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## Cannabis-related psychosis, addiction, ER visits: For young users, marijuana can be a dangerous game

by Rita Giordano, Updated: December 23, 2019

<https://www.inquirer.com/health/marijuana-addiction-adolescents-psychosis-abuse-vaping-penn-state-20191223.html>

Not long ago when Joseph Garbely, chief medical officer for the Caron Foundation, reviewed younger patients starting drug or alcohol treatment on his unit, he usually saw people shaking, sick, and seizing from alcohol or opioid withdrawal. Marijuana was seldom what put them in those medical beds.

That has changed.

“A few years ago, it was rare to see a young person enter Caron with marijuana-induced psychosis,” said Garbely. “Now we see it on a regular basis. Older teens and young adults — approximately ages 18 to 26 — are the most impacted. We see a significant misperception about the safety and efficacy of marijuana among our teen and young-adult patient population.”

Marijuana, legal for medical uses in well over half the states in the country and as a recreational substance in ever more states, is generating increasing concern as a dependency-causing drug capable of serious impairment and harm, particularly among its youngest users. New Jersey voters will get to decide in 2020 whether to legalize marijuana for recreational use for people age 21 and over.

While it was once doubted as an addictive substance, treatment professionals now say they are seeing more adolescents and young adults with cannabis use disorder. Often starting in their early teens, many graduate to daily use.

“The majority of cases we see of substance use disorder are marijuana,” said Ned Campbell, medical director of Rehab After School, an intensive out-patient program for adolescents in Southeastern Pennsylvania, including the Philadelphia area.

In-patient admissions have increased, as well.

At Caron, the number of patients who were admitted with a primary diagnosis of cannabis use disorder increased more than 22% from 2014 to 2019. In those five years, people admitted to treatment for marijuana addiction rose from more than 27% of Caron's total admissions to nearly 40%.

Independence Blue Cross, the region's largest health insurer, has seen claims for cannabis use disorder diagnosis rise substantially. Between 2012 and 2018, there was a 180% increase in marijuana diagnosis claims. That included a 100% claim rise for patients ages 19 to 25. Claims for adolescents diagnosed with cannabis use disorder went up 25% during the same period.

Terri L. Randall, medical director of Children's Hospital of Philadelphia's Substance Use Disorder Clinic, said it has become more common for young patients to experience such bad reactions as extreme anxiety and even detachment from reality from cannabis use — and continue using.

"The fact that kids continue to use, even despite an adverse experience or unpleasant experience with marijuana, is really concerning to me," Randall said. "Not only are they having difficult consequences of their use, but they also are finding themselves using more and are unable to control their use. That really is at the heart of the diagnosis of addiction."

The extremes aren't only showing up in treatment offices.

"We're certainly seeing a lot more emergency department visits due to marijuana," said Kevin Osterhoudt, medical director of Children's Hospital of Philadelphia's poison control center. "We're seeing more people with paranoid delusions. We're seeing a lot more people with signs of acute psychosis."

## A more potent drug

Today's marijuana is not the reefer of the Woodstock generation or even the weed of the Grunge era. Over the decades, the amount of THC — the psychoactive compound in cannabis — has soared.

"The nature of what's being consumed has changed dramatically," said Itai Danovitch, an American Society of Addiction Medicine fellow and psychiatry chairman at Cedars-Sinai Medical Center in Los Angeles.

In the 1990s, THC concentrations were still in the single digits. Now, the THC percentage in a marijuana cigarette can range from the teens to as high 30% with some strains.

"And then when people use extractions — oils and waxes — they can easily get 80% to 90%," Danovitch said.

Some research has suggested that for new or infrequent users, vaping cannabis produces stronger effects than smoking. In this year's mysterious rash of vaping-related lung injuries — which has accounted for 52 confirmed deaths as of mid-month in 26 states, according to the Centers for Disease Control and Prevention — many involved vaping THC products. While the CDC has identified vitamin E acetate as “a chemical of concern” in these cases, it's just one of many substances present in vaping oils and liquids. The CDC has said the mystery of these illnesses is far from solved and has recommended that people not use any THC-containing e-cigarette products.

