What Not To Tell Your Children

Five Things Alex Berenson Gets Wrong About Marijuana

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A Drug Policy Alliance release.

In his book released in January 2019, "Tell Your Children: The Truth About Marijuana, Mental Illness, and Violence," Alex Berenson attempts to incite fear over the supposed devastation marijuana wreaks on mental health. But this self-described prohibitionist[i] gets it wrong. He blends a lack of perspective with lazy research interpretation and cherry-picked statistics to make several specious claims. Rather than contributing to thoughtful debate, his work is a polemic based on a deeply inaccurate misreading of science.

This is a problem, because it is critically important, as we consider marijuana policies, that we understand the harms associated with both marijuana use and its prohibition. We know that marijuana can be associated with certain health risks, such as cannabis use disorder, and that it can impact the development of teenage brains. We also know that prohibition makes it impossible to regulate the content, labeling, packaging or distribution of marijuana—increasing health risks. And we know that prohibition has caused devastating social consequences.

Distorting the facts, like Berenson's book does, risks contributing to a continuation of policies that have been deeply damaging to the health and wellbeing of millions of people in the US.

Here are five key things he gets wrong:

1) Berenson misrepresents the science. He cherry picks data, conflates correlation with causation, and relies on anecdotes to claim that marijuana causes mental illness and violence.

Berenson attributes cause to an association between marijuana and schizophrenia. For example, he argues that marijuana use has caused an increase in psychosis, including schizophrenia, in the United States, and that marijuana legalization will increase rates of both psychosis and schizophrenia in the next generation (see the book's introduction)[ii]. Though the U.S. has among the highest rates of marijuana use across the globe,[1] it has a lower estimated prevalence[iii] of schizophrenia and related psychotic disorders than the global average.[2] Even if there has been an increase in psychotic disorders in this country, it may be due to a number of other factors such as the complexity of a schizophrenia diagnosis,[3] changes in how mental illness is diagnosed[iv] and defined in the DSM 5,[4] or environmental changes.

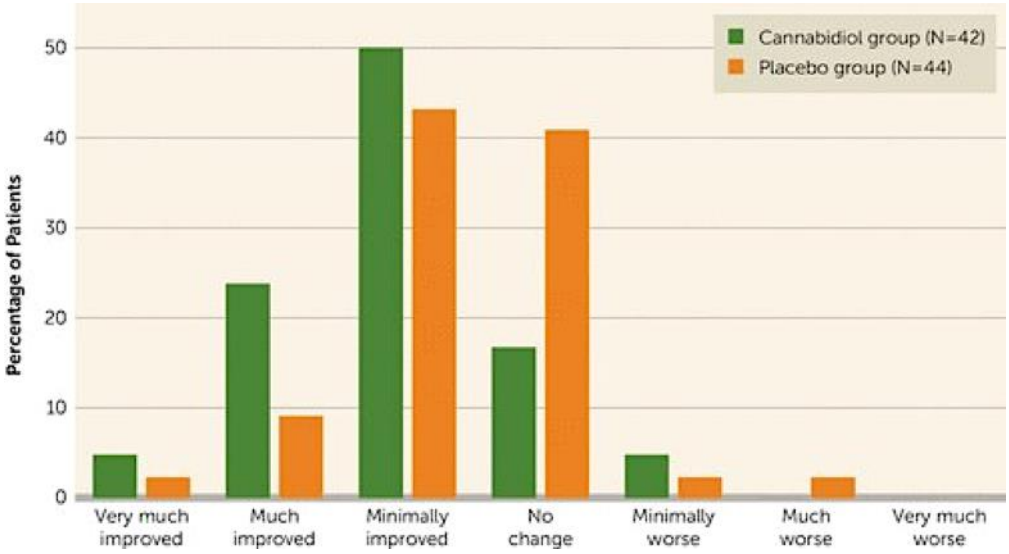
[i] In his book, Berenson directly contradicts his own statement in his New York Times op-ed by making it clear that he is, in fact, a marijuana prohibitionist: "When I told people I was writing this book, they inevitably asked whether I thought marijuana should be legal.… the truth is: No. Of course, it shouldn't" (p.223).

