Protecting Public Health and Promoting Equity in Adult-Use Marijuana Legalization in Illinois

Recommendations for Policy Makers

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Developed by Illinois Public Health Institute

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Summary

As legalization of adult-use marijuana is taking place in states across the country, it is imperative that any policy formation efforts minimize the health and social harms of marijuana use and maximize social equity through criminal justice reform and decisions about revenue allocation. Most national public health and medical associations have called for additional research on the health and social impacts of legalization and indicate that a public health and equity framework must be developed if legalization moves forward, whether they oppose or support legalization with proper regulatory protections in their official policy statements. Public health stakeholders in other states that have already legalized adult-use marijuana have been publishing "lessons learned" about their efforts. With adult-use marijuana legalization proposals from Illinois policymakers, the Illinois Public Health Institute (IPHI) convened a broad group of Illinois stakeholders to build a framework that protects public health and promotes equity in any potential legalization in Illinois.

Given the numerous concerns related to public health and safety published by states with legalization and commercialization policies, combined with opposition from major professional societies across medicine, behavioral health, addiction, road safety, law, and law enforcement, IPHI urges caution in determining whether to legalize or commercialize adult use marijuana in Illinois at this time. However, if Illinois legislators choose to proceed with this initiative, the following are essential protections to minimize harm to the public.

Background

Marijuana and Health Organizations

While cannabis (commonly called marijuana) continues to be a Schedule 1 drug under the Controlled Substances Act in the United States,[1] eight states and the District of Columbia have legalized adult-use marijuana with limited intervention by the Federal government.[2] Policymakers in other states, including Illinois, have considered legalization to remove the marijuana black market, reduce mass incarceration, and secure revenue from taxation.

National public health and medical associations call for additional research on the health impacts of marijuana and the health and social impacts of legalization. For example, the American Academy of Pediatrics (AAP) opposes legalization because research shows that marijuana can impair memory and learning in adolescents and lead to addiction in adulthood. However, the AAP calls for more research on the health impacts of marijuana on adults and children and for strong regulations in places that do legalize adult-use to minimize access, marketing, and advertising of the drug to youth.[3] The American Academy of Family Physicians also opposes legalization for recreational use and "advocates for further research into the overall safety and health effects of recreational use as well as the effects of those laws on patient and societal health."[4] The American Society of Addiction Medicine (ASAM) opposes legalization for adult recreational use because some recent research has shown negative health effects of marijuana use, including addiction. For states that have or will legalize, the ASAM calls for a cautious approach to legalization with a strong regulatory framework to ensure health and safety and minimize harms to vulnerable populations.[5] All three organizations support decriminalization of marijuana possession.

The National Academies of Sciences, Engineering, and Medicine (National Academies) released a comprehensive review of the current state of evidence on the health effects of marijuana in 2017. The report highlighted the potential therapeutic effects of cannabis and cannabinoids to treat chronic pain in adults, as well as reducing ailments such as multiple sclerosis-related muscle spasms and chemotherapy-induced nausea and vomiting. However, they also noted "substantial evidence" from research pointing to negative health impacts of marijuana use, including impaired driving and an increased risk of being in a motor-vehicle accident; increased risk of developing schizophrenia, and other psychoses; and increased risk of developing problem -use, especially when use begins early or is frequent. Additionally, smoking marijuana during pregnancy is associated with lower birth-weight babies. There were several areas of health impact with only limited or moderate evidence to date and for which the National Academies called for more research.[6] Evidence continues to emerge in a number of important areas, most notably effects on cognition and achievement in youth and on cardiovascular disease,[7],[8] that may in the long run have the most significant population level impact.

