# Oxycontin maker helped spark an epidemic

BY RICHARD GUNDERMAN THE CONVERSATION

hat do conservative talk show host Rush Limbaugh, singer Courtney Love and deceased actor Heath Ledger all have in common? The answer, according to published reports, is that all battled addiction to OxyContin, an opioid pain reliever now sometimes called "rich man's heroin" but known on the street simply as "Killer."

The sources of the opioid epidemic are complex, but one powerful motivator has been the pursuit of profit. Purdue Pharma, which calls itself a "pioneer in developing medications for reducing pain, a principal cause of human suffering," is the producer of OxyContin, a timed-release formulation of oxycodone, an opioid pain reliever.

OxyContin, like other prescription opioids, such as hydrocodone, has become far more commonly prescribed over the past few decades. Today, enough opioid prescriptions are written each year in the U.S. to give every adult American his or her own one-month supply.

### A family firm creates a new pain drug

Purdue Pharma was founded in the late 19th century in New York City, and the firm was later purchased by the Sackler brothers, three physicians. Some years later, the firm began producing opioid pain relievers.

One of the Sackler brothers, Arthur, who died in 1987, had been inducted into the Medical Advertising Hall of Fame for his promotional work in helping Valium to become the first \$100 million drug.

In 1996, Purdue Pharma introduced a new drug — a time-released formulation of oxycodone, an opioid painkiller. OyxContin, as the drug was called, was touted as having a low risk of addiction.

Purdue backed OxyContin with an aggressive marketing campaign. Key components of this effort were pain-management and speaker-training conferences in sunshine states, such



MAINE STATE POLIC

Surveillance photo of robbery in 2012 at Whitney's Family Supermarket in Corinth. No one was injured when the woman handed a note to the pharmacist saying she had a gun. No gun was seen but the woman stole a large amount of Oxy-Contin

as California and Florida, attended by more than 5,000 physicians, nurses and pharmacists, many of whom were recruited to serve on Purdue's speakers' bureau.

The company also used a bonus system to incentivize its pharmaceutical representatives to increase Oxy-Contin sales. The average bonus exceeded the representatives' annual salaries.

Of course, Purdue was not alone in marketing its pain-relieving products in this way. The Oregon assistant attorney general, for example, described the practices of Insys Therapeutics in marketing its oral spray painkiller as "among the most unconscionable I've seen."

#### A sea change in pain treatment

These efforts succeeded spectacularly. According to a 2009 article in the American Journal of Public Health, OxyContin prescriptions for non-cancer-related pain went from about 670,000 in 1997 to about 6.2 million by 2002.

This is partly due to Purdue Pharma's aggressive marketing of Oxy-Contin. But pain treatment in the U.S. also was



GABOR DEGRE | BDN OxyContin pills on a counting tray at Miller Drug in Bangor.

changing at this time.

Starting in the early and mid-1990s, a small group of physicians, some receiving funding from drug firms, began arguing that the medical profession had been systematically undertreating pain, motivated by erroneous concerns about addiction. They lobbied to have pain recognized as the "fifth vital sign," and urged physicians to be more liberal in their prescribing of opioids. Some of these physicians were associated with professional associations focused on treating pain

Undoubtedly, there were patients with undertreated pain who benefited from these campaigns.

In 2000, the Joint Commission, the organization that accredits hospitals, began requiring health care organizations to prove that they were assessing and treating pain. This led to a more liberal approach for prescribing painkillers like OxyContin, but other opioids also were involved.

# OxyContin prescriptions grow and grow

In 2001, Purdue spent \$200 million marketing Oxycontin, and by 2002 sales topped the \$1.5 billion mark. In 2012, OxyContin represented about 30 percent of the overall painkiller market.

all painkiller market. Between 1991 and 2013, the number of annual opioid prescriptions in the U.S. increased from 76 million to 207 million, with corresponding increases in the number of cases of addic-

tion, overdose and death.

As the numbers of cases of addiction, overdose and death mounted, the Department of Justice took notice, and charged Purdue with misbranding the drug's abuse potential. In 2007, Purdue pleaded guilty and paid over \$600 million in fines. Three company executives also pleaded guilty to criminal charges of misbranding the drug's risk of abuse and addiction.

In 2010, Purdue Pharma released a new formulation of OxyContin with an abuse-deterrent mechanism that is harder to crush or dissolve. The original formulation was withdrawn from sale, and in 2013, when OxyContin's patent was set to expire, the FDA refused to approve generic versions of the original formulation.

Now STAT NEWS, a news website focused on health and medicine, is suing Purdue Pharma to unseal records about what its executives knew about the drug's addiction potential and whether they intentionally downplayed it.

#### The president's plan to curb the epidemic

The introduction of one drug, OxyContin, helped to spark the opioid epidemic, but solving it is going to be much more complicated.

It is estimated that nearly 2 million Americans are addicted to prescription pain relievers, and drug overdose has become the leading cause of accidental death in the U.S., exceeding motor vehicle accidents.

In the first decade of this century, the overdose death rate increased nearly four times, with admissions to addiction treatment programs up six times over the same time period. Prescription opioids now kill more Americans every year than illegal ones.

Four in five new heroin users started out by misusing prescription painkillers, and 94 percent of opioid-addicted patients said that they switched to heroin because prescription opioids were more expensive and harder to obtain, according to the American Society of Addiction Medicine.

This secondary epidemic of illicit drug use is a new public health challenge that is hitting small towns and rural areas particularly hard.