[ii] In the introduction of his book, Berenson says, ""About 40 million Americans were born in the last decade. An increase of 0.4 percent in psychosis would mean an extra 160,000 of those kids will suffer debilitating mental illness by 2040 or so. Many thousands of those will wind up committing murder and other violent crime."

[iii] According to the National Institute of Mental Health, the estimated prevalence of schizophrenia and related psychotic disorders ranges between 0.25% and 0.64% in the United States, as compared to 0.33% to 0.75% internationally. National Institute of Mental Health, *Mental Health Information. Schizophrenia*, NATIONAL INSTITUTE OF MENTAL HEALTH RESOURCE CENTER (Updated May 2018), https://www.nimh.nih.gov/health/statistics/schizophrenia.shtml.

[iv] For example, the diagnosis for schizophrenia was changed in the most recent edition of the American Psychiatric Association's Diagnostic and Statistical Manual. American Psychiatric Association, *Schizophrenia*, APA (2013), *available for download here:* https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/dsm-5-fact-sheets.

Berenson blatantly misrepresents[v] the findings of the National Academy of Sciences' report on the health effects of cannabis and fallaciously argues that marijuana use *causes* mental illness and violence—when in fact the report did not reach that conclusion.[5] It is impossible to attribute one cause to the onset of mental illness. Mental illness is complex and impacted by multiple factors, such as social determinants, environmental factors, and genetics.[6] There does, however, appear to be an *association* between schizophrenia and marijuana use, just a more complicated one than Berenson claimed in his book. Recent evidence suggests that genetic risk for schizophrenia appears to predict cannabis use.[7] This means that genetic risk often precedes the marijuana use so that heavy use among these individuals may put them at greater risk of developing psychosis and psychotic disorders. Moreover, researchers found that marijuana may have some benefits in treating psychotic disorders. They have found an association between marijuana use and *improved* cognitive outcomes in individuals with psychotic disorders.[8] And, as shown in the chart below, they have found that cannabidiol (or CBD), a cannabinoid found in marijuana, improves outcomes in patients with schizophrenia when given as an adjunct medicine.[9]



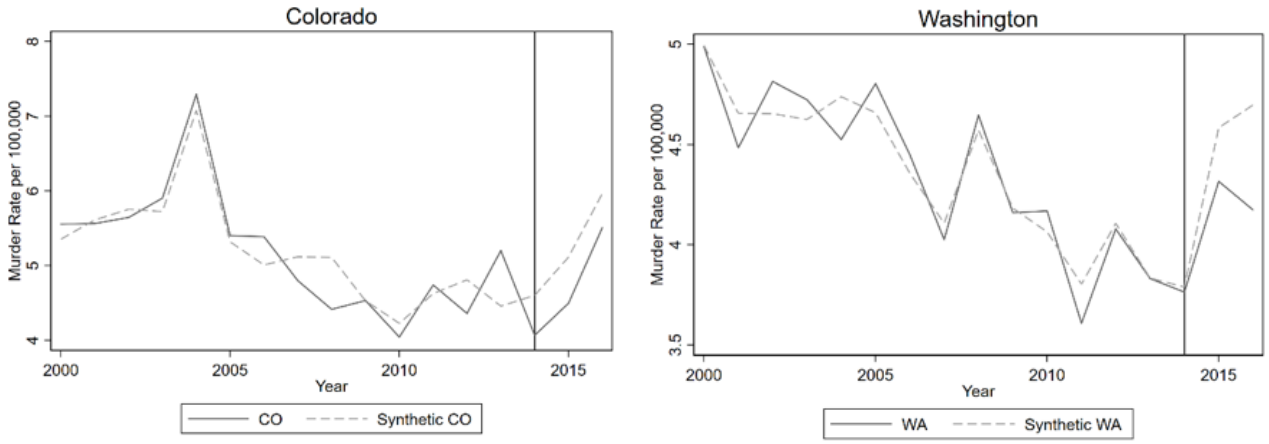
Source: Philip McGuire et al., Cannabidiol (CBD) as an Adjunctive Therapy in Schizophrenia: A Multicenter Randomized Controlled Trial, 175 AM J PSYCHIATRY 225-31 (Mar. 2018).

