

Understanding Arizona

How is Medical Marijuana Affecting their State?

In 2010, Proposition 203, the **Arizona Medical Marijuana Act (AMMA)**, narrowly passed with 50.13% of votes. The AMMA designates the Arizona Department of Health Services as the licensing and issuing authority for the Medical Marijuana Program. Since the enactment of the AMMA, available data have substantiated several areas of concern.

Increased Availability

- ◇ Expansion of **underground marijuana market** involving illegal dispensaries, clubs, and co-ops engaged in for-profit distribution.¹
- ◇ Indoor **marijuana plants seized** soared from 1,462 plants to 3,192 in just three years.²
- ◇ **Marijuana abuse and crime** in Arizona are heavily impacted by increased marijuana diversion and availability.

Difficult Enforcement

- ◇ The AMMA allows **home cultivation of up to 12 plants** for patients and caregivers who live more than **25 miles** from a dispensary.³
- ◇ Positive marijuana test results for drivers involved in **fatal traffic accidents increased 49%** from 2010 to 2013.⁴
- ◇ Marijuana was the most frequently reported drug used by arrestees, and more than **35.2% tested positive for marijuana at time of arrest.**⁵
- ◇ There are over **82,000** residents with an AMMA card.⁵

Health Risks

- ◇ In 2013, marijuana surpassed alcohol as the **most commonly used substance associated with a child's death.**⁶
- ◇ Since 2010, hospital emergency department encounters involving marijuana **increased 50%.**⁷
- ◇ Marijuana **exposure calls rose 32%** from 2011 through 2014.⁸
- ◇ **14.3%** of students currently using marijuana **received it from an AMMA cardholder.**⁹

Recreational Use

- ◇ **76% of cardholders have a prescription for chronic pain.** The second largest condition is **cancer at 3%.** This raises concerns of the legitimacy of prescriptions.³
- ◇ **A proposition to fully legalize marijuana is planned for 2016.** Under this proposition, current dispensaries will become medical and recreational.
- ◇ Many **dispensaries are funding** promotion of this proposition.

1. Arizona HIDTA 2015 Arizona Threat Assessment Report.
 2. Arizona High Intensity Drug Trafficking Area Investigative Support Center, September 2015.
 3. Arizona Department of Health Services Medical Marijuana Program Monthly Report, October 2015.
 4. NHTSA Fatality Reporting System, July 2015.
 5. ASU Center for Violence Prevention and Community Safety, Arizona Arrestee Reporting Information Network, October 2012, the Characteristics of the Adult Arrestee Population.

6. Arizona Child Fatality Program Report, 2014.
 7. Arizona Department of Health Services, September 2015.
 8. Arizona Poison Control Center, College of Pharmacy, University of Arizona, July 2015.
 9. State of Arizona, Arizona Criminal Justice Commission, 2012/2014, Arizona Youth Survey.

By David Blodgett, MD, MPH
SWUPHD Director & Health Officer

MEDICAL



In the days when opium, cocaine, and other plant-derived narcotics were routinely used in medical practice - often with disastrous effects - marijuana was also investigated for its medicinal qualities. An 1890 study indicated "marked disturbances in motility, convulsions, and the induction of epilepsy, which is not rare."

One of the great advances of modern medicine is the standardization of processes used to evaluate compounds that have the potential to help treat or cure disease. Thousands of promising substances are filtered through this procedure before truly effective medications are identified and made available to the general public. This process remains critical as a protection against false claims and the negative impacts that damaging medications can have.

Does marijuana contain beneficial compounds that could heal a variety of diseases, many of which have been regarded as having no cure? The surprising answer is... "maybe", but certainly not to the extent claimed by many advocates. The endocannabinoid system in the body has receptors that respond to two compounds found in marijuana: cannabidiol (CBD) and tetrahydrocannabinol (THC). This system is widespread, affecting many systems in the body, so the impact of CBD and THC

can be profound. We know this is true because of the negative effects of marijuana.

Active research is currently underway to study whether there could be positive impacts from these compounds as well. The National Institutes of Health (NIH) currently has 213 projects related to CBD, and an additional 13 are analyzing other marijuana compounds for potential medical use. There are already standardized extracts and synthetics of THC and CBD available on the market today, with a prescription. No one is being denied the legitimate use of these potentially beneficial compounds.