While there is evidence of negative health effects, many advocates for legalization point to positive effects related to criminal justice reforms associated with legalized adult-use marijuana. For this reason, the National Association of County and City Health Officials (NACCHO) calls on local and state health departments to actively engage in discussions around adult-use marijuana legalization and to take a precautionary approach to these policies.[9]

The Public Health Institute (PHI) in California launched the "Getting it Right from the Start" initiative to "collaboratively develop and test models of optimal marijuana policy (retail practices, marketing and taxation) with the goal of reducing harms, youth and problem use."[10] This initiative completed substantial qualitative research engaging a wide range of key informants to better understand the public health implications of the existing adult-use marijuana laws and identify potential best practices for regulation in the United States. The initiative is developing tools and resources to help other states to optimize public health and equity outcomes in marijuana policies. PHI is promoting sharing these "lessons learned" from other states with states considering legalization.

Legalization Efforts in Illinois

Medical marijuana was legalized in Illinois in 2014 and updates to the law were enacted in 2015, 2016, 2017, and 2018.[11] Adult-use (over age 21) marijuana legalization was proposed by Sen. Heather Steans and Rep. Kelly Cassidy in 2017 and they continue efforts to write legislation to legalize adult-use marijuana in Illinois.[12] Illinois Governor-elect, J.B. Pritzker, includes plans to "safely legalize and decriminalize" marijuana in Illinois in his policy platform.[13] The Coalition for a Safer Illinois has been a proponent of adult-use marijuana legalization in Illinois, with the primary argument for legalization being to replace the marijuana black market with a safer, tightly regulated legal market, and to generate revenue for the state. [14]

A non-binding ballot question proposed to Cook County voters in 2018 asked, "Shall the State of Illinois legalize the cultivation, manufacture, distribution, testing, and sale of marijuana and marijuana products for recreational use by adults 21 and older subject to state regulation, taxation and local ordinance?" The ballot question received 68 percent approval.[15] However, some experts have questioned the objectiveness of the proposed question.[16]

Convening

It is with these public health and medical association recommendations and guidance, lessons learned from other states, and the political landscape of adult-use marijuana legalization proposals in Illinois, that the Illinois Public Health Institute convened stakeholders from governmental public health, public health advocacy, behavioral health, law, criminal justice reform, and medicine to discuss the public health and equity considerations for adult-use marijuana legalization in Illinois. The following recommendations were generated through these stakeholder discussions.

Recommendations

While many health and medical groups oppose legalization, many groups recognize the potential positive criminal justice reform outcomes of adult-use legalization. While those criminal justice outcomes could potentially be achieved through other policies, it is important that any legalization efforts maximize these benefits to **promote equity and minimize any health harms** from marijuana, especially for youth and other vulnerable populations.

As adult-use marijuana legalization policies are still rather new in the U.S., and evaluation of their impacts on health, equity, and public safety are limited, it is important that Illinois take a **slow, phased-in approach to legalization** if it chooses to legalize.

If adult-use marijuana legalization occurs in Illinois, a public health and equity approach must promote the following principles:

- Protect Vulnerable Populations and Minimize Health Harms
    - Marijuana dependency and other health and social harms must be minimized
    - Children, youth under age 21, pregnant and breastfeeding women, people recovering from addiction, immigrants, and other vulnerable populations must be protected
- Ensure that Social and Economic Benefits of Legalization Promote Health and Equity
    - Legalization should reduce the social harms of the historic war on drugs
    - Economic benefits of legalization should remain as much as possible in the communities most impacted by the war on drugs
- Create a Strong Public Health Leadership and Regulatory Scheme, including Local Control
    - Governmental public health and public health advocates must take a strong leadership role in legalization and implementation
    - Local communities must be allowed to adopt regulations that are more stringent than the state law
    - Legalization should avoid creation of a powerful new tobacco-like industry