Berenson cherry-picks and relies on data tainted by sampling bias to erroneously link marijuana legalization to violent crime. Berenson relies on second-hand stories from the clients of his wife—a forensic psychiatrist working with mentally ill individuals who have committed crimes—to draw conclusions about marijuana and violent crimes. Choosing from this non-random pool of individuals is a type of research error called "sampling bias"[vi] that will lead to distorted results.[10] He also relies on a limited subset of murder rate data chosen to confirm his theory that marijuana legalization leads to violence based on an unpublished and non-peer-reviewed analysis he conducted with a New York University professor (see book's introduction). This approach is known as "cherry-picking."[11]

[v] In the introduction of his book, Berenson misrepresents the findings of the National Academies of Sciences' report saying that, "marijuana in the United States has become increasingly dangerous to mental health in the last fifteen years, as millions more people consume higher-potency cannabis more frequently"

[vi] "Sampling bias" is defined as a "systematic error due to study of a nonrandom sample of a population." Wolters Kluwer Health, *Stedman's Medical Dictionary* (2012).

A more scientific approach would be to analyze longer historical trends and control for other factors that might influence the trends. It would also consider how prior laws that reduced marijuana penalties and increased legal access to marijuana years before full-scale legalization may prove or disprove his theory. Economist Benjamin Hansen took this type of scientific approach in a recent analysis. Professor Hansen used a reliable and robust statistical approach to predict murder rates in Washington and Colorado, the first two states to legalize marijuana. Professor Hansen found that though the murder rate did go up in both states, as noted by Berenson, the actual murder rates in both states were lower post-legalization than their predicted (or "synthetic") rates (as shown on the next page).[12] He concluded that the murder rate data did *not* demonstrate that marijuana legalization increases violence and that it may actually demonstrate that legalization slightly decreased violence.[13]



Source: Benjamin Hansen, *A More Thorough Analysis of Marijuana Use and Homicide in Colorado and Washington*, THE INCIDENTAL ECONOMIST, Jan. 8, 2019

Evidence shows that marijuana legalization is not associated with crime, including violent crime. A 2013 Office of National Drug Control Policy report found, "Marijuana use does not induce violent crime, and the links between marijuana use and property crime are thin."[14] More recent research draws similar conclusions, finding no impact from retail marijuana stores, selling marijuana for adult use, on any type of violent crime.[15]

Berenson's assertions are harmful to public health and safety. The types of arguments Berenson makes are reminiscent of the "crack baby" and "super-predator" myths of the 90s. These myths used misleading and inaccurate science to justify widespread harsh penalties for pregnant women, mothers of newborns, and youth caught up in the juvenile justice system. Though scientific evidence clearly refutes both theories, we are still working to roll back those draconian policies today. We should not repeat this pattern with recycled, fear-based myths grounded in the misleading use of science and research about marijuana.

2) Berenson minimizes the consequences of arrests and criminalization, while blaming black communities for racially biased marijuana enforcement.