Some claim that since marijuana contains potentially helpful components, it should be legalized as medicine. The problem is, you don't smoke medicine. In order for a substance to be a legitimate medicine, you must be able to know how much of the substance you are getting, and smoking does not allow that. Variations in the plant being smoked and how the smoker inhales make it impossible to know from one hit to another how much "medicine" you have ingested. This makes the debate about "medical marijuana" a farce, especially when many proponents use the "medicine" label simply to encourage legalization of their recreational use of the drug.

Research continues, but any potential benefits have not yet been proven. However, the adverse - sometimes devastating - effects of marijuana have been well documented, as illustrated recently in the *New England Journal of Medicine*:

Short Term Effects:

- Impaired short-term memory including difficulty learning and retaining information
- Impaired motor coordination, including impaired driving skills, leading to accidents
- Altered judgment
- Paranoia and psychosis, especially at higher doses

Long Term Effects:


- Addiction
- Altered brain development
- Poor educational outcome, with increased likelihood of dropping out of school
- Cognitive impairment, with lower IQ
- Diminished life satisfaction and achievement
- Symptoms of chronic bronchitis
- Increased risk of chronic psychotic disorders including schizophrenia

It is likely that marijuana also negatively impacts the central nervous system, along with the cardiovascular, re-

spiratory, immune, reproductive, and neuro-psychological systems of the body.

There is still much to be discovered about both the negative and positive attributes of marijuana, yet I find it interesting that some of us simply believe that the potential benefits already exist, while assuming none of the potential harms do. The tragedy of this logic was explained by Dr. Ed Gogek in the *New York Times*: "Indeed, marijuana activists use phony science...for years they claimed pot was good for glaucoma and never apologized when research found it could actually make glaucoma worse. They still insist weed isn't addictive, despite every addiction medicine society saying it is. They've even produced their own flawed scientific studies supposedly proving that medical marijuana laws don't increase use among teenagers, when almost all the evidence says just the opposite."

The consequences of marijuana use is bad enough in adults, but can be catastrophic for children and teenagers. The data mentioned by Dr. Gogek shows that when marijuana is legalized or legitimized, the perception of harm decreased among adolescents and use goes up. We've seen this trend in our own district: high school seniors in southwest Utah reported regular use of marijuana at a rate of

The background of the page is a complex, abstract graphic composed of various chemical structures, primarily hexagons and pentagons, in shades of yellow, green, and purple. These structures are interconnected by thin lines, creating a network-like pattern that resembles a molecular lattice or a complex organic molecule. The overall effect is a vibrant, scientific aesthetic.

5.3% in 2013, which nearly doubled to 9.6% in 2015. 25% of high school seniors report having tried marijuana. The younger a person starts to use marijuana, the more damaging and long-term the impacts become, and the likelihood of using other drugs increases.

No major public health organization endorses the concept of medical marijuana. In fact, they all universally reject the notion that smoking marijuana for medicinal purposes is valid. Both the CDC and the National Institute for Drug Abuse have called marijuana use a national public health crisis.

Here's a sample of what the scientific community is saying:

The American Cancer Society states "The ACS is supportive of more research into the benefits of cannabinoids. Better and more effective treatments are needed to overcome the side effects of cancer and its treatment. The ACS does not advocate the use of inhaled marijuana or the legalization of marijuana."

The American Academy of Pediatrics (AAP) believes that "[a]ny change in the legal status of marijuana, even if limited to adults, could affect the prevalence of use among adolescents." While it supports scientific research on the possible medical use of cannabinoids as opposed to smoked marijuana, it opposes the legalization of marijuana.

The American Medical Association (AMA) has called for more research on the subject, with the caveat that this "should not be viewed as an endorsement of state-based medical cannabis programs, the legalization of marijuana, or that scientific evidence on the therapeutic use of cannabis meets the current

standards for a prescription drug product."

Dr. Christian Thurstone, a professor of psychiatry at the University of Colorado and medical director of one of Colorado's largest adolescent substance abuse treatment programs, said: "In the absence of credible data, this debate is being dominated by bad science and misinformation from people interested in using medical marijuana as a step to legalization for recreational use. Bypassing the FDA's well-established approval process has created a mess that especially affects children and adolescents. Young people, who are clearly being targeted with medical marijuana advertising and diversion, are most vulnerable to developing marijuana addiction and suffering from its lasting effects."

Current evidence is compelling enough to support efforts that reject the idea of smoking marijuana as medicine, along with rejecting the idea that smoking marijuana for recreational purposes is acceptable or harmless. We should, however, support efforts to encourage research into the components in marijuana that might have medicinal value. Utah State Senator Evan Vickers, along with Representative Ed Redd, MD and others, are leading the fight for a common sense solution to this issue with a bill that would allow for specific compounds found in marijuana to be studied and used reasonably, versus legalizing the entire plant.