President Barack
Obama's efforts to combat
opioid abuse are attracting
broad, bipartisan support.
More than 60 medical
schools, including my own,
have recently announced
that they will include new
federal prescribing guidelines in their curricula.

Leaders of all stripes are recognizing that to successfully prosecute the war on drugs, attention needs to shift stateside, to pharmaceutical companies, hospitals and physicians. Legal opioids prescribed by physicians have proved far more dangerous than the illicit ones.

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Charlie Steed (left) during his time in the Navy. He served two tours during which he manned a destroyer, the E.G. Small, during the Korean conflict and received a Purple Heart.

# Steed

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I told this story at The Corner, a monthly storytelling event in Lewiston. The theme of the event was "in sickness and in health," and I was joined by a number of other storytellers who'd been daunted in one way or another by the inevitability of entropy. Topics included: Lymphoma, polar bear attacks, overseas adventures halted by sickness, mystery illnesses intervening in new love and more.

In that way the night was so heavy, but it also was a reminder of this other side of humanity we typically don't think about unless it hoists itself into our existence. In every story, I was reminded that we survive. It's not always pretty, and it's not always possible, but we fight like hell. And when we share that with each other and bond over that vulnerability, this can be as beautiful as it is terrifying.

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honest, our clearest, and even our funniest selves. Reminded and refreshed, I left that event nourished.

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# Legal

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marijuana sales, with companies such as My 420 Tours offering curious outsiders tours of the Napa Valley of weed. But for a growing number of marijuana tourists, a vacation is likely to end with a trip to the emergency room, according to a 2016 study in the New England Journal Medicine.

The statewide rate of outof-state visitors to emergency rooms for issues related to marijuana use rose from 78 per 10,000 visits in 2012 to 163 per 10,000 in 2014. The rate of marijuana-related emergency room visits for Coloradans also increased, but less sharply, from 70 per

10,000 visits to 101 per 10,000. One reason why visitors are ending up in emergency rooms is that they apparently are less experienced marijuana users than Colorado residents, who have had access to marijuana for a couple of years and have been targeted by state education campaigns, Van Dyke said. As a result, visitors to the state may overestimate their ability to handle marijuana

"A lot of people do different things when they're on vacation," Van Dyke said. "Some people tend to do it overboard more when they're on vacation, and that could also be playing a part."

Colorado police still have their hands full enforcing new marijuana laws, and the marijuana black market has spilled over.

Proponents of legalizing marijuana have argued that it would free law enforcement to focus scarce resources on violent crimes. Indeed, marijuana-related arrests fell 46 percent in Colorado between 2012 and 2014, according to the Department of Public Safety's report.

As a share of total arrests, marijuana accounted



REUTERS | RICK WILKING

A bag of marijuana being prepared for sale sits next to a money jar at BotanaCare in Northglenn, Colorado in 2013.

for only 3 percent of arrests in 2014, down from 6 percent in 2012.

cent in 2012.

"Proponents wanted less arrests and incarceration, and that's what we've seen. But marijuana is still a problem for law enforcement," Marco Vasquez, chair of the marijuana issues subcommittee for the Colorado Association of Chiefs of Police, said.

While arrests for marijuana possession, for instance, are down, police departments are issuing far more citations for public consumption of marijuana, Vasquez said. In Denver, citations jumped more than 400 percent between 2013 and 2014.

What's more troublesome for police, though, is cracking down on marijuana being diverted from Colorado to other states. Instead of driving the black market out of business, legalization created new opportunities.

During the first year of legal marijuana sales, police seized an estimated 360 shipments of Colorado marijuana bound for other parts of the country, up from 274 seizures in 2012, according to a 2015 report by the Rocky Mountain High Intensity Drug Trafficking Area, a federally funded agency formed to disrupt drug trafficking.

Seizures of black market marijuana sent through the

U.S. mail also doubled from 158 in 2012 to 320 in 2014.

What's not known is whether this Colorado marijuana is coming from licensed businesses, personal growers or the marijuana black market.

"We believe there is a certain amount of diversion from the legal market, but most of it has come from the unregulated market," Vasquez said.

Before legalization rolled out in 2014, Colorado implemented an advanced tracking system to prevent diversion of marijuana plants from "seed to sale." Each marijuana plant is outfitted with radio-frequency identification tag to track it until a consumer purchases it.

But under Colorado law residents can grow up to six marijuana plants for personal use, and this isn't easily tracked.

Stoned driving also has emerged as an issue for Colorado police since legalization.

The Colorado State Patrol began tracking data on stoned driving in 2014, when it issued 674 summons for people suspected of driving under the influence of marijuana. In 2015, the state patrol saw summons for stoned

driving dip to 665. The Denver Police Department, which also tracks stoned driving data, has seen a small but steady increase in stoned driving from 51 in 2013 to 73 in 2015.

Under Colorado law, it is illegal to drive a vehicle with a THC blood count of greater than 5 nanograms per milliliter. (THC is the primary psychoactive ingredient in marijuana.) But Colorado police are finding it difficult to determine whether a driver is stoned.

"We are still struggling to detect someone who is impaired by marijuana. It's much easier to determine if someone is impaired by alcohol," Vasquez said.
"We're breaking new

ground here in Colorado."
The science is not clear about what concentration of THC in the blood results in impairment. Research also suggests that THC concentration in the blood dissipates before impairment wears off, making blood samples an unreliable method for testing for stoned driving, according to a 2016 study in the journal Clinical Chemistry.

Colorado police are testing a number of devices to find an accurate and reliable method to detect marijuana impairment, including one device that measures THC levels in saliva. But none have been adopted yet for widespread use.