Berenson falsely claims that no one is incarcerated for marijuana possession anymore[vii], and minimizes the harms of arrest. Marijuana possession is one of the single largest arrest categories; it accounts for over five percent of all arrests.[16] More people are arrested for marijuana possession than for *all* violent crimes combined, as classified by the FBI.[17] In 2017, there were 599,282 marijuana possession arrests in the U.S.[18]

[vii] In the introduction of his book Berenson claims, "Even in states that haven't decriminalized, almost no one is imprisoned for possession anymore"

Marijuana possession arrests account for over nine out of every ten marijuana arrests and nearly four of ten drug arrests nationwide.[19] This amounts to more than one marijuana possession arrest every minute.[20]

Though it is hard to get incarceration data from local jails, tens of thousands of people are estimated to be incarcerated for marijuana possession in local jails and state and federal prisons across the country.[21] It is also important to note that there are several ways that a simple marijuana possession arrest can lead to incarceration: through a probation or parole violation; a plea bargain including a more serious offense; or a third-strike under some state laws.[22] All too often, an arrest even without a conviction can show up on a background check and potentially impact one's prospects and future.

He grossly underestimates the extent to which incarceration and criminal justice involvement is detrimental to health. Criminalizing marijuana harms people. Interactions with the justice system (often called "justice involvement") impact health in numerous, complex ways. Justice involvement, and incarceration in particular, leads to poor physical and mental health outcomes for individuals, their families, and communities.[23]

He fails to consider the detrimental effects that the collateral consequences of a marijuana arrest or conviction can have on a person's life. These social and legal consequences can create barriers to education, employment, occupational licensing, housing, and public benefits.[24] Noncitizens face additional consequences, and may be subject to deportation, detention, and inadmissibility.[viii] As a result, a minor marijuana conviction can result in a person being separated from their family.[25]

Berenson also downplays the role of racially disparate marijuana enforcement and its detrimental impacts on black and brown communities. It is widely acknowledged that racial disparities exist in the enforcement of marijuana laws in this country—black and brown people are more likely to be arrested for marijuana law violations than white people, despite similar rates of use and sales across racial groups.[26] Because they are more likely to be arrested for marijuana law violations, black and brown people, their families, and communities are more likely to suffer the resulting health-related harms that are described above.

He blames black communities for racially biased marijuana enforcement when he states:

"Yes, marijuana arrests disproportionately fall on minorities, especially the black community. But marijuana's harms also disproportionately fall on the black community. Black people are also more likely to develop schizophrenia and much more likely to be perpetrators and victims of violence. Given marijuana's connection with mental illness and violence, it is reasonable to wonder whether the drug is partly responsible for those differentials" (p. 220).

Berenson is suggesting that the reason police arrest and jail young black people so much more than young whites is because marijuana makes young black people psychotic and therefore more violent. He is presenting a wholly unsupported biochemical justification for racially biased policing and marijuana prohibition—in fact, it's nonsensical: if black and white people use marijuana at the same rates, then there's zero basis to conclude that marijuana is driving any different outcomes in the two groups. His flawed reasoning reeks of the racial animus and fearmongering of the 1930s that led to the passage of the Marihuana Tax Act of 1937, the first federal law prohibiting marijuana.[27]

3) Evidence overwhelmingly demonstrates that legal regulation has significant benefits for public health and safety.

Berenson paints a false portrait of marijuana legalization leading to social ills. But, as a recent report for the New York State Department of Health noted, "The positive effects of a regulated marijuana market [in New

[viii] "Inadmissibility" is an immigration term for when a noncitizen who otherwise is entitled to apply for lawful immigration status or admission to the U.S. is barred from eligibility and is deported. Kathy Brady, Angie Junk, & Nikki Marquez, *Immigration Impact: The Adult Use of Marijuana Act: Analysis of California's Proposition 64*, IMMIGRANT LEGAL RESOURCE CENTER (2016), https://www.ilrc.org/sites/default/files/resources/report_prop64_final.pdf.