Protect Vulnerable Populations & Minimize Health Harms

Marijuana use among young adults is rising, and in fact, past-month use of marijuana is highest among 18 to 25-year-olds (20.1% past-month use in 2015).[17] Past-month adult use is highest among non-Hispanic African American adults (10.7% in 2015), followed by non-Hispanic White adults (8.4%), Hispanic adults (7.2%) and non-Hispanic Asian adults (3%). Individuals from families making less than $10,000 a year have higher past-month use (13.4%) compared to families making more than $75,000

a year (6.6% past-month use). Additionally, and most worrisome from a health and well-being standpoint, heavy-use is rising. In 2014, 35.4 percent of users used at least 20 of the past 30 days. [*Ibid*] The only age-group in which past-month use has not been rising nationally is ages 12 to 17 years (7.1% report past-month use). Year-to-year trends of youth use in states that have legalized adult-use marijuana show youth-use is decreasing, although there is limited information on how that decrease compares to decreases shown in youth use from other states that have not legalized adult-use marijuana.[18] A study of youth in southern California found that increased exposure to medical cannabis advertising increased average use, intentions to use, positive expectations, and negative consequences of use for youth.[19] A study in Oregon found that while overall there was lower youth use post legalization, youth who already used marijuana prior to legalization were more likely to increase youth after legalization.[20]

There is a growing body of evidence suggesting that regular marijuana use in adolescence impairs future education and academic achievement, employment and income, and social relationships and roles.[21] A review of research from the National Academies showed an association between the frequency of marijuana use and higher THC potency with the development of mental health issues, including psychoses, depression, anxiety, suicidality, and addiction. [*Ibid*] In Colorado, there has been an increase in marijuana presence in toxicology results of suicides among adolescents ages 10-19 years old post legalization.[22] Cannabis use during pregnancy has been associated with lower birth-weight babies.[23] Driving while impaired by marijuana increases the risks of motor vehicle crashes [*Ibid*] and states that have legalized adult-use marijuana have seen increases in fatal traffic crashes and driving under the influence of drugs (DUID) citations post legalization.[24] Also, in states that have legalized marijuana, there is evidence that cannabis use is associated with increased risk for overdose injuries among children.[25] Given that lower high school graduation, low birth-weight, and poor outcomes with mental illness are all major areas of existing health and social inequities in Illinois, great care must be taken not to further exacerbate these problems.

With the growing use of marijuana by adolescents and young adults in the jurisdictions that have commercialized adult-use marijuana, and the potential negative health and social effects of marijuana use, it is imperative that regulations be put in place to protect our most vulnerable populations.

Lessons learned from tobacco and alcohol show that public health regulations can have a highly significant impact on youth access and use, can limit and prevent impaired driving, and can reduce negative health impacts. Public health regulations that keep prices artificially high (such as through taxation), for example, help limit access to youth as they are a price-sensitive sub-set of the market. Limiting marketing and the types of products sold, reducing and limiting public consumption, and restricting and monitoring licensing and the density of retail dispensaries can all have an impact on access and use.[26]

If adult-use marijuana is legalized in Illinois, health and equity stakeholders recommend the following regulations to protect vulnerable populations:

- **Marketing of adult-use marijuana must be very limited to protect youth and other vulnerable populations.** While the marketing limitations to adult-use marijuana vary across states, Alaska, Oregon, Washington, and Colorado include clear language about limitations in

the state laws. Illinois stakeholders recommend including all the following marketing limitations that other states or cities have used, including:

- Limiting marketing within 1000 feet of places children and young adults frequent, like schools, childcare facilities, parks, on public spaces, bus/train stops, and college campuses
- Limiting the number and size of dispensary signs on premise
- Not allowing promotional giveaways, discounts, coupons or games
- No depiction of persons under age 21
- Not allowing health or therapeutic claims
- Not allowing objects/characters, including toy, animal, fruit, or cartoon characters, that are particularly appealing to someone under age 21
- No mass marketing campaigns that appeal to minors, including on TV, internet, and radio (unless they can show with reliable data that the audience is less than 15% under age 21). The 15% standard is recommended as a best practice standard by the National Research Council/Institute of Medicine's report on underage drinking commissioned by the United State Congress.
- No advertising visible to members of the public from any street, sidewalk, park or other public place, including billboards, mounted vehicles, or handbills, leaflets, or fliers handed directly to people or left on cars
- All marketing that is allowed must include warning labels (see more below)

In addition to the above recommended limitations, the state should work with public health and community advocacy/equity stakeholders to determine additional limitations on marketing to ensure that marijuana use is unattractive to youth and that marketing is extremely limited to prevent the commercialization of adult-use marijuana in Illinois.