If marijuana truly does hold answers to health problems that have not been treatable before, we need to find that out using the scientific method instead of allowing political interests to hijack the issue as a smokescreen for recreational use. ❏

SMART's mission is to prevent and reduce alcohol, marijuana and prescription narcotic drug misuse/abuse among youth living in Utah County. To get involved with SMART Utah County contact Michelle Allen at (801) 851-7181



Utah Cannabis Bills 2015

Sen. Evan Vickers and Rep. Brad Daw

Sen. Mark Madsen

Basic Principles:

- ❖ Do no harm
- ❖ Compassionate use to all qualifying patients
- ❖ Research
- ❖ High CBD, minimal THC

Plant Production

- ❖ Less than 50 acres needed to supply the patient population
- ❖ Growing strictly controlled by the Dept. of Agriculture
- ❖ State licensed lab certifies contaminant-free and high CBD plants

Processing

- ❖ License granted to no more than two private companies
- ❖ Licensee must meet the following criteria
 - High bioavailability
 - Reasonable price charged for product
 - All product certified by state licensed lab

Distribution

- ❖ Dispensaries limited by geographic distribution
- ❖ Must have licensed pharmacist review all dispensing
- ❖ Cities and towns can choose not to allow

Basic Principles:

- ❖ Whole plant consumption; least expensive, regardless of abuse potential
- ❖ Intended to be vaporized or eaten, but no enforcement on delivery system
- ❖ End marijuana prohibition

Plant Production

- ❖ Cultivation facilities licensed and regulated by Dept. of Agriculture
- ❖ Rigorous monitoring any time the material is handled or processed

Processing

- ❖ Delivery: whole plant or edibles
- ❖ Tinctures and extracts similar to those widely available in 1930's
- ❖ Minimal processing to avoid making product too expensive
- ❖ Tested for purity, lack of pesticides, molds, heavy metals, etc. Use industry standards of other states. Labels will be checked for quality insurance
- ❖ Separate licenses for growing and processing

Distribution

- ❖ Still very expensive, highly taxed to discourage abuse

dispensaries v Allowed to ship product in state by non-USPS carrier

- ❖ Limitations on dispensary advertising

Who has Access

- ❖ Adults
- ❖ Eligible diseases determined by Controlled Substance Advisory Committee
- ❖ Committee will consist of doctors, law enforcement, and legislators
- ❖ Anticipated patient population between 2,000-5,000

Doctors Making Recommendations

- ❖ Must undergo additional training before making recommendation
- ❖ Can recommend product to no more than 100 patients at a time
- ❖ Must de-identify and report patient outcomes to the Dept. of Health

Research

- ❖ Creation of research license
- ❖ Allows a university to conduct clinical trials under a state license
- ❖ All results will be reported to the Dept. of Health

Finances

- ❖ State licensed credit unions authorized to handle transaction
- ❖ No entrepreneurial opportunity

- ❖ Dept. of Health to inspect dispensaries, same as other businesses
- ❖ Cities and towns are required to allow dispensaries
- ❖ "Seed to Sale" barcoded pots and products
- ❖ Proposals are submitted to a committee by anyone who wants to obtain a license; Need to be able to stay in business, history of operating a business
- ❖ Prefer to hire those from out of state who have run dispensaries; those who have capital to sustain business.
- ❖ One per county or one per every 200,000

Who has Access

- ❖ Any age, parent will file for child
- ❖ 8-9 conditions including: Cancer, Epilepsy, MS, Crohn's, chronic pain, PTSD – Veterans only
- ❖ Six figure patient base estimated

Doctors Making Recommendations

- ❖ Specialists must make recommendations for each condition
- ❖ Recommended patients submit online application to Dept. of Health for card
- ❖ Patient can only buy what physician has recommended, electronic system prevents patients from purchasing at multiple dispensaries.
- ❖ Law enforcement can access database, to check legality of possession- need a standard for measuring impairment, there is not a dependable one now.

Research

- ❖ No research component stated

Finances

- ❖ Any additional cost will be borne by the patient
- ❖ Keep regulatory and tax as low as possible, yet high to discourage abuse

Summary:

Across the nation many states are stampeding to legalize marijuana. Sadly, some states have enacted irresponsible and even dangerous policies. If any action is necessary, the more cautious and reasonable approach being sponsored by Senator Vickers and Representative Daw will better support the health of our community.