York] outweigh the potential negative impacts. Areas that may be a cause for concern can be mitigated with regulation and proper use of public education that is tailored to address key populations."[28] This has been borne out by the states that have legalized to date; the evidence clearly shows that states are effectively protecting public health through regulation.[29]

Youth marijuana use remains stable across the U.S. Rates of lifetime, past year, past 30 days, and daily marijuana use all demonstrate that youth have not increased or decreased their use to a degree of statistical significance since states started legalizing marijuana.[30] This means that the increased number of states legalizing marijuana for adult or medical use has not contributed to increases in youth use rates across the U.S. If anything, rates are comparable to those of the late 1990s/early 2000s.[31] Youth use rates in Colorado, the first state with retail sales of marijuana for adult use, declined post-legalization.[32]

Marijuana arrests have dramatically declined. Arrests in all legal marijuana states and Washington, D.C. for the possession, cultivation and distribution of marijuana have plummeted, saving those jurisdictions hundreds of millions of dollars and preventing the criminalization of thousands of people.[33] In Alaska, the number of marijuana arrests for possession and sales/manufacturing declined by 93 percent from 2013 to 2015.[34] In Colorado, marijuana arrests declined by 56 percent from 2012 to 2017.[35] In Oregon, the number of marijuana arrests declined by 96 percent from 2013 to 2016.[36] The total number of low-level marijuana court filings[ix] in Washington fell by 98 percent between 2011 and 2015,[37] while marijuana possession convictions in Washington decreased by 76 percent from 2011 to 2015.[38] In Washington, D.C., marijuana arrests decreased 76 percent from 2013 to 2016, with possession arrests falling by 98.6 percent.[39]

The reduction in arrests has resulted in substantial savings, estimated at hundreds of millions of dollars, for law enforcement and the judiciary.[40] For example, Washington spent over $200 million on marijuana enforcement between 2000 and 2010.[41] By no longer arresting and prosecuting marijuana possession and other low-level marijuana offenses, states are saving hundreds of millions of dollars and thousands of adults are no longer getting stopped, arrested, charged or convicted simply for possessing a small amount of marijuana.

States are also protecting the public through strict regulations. All states that permit retail marijuana sales require strict consumer protections.[42] These include product testing; labeling of contents, strength, and dosing; and childproof packaging.[43] These protections do not exist under prohibition.

Berenson conflates legalization with commercialization. States can limit commercialization by restricting advertising and marketing, in addition to barring products that may be appealing to children. Many states are already taking some of these steps.[44] Federal law reform—like the Marijuana Justice Act introduced by Senator Cory Booker last session—would help states limit commercialization, because it would permit states to directly control their marijuana markets. Under federal prohibition, the Controlled Substances Act actually prohibits states from having that type of direct involvement.[45]

4) Prohibition has stymied marijuana research – and Berenson wildly mischaracterizes what the research has shown.

Berenson fails to mention that, while there has been a fair amount of government-backed research on potential harms of marijuana, prohibition has severely limited research on marijuana's medical efficacy and safety. Legalization advocates have long sought to end the federal government's systematic obstruction of marijuana research.

[ix] Because marijuana arrest data are not available for Washington, data on the number of marijuana possession convictions were used to demonstrate the decline in marijuana arrests in the state.

The Drug Enforcement Administration (DEA) and the National Institute on Drug Abuse (NIDA) have effectively blocked the Food and Drug Administration (FDA) drug development process to establish marijuana's medical safety and efficacy at the federal level. U.S. researchers face daunting regulatory hurdles to studying any Schedule I drug, but they face additional, unique barriers when they attempt to research marijuana.[46] Marijuana is the only Schedule I drug that the DEA prohibits from being produced by private laboratories for scientific research. Although the DEA has licensed multiple, privately-funded manufacturers of all other Schedule I drugs (such as heroin and LSD), it permits just one facility at the University of Mississippi to produce marijuana for federally-approved research.[47] Researchers seeking to conduct FDA-approved studies of marijuana's medical properties must procure the plant from a facility that contracts with NIDA, which is not mandated to study the medical benefits of use.[48] Accordingly, NIDA conducts research disproportionately focusing on the negative health effects, with only 16.5% of NIDA's spending going toward research on the therapeutic properties of cannabis.[49]

In 2016, the DEA announced a new policy designed to increase the number of entities registered to grow marijuana for research purposes. Despite receiving 26 applications from producers in 2016, no further progress has been made toward ending the NIDA monopoly by licensing privately-funded, federally-approved research-grade marijuana production.[50] The Department of Justice has effectively blocked the DEA from taking any action on the applications[51] and DEA spokespeople have declined to comment on the status of the applications.[52]

DEA and NIDA have successfully created a Catch-22 for patients, doctors and scientists by denying that marijuana is a medicine because it is not FDA-approved, while simultaneously obstructing the very research that would be required for FDA approval.

