How much marijuana is too much for drivers?
By Kay Lazar

Just how much marijuana is too much when getting behind the wheel? Is any amount safe?

Those questions emerged anew after prosecutors alleged last week that a driver had visited a medical marijuana dispensary an hour before his car struck a State Police cruiser, killing the trooper inside.

That motorist, who was authorized to use marijuana for medical purposes and had traces of the drug detected in his blood, was impaired, authorities said.

But gauging marijuana impairment is not clear-cut. The risks from drinking and driving have been studied for years, but the data about marijuana’s effect on motorists are considerably less robust.

Scientists know that both marijuana and alcohol can impair driving skills, said Dr. Kevin Hill, an assistant professor of psychiatry at McLean Hospital and Harvard Medical School. But the drugs affect the brain differently.

With too much alcohol, drivers are likely to make “errors of omission,” such as not checking their rearview mirror, while marijuana users tend toward “errors of commission,” such as driving too slowly, Hill said.

“If you’re drunk, you run red lights,” he said. “If you are stoned, you stop at green lights.”

There is no reliable breath test that detects THC, the ingredient that causes marijuana’s high — no routine standard akin to the limit of 0.08 blood alcohol concentration used to define drunken driving.

And there is little agreement among scientists about the level of THC in someone’s blood that signals impairment.

Washington and Colorado are among a handful of states that have adopted specific measures — 5 nanograms of THC in blood levels — to define impaired driving from marijuana use. Massachusetts has no such law.

Massachusetts also does not separately track arrests involving drivers impaired specifically by THC, according to the state Department of Transportation. (The state does record driving arrests that involve any drug use, from marijuana to opioids, and that number is increasing.)

Washington state, which began recreational-marijuana sales nearly two years ago, tracks THC-involved accidents and found that fatal accidents involving “marijuana-positive” drivers climbed from 58 in 2013, the year before recreational sales were allowed, to 92 last year, according to preliminary data.

Authorities in Washington caution that the state’s blood testing for THC does not distinguish between active levels and what’s known as “carboxy THC,” the chemical that lingers long after the marijuana high has dissipated.
“As such,” a report from the state concluded, “the actual impairment, or contributing crash effect by marijuana, if any, is unknown.”

The driver implicated in the Massachusetts trooper’s death in March had legally purchased at least three marijuana cigarettes that day, and one was found half-burnt in his car after the crash.

Prosecutors last week said 30-year-old David Njuguna had THC in his blood and was in an “impaired state” when his Nissan Maxima hit the parked cruiser on the Massachusetts Turnpike, killing Trooper Thomas L. Clardy, 44, a married father of seven.

Njuguna has pleaded not guilty to several charges, including manslaughter and motor vehicle homicide while operating under the influence of drugs.

Authorities did not reveal how much THC was in Njuguna’s blood, or disclose the medical condition that led to him being authorized to use medical marijuana. Officials also did not say how often Njuguna used the drug.

Determining impairment in marijuana users is difficult because THC lingers in a person’s bloodstream for days, so regular users may have measurable amounts of the chemical in their blood but may not be impaired, said Hill, the McLean psychiatrist.

By comparison, alcohol declines in the bloodstream much more quickly, said Hill, an addiction specialist who researches marijuana.

The 5 nanogram blood THC limit used in Colorado, one of the few states where marijuana is legal for medicinal and recreational use, may not be a reliable indicator of who is too stoned to drive, Hill said.

“That blood level of cannabis is not a good proxy of determining impairment,” Hill said. “If I used a lot of marijuana Tuesday night, I may still have a blood level above that threshold on Thursday, but I may not be impaired to drive.”

A study released earlier this month by the AAA Foundation for Traffic Safety attempted to establish a benchmark for THC impairment, but concluded that such a threshold could not be “scientifically supported.”

As researchers work to establish a reliable measure, more states are legalizing marijuana.

The drug is allowed for medicinal use in at least 23 states and the District of Columbia, and a few states, including Colorado and Washington, have made recreational use legal.

The first medical marijuana dispensary in Massachusetts opened in June, and voters may be asked in November whether marijuana should be allowed for recreational use for adults older than 21.

Use of marijuana among teen drivers is a particular concern. Campaigns to reduce drunken driving have decreased the number of teenagers nationwide who drink and drive, data show. But some public health officials now worry the increasing number of states legalizing marijuana for medical use may translate to more teens smoking and driving.

These younger drivers, whose brains are still developing, are more likely to be distracted behind the wheel, and marijuana use accentuates distractions, said Marisa Silveri, an associate professor of psychiatry at Harvard Medical School.

“It’s divided attention, for kids who already have less ability to inhibit the things that get their attention, [marijuana] makes it more dangerous for them,” said Silveri, a McLean Hospital researcher who studies the effects of marijuana and drug use on young brains.