- **Warning labels should be required to be prominently posted on product packages and any allowed marketing messages.** Other states have required warning labels be posted that warn the public that marijuana use can impair cognition and driving, is for adult-use only, can lead to addiction, and should not be used by pregnant or breastfeeding woman.

- **Prominent warning signs on key negative health and social effects should be posted in all retail outlets.** Although the health impact warnings are important, it is **also important to include warnings about potential social and legal impacts** of marijuana use. For example, individuals living in public housing should be warned that marijuana use and possession may put their Federal public housing subsidies at risk, and immigrants should be warned that possession/use may put their immigration status in jeopardy. Finally, those on parole, or those seeking employment should be aware that they still may be subject to drugs tests and that legalization does not exempt one from the consequences of testing positive for marijuana use.

- **Product packaging and labeling must help prevent accidental ingestion/use by children, youth and pregnant women.** A universal symbol for marijuana should be used on all products that contain marijuana for safe public identification of such products. Additionally, child-resistant packaging should be required to ensure child safety. All states that have legalized adult-use marijuana have now adopted requirements around use of a universal symbol and child-resistant packaging and Illinois should do the same.[27]

- **The types of products allowed should be limited. Cannabis-infused beverages and flavored combustibles, such as pre-rolls with flavored paper and others known to attract youth, should be banned.** Marijuana plant and vaping oils constitute most product forms purchased by consumers of legalized adult use marijuana. In Washington state, well over three-quarters of the market is sales of the plant or vaping oils, with edibles and other products taking up a much smaller proportion of the market. To minimize use by youth, combustibles, concentrates, and edibles that are particularly attractive to young people should be banned or severely restricted. This includes: marijuana-infused beverages, flavored combustibles, candy-like products, etc. Other edibles, like baked goods, if allowed, should be limited and unattractive to youth (e.g. plain packaging and without images of food or similarity to existing food marketing).

- **The state must invest a substantial amount of money into a public education and prevention campaign specific to cannabis <u>before</u> the first adult-use stores open.** Public health practitioners in other states have repeatedly noted that they were not provided sufficient resources to educate the public about the potential health, social, and legal impacts of marijuana use before the first dispensaries opened, leading to public misperceptions of harm, increased youth use, and "normalization" of use.[28]

  The state should provide sufficient dollars to state and local health departments, local community organizing and empowerment organizations, and health advocacy organizations to develop and implement a mass media public education campaign, and community-level educational efforts about the health, social, and legal impacts of marijuana use. These campaigns should especially target communities who may have higher use of the drug or greater implications of legal or social harm from use (i.e. those with large immigrant communities, those living in public housing, etc.), and among youth. Educational materials and messages must be available in multiple languages (perhaps the top 6 languages in each county) and in braille. This local-level education must be conducted to ensure equity in legalization implementation and impact and should be maintained over time.

  Additionally, significant effort should be made to educate healthcare professionals, such as pediatricians, family physicians, pharmacists, and others on how to counsel patients on marijuana use and how to speak to children to prevent marijuana use. Healthcare professionals should understand the current state of research evidence on the health impacts and how to apply those findings in their interactions with patients.

- **There should be "budtender training" similar to the Illinois requirements for bartenders to ensure dispensary owners and workers understand the potential negative health, social, and legal aspects of marijuana use.** The Illinois Liquor Control Commission requires bartenders to complete an alcohol beverage sellers and servers education and training program before they can work as a bartender. A similar program should be developed and implemented for "budtenders" working in dispensaries. A study in Colorado found that of 400 dispensaries contacted, the majority of budtenders (69%) recommended cannabis-use to women for first-trimester pregnancy-related nausea, despite the research indicating the pregnant women should not use cannabis.[29] Budtender training is critical to prevent these types of erroneous recommendations.

