in 1996. Eleven other states also allow use of low THC, high cannabidiol products for medical reasons in limited situations or as a legal defense. It is currently estimated that there are over 1.1 million legal medical marijuana patients in the U.S., or on average eight patients per 1,000 residents in states where the laws have been approved.

State laws relating to the use of medical marijuana vary. They are specific as they pertain to patient registration or ID cards, whether dispensaries are allowed, specific conditions that may be treated, whether patients from other states will be recognized, possession limit (i.e., amount in ounces or number of plants), fees, etc.

State laws also specify the conditions for prescribing marijuana. While these vary, marijuana is typically used in the treatment of AIDS/HIV, Alzheimer's disease, arthritis, Crohn's disease, epilepsy or seizure disorders, glaucoma, hepatitis C, migraines, multiple sclerosis, nausea due to chemotherapy, Tourette's syndrome and terminal illness. Its euphoric high is employed as a natural painkiller or an appetite stimulant for these various diseases. There is no current evidence, of any sort, that it is a curative remedy for the conditions noted above. Delivery can either be via smoking, vaporization or ingestion.

There have been no official endorsements from the medical community as a whole related to the use of medical marijuana, though there is some anecdotal evidence related to its efficacy as a pain reliever. Its use for nausea relief and as an appetite stimulant in medical settings is less controversial.

How does the insurance industry identify marijuana users? The usual practice is to ask a question related to drug use on the application. Is this the best method? With growing acceptance and the fact that marijuana

use is likely well underreported, this is a hit or miss proposition at best that is likely to elicit a minimum of positive responses. What about driving violations? Perhaps that DUI wasn't alcohol-related but marijuana-related. It should be noted that alcohol-related violations continue to decrease but drug-related (marijuana and other illegal drugs) driving violations continue to climb. Is this question on the application?

How many companies run a screen for marijuana?

Virtually all insurers run a cocaine screen on prospective insureds. Cocaine is a Schedule 2 drug and its use is far less prevalent than that of marijuana. If 25 million Americans admit to using marijuana, a Schedule 1 drug, in the past year, perhaps there is a need to run more screens on selected age groups. A positive result may be the first clue of an undisclosed medical problem for which marijuana has been legally prescribed.

When a marijuana user is identified, an underwriter must determine whether the use is recreational or medical (in some situations there may be an overlap). If it is recreational, then frequency and quantity, as well as the manner of use, must be determined. Other risk factors related to alcohol, other drugs of abuse, lifestyle concerns, and hazardous avocations or occupations must also be identified. If abuse or multiple hazards associated with marijuana use are identified, the risk will likely be unacceptable.

For those that are using marijuana for medicinal purposes, the reason it is being prescribed must be identified and the mortality and/or morbidity implications related to that impairment understood, as the risk may be uninsurable at the outset. If the risk is potentially insurable, again, how often, how much and how the marijuana is delivered must be established. Signs of abuse – multiple physicians prescribing, other medications being used or abused, frequent requests

to refill the prescription, additional recreational use of marijuana or other drugs of abuse, etc. – should be looked for. If all the factors are favorable and the underlying impairment can be priced appropriately, according to your guidelines, then an offer is warranted.

An additional consideration relates to insuring individuals that grow or distribute marijuana legally under current state statutes. The U.S. Congress recently passed a spending bill that was signed into law by the President in late December 2014. Under the provisions of that bill, federal agents can no longer raid medical marijuana dispensaries in states where medical marijuana is legal, nor will the federal government interfere in implementation of states' medical marijuana laws. However, marijuana is still a Schedule 1 drug and is still federally regulated. While the government is not currently enforcing federal regulations in states that have legalized medical marijuana use, the situation could change quickly due to unforeseen circumstances, and all laws are subject to interpretation. So, if you decide to insure these individuals, make certain that they are acceptable risks. Question them about their own use of marijuana, and don't hesitate to complete other inquiries to make certain that they are, and have been, in compliance with the law.



*Gary Haddow
Risk Management Consultant
Munich American Reassurance Company*