Regular marijuana use may not have the crash-and-burn effect of other drugs, but it can limit a young person's social, academic, and personal development.

“For many of them, there is a grieving process,” said Jason Whitney, program coordinator of the Penn State Collegiate Recovery Community. “They're so much behind where they want to be.”

Impact on developing brains

Especially concerning to medical and treatment providers is what today's increasingly potent strains may be doing to young, developing brains.

The National Institute on Drug Abuse cites research that suggests between 9% and 30% of people who use marijuana may develop use disorder, and the risk increases the younger someone starts using. Individuals who begin using cannabis before age 18 are four to seven times more likely than adults to develop marijuana use disorder. And the likelihood is that more young people will be impacted; two studies published earlier this month in the Journal of the American Medical Association found that more teenagers are vaping cannabis than ever before.

There's also evidence that people who start using cannabis as teenagers risk suffering impaired memory, attention and cognitive function that may not improve with time.

A long-term study by an international research team that included Duke University found that people who began regular, persistent marijuana use as teenagers that continued into adulthood showed an average decline in IQ of eight points.

Episodes of acute psychosis seem to go away if the user stays off the drug. But adolescents who use especially high-potency marijuana may be at increased risk for developing a chronic psychotic disorder such as schizophrenia, particularly if they had a genetic predisposition. A recent article in the journal the Lancet said at least 12% of new cases of psychosis could be eliminated if high-potency marijuana wasn't available.

"They found both the frequency of use and potency was associated with increased incidents of psychotic disorders," said ASAM's Danovitch.

Unlike other drugs, there is no record of death by cannabis overdose.

"The toxicity is certainly less. And the severity of the substance use disorder tends to be less severe than what you can do to yourself with alcohol and heroin," Danovitch said. "However, that doesn't mean it's safe."

## A voice of recovery

Marguerite, 21, a Pennsylvania State University psychology major and member of the campus recovery community, learned the hard way that marijuana is not the innocuous substance she thought.

"I definitely think it's an addictive drug. I don't think it's harmless," said Marguerite, who asked at her full name not be used because of the stigma associated with marijuana use disorder. "I absolutely got addicted to it mentally and physically, and I couldn't go a day without smoking."

She started smoking marijuana early in high school. The initial relaxed high it gave her turned to anxiety and paranoia, but she wanted the good feeling back, so she stuck with it. By her junior year, she was using cannabis before and after school, before dinner, after dinner, to do homework. She said she needed marijuana just to "feel normal."

"It was like something I needed to do really anything. I probably smoked at least six times a day," she said. "And if I wasn't smoking it, I was eating it. I tried all the different ways you could do it. I got an oil pen so I could get more THC."

When she didn't have enough of her own money for the drug, she'd steal from her parents. "I've stolen jewelry from my mom and pawned it."

Eventually she started trying other drugs, too, including LSD.

Marguerite believes she was in psychosis not long after graduating high school. She ended up hospitalized a few days, diagnosed with an anxiety disorder. The hospital sent her home with Xanax and told her to go to substance-use outpatient treatment. She did briefly, but went back to marijuana and alcohol. She continued to use until she ran out of money. Then her family sent her to Caron in 2016.

"I was still in a psychosis when I went there," Marguerite said.

It took about a month and a half before her intense cravings went away. She was in treatment with Caron about three months. For at least a year, she had trouble with her short-term memory. She thinks it has for the most part returned.

After Caron, Marguerite attended Marymount University in Virginia before transferring to Penn State in 2018 because of its recovery community. She's in ROAR House, Residence of Addiction Recovery. She goes to 12 step meetings. She enjoys the support.

"I'm a lot happier now," she said, "that I'm able to function as a normal human being."

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