Berenson uses the limited amount of federally approved research on marijuana's medical efficacy to bolster false claims about patients. He claims that marijuana has no real benefits and that people are gaming the system to obtain marijuana for recreational, rather than genuine medical, use.[x] Though research on the medical safety and efficacy of marijuana is limited, it is promising. The National Academy of Sciences did, in fact, find conclusive evidence that marijuana can be used as a medicine for treating medical conditions such as "chronic pain in adults, chemotherapy-induced nausea and vomiting, and multiple sclerosis spasticity symptoms."[53] In addition patients report that they find marijuana useful for treating conditions such as chronic pain, arthritis, migraines, cancer, nerve pain, multiple sclerosis, and tremors from Parkinson's disease.[54]

5) Decriminalization does not do nearly enough to reduce the harms of marijuana prohibition.

Berenson grossly overstates the benefits of decriminalization and underestimates the persistence of racially disparate enforcement. New York City is a prime example of how large numbers of marijuana arrests can persist well after marijuana is decriminalized. New York State decriminalized marijuana possession in 1977,[55] yet New York City has arrested and jailed more than 650,000 people for possessing small amounts of marijuana since 1997, more than any other city in the history of the world.[56]

Marijuana legalization has been more effective than decriminalization at reducing the number of black and brown people arrested for marijuana. Data show that while legalization substantially reduced the total number of black and brown people arrested for marijuana offenses, it did not eliminate the social forces that contributed to racial disparities more broadly in the criminal justice system, such as racial profiling, over-policing, and other racially motivated police practices.[57] Marijuana legalization is not a panacea and cannot fix systematic problems with policing alone. However, it does remove an important excuse that police have used

[x] In the introduction of his book, Berenson says, "Maybe I'm too cynical, but I believe most people smoke marijuana for the same reason they drink alcohol or use any other drug: because they like to get high."

for over-policing, asset seizures, arrests, and for unnecessary adversarial encounters between the police and rights-bearing residents in black and brown neighborhoods that have too often resulted in violence and death. Legalization removes an excuse for those encounters, and may help set the stage for a different relationship between police and targeted communities.

What You Should Really Tell Your Children About Marijuana

When it comes to drug education, scare tactics and fearmongering are deeply counterproductive. The most infamous and commonly used drug education curriculum that relied on these approaches, D.A.R.E., has consistently been proven to be ineffective.[58] Recent research about ideal forms of health education, including drug education, emphasizes the importance of skills-building as a fundamental approach.[59]

DPA's *Safety First: Real Drug Education for Teens* curriculum is the culmination of almost 20 years of work in youth drug issues by the Drug Policy Alliance (DPA). The *Safety First* curriculum empowers ninth and tenth grade students to make healthier decisions about alcohol and other drugs. It gives them personal and social strategies to manage the risks, benefits, and harms of alcohol and other drug use, as well as information about the impact of drug policies on their own health and the health of their communities. Most importantly, it spends a good deal of time building the critical thinking skills necessary to evaluate information about alcohol and other drugs. *Safety First* teaches young people to look at information critically and come to their own conclusions based on research. The aim is to give young people the tools to analyze sources such as Berenson's book, and discover his inaccuracies and exaggerations on their own.

The Drug Policy Alliance (DPA) is a national organization committed to reducing the harms of drugs and drug prohibition. DPA advocates to change drug policies so that they are founded on science, health, compassion, and human rights, rather than criminalization.

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