- **Illinois must limit the number and density of adult-use marijuana retailers and should allow only specialized business model licenses.** Similar to the impacts of alcohol and tobacco licensing density, limiting the number of retailers and retail density for marijuana can limit competition (and help keep prices higher, protecting youth), and prevent youth use and misuse. Keeping the number of retailers low (1 per 20,000 inhabitants or more, for example) also helps to control the costs of regulating and monitoring compliance with licensing requirements.[30] A specialized business license model would keep marijuana sales out of other retail outlets like bars, drugstores, grocery stores, etc. Limited retail access limits access to youth and prevents normalization of sale/use. Both alcohol and tobacco retailers have concentrated in low-income and minority communities, and the state should also ensure this type of geographic concentration for marijuana retail is prohibited so that the marijuana retail industry cannot heavily market to and target those communities for use.

Ensure the Social and Economic Benefits of Legalization to Promote Health and Equity

A primary driver of legalization efforts in Illinois, as evidenced by proposed legislation and policy statements, includes the collection of tax revenue from the cultivation and sale of marijuana. Many supporters also favor legalization to move the illegal black market of marijuana into a legal market and put an end to the disproportionate arrests of Black residents[31] and mass incarceration. To promote an equitable outcome, it's critical that any social and economic benefits of legalization promote health and equity, especially in communities most impacted by the war on drugs (low-income and minority communities).

A public health and equity framework to taxation and legalization to ensure equitable social and economic benefits includes the following:

- **The state should <u>automatically</u> expunge past criminal convictions for possession or non-violent marijuana related crimes** (see the recently passed CA AB1793 for example) rather than through a per-person legal process. In California, expungement was allowed under Proposition 64 but not automatic, and thus there are many barriers for completing the process and very few expungements had occurred. In a report that looked at marijuana possession arrests from 2001 to 2010 nationally, Blacks were 3.73 times as likely to be arrested for marijuana possession than Whites, even though reported use is only slightly

higher for Blacks."[32] The social harms of disproportionate arrest by race must be addressed in marijuana legalization efforts.

- **In generating licenses for marijuana businesses, the state should consider favoring worker cooperatives and non-profits or other structures** that avoid transferring control or marijuana retail to outside investors. This structure will assist in the transition from the illegal market to legal market and keep the economic benefits of marijuana legalization with individuals and community-based entrepreneurs, rather than wealthy outside investors. Steps such as deferring licensing fees, promoting "incubators," and giving more time to locate physical locations can help make these cooperative/non-profit applicants successful.

- Any legalization scheme must carefully consider the impact of the new system of laws on equity and avoid a new wave of incarceration. For example, what will the consequences be for those who grow or sell marijuana without a license, or for those who do not meet marketing limitations, etc.? The enforcement mechanisms and fees must reasonably protect equity across low-income and minority populations who have already been disproportionately arrested for marijuana-related offenses.

- **The state must invest tax revenues into programs and initiatives that promote and protect health and equity**. Key areas of reinvestment should include:

    - Investment in substance use treatment and prevention. The state should ensure full funding to support existing evidence-based programs in Illinois, like those implemented by the Substance Use Prevention and Recovery (SUPR) division in the state's Department of Human Services
    - Investment in a public education and prevention campaign specific to marijuana, and including campaigns specific to youth
    - Investment in addressing social determinants of health, especially in low-income, minority, and/or communities most impacted by the war on drugs. This includes investing more in education, economic development, youth development and resiliency, affordable housing, and restorative justice approaches. Advocates have developed a "restoring our communities" model of community reinvestment that the state should consider adopting.
    - Adequately fund regulatory agencies to ensure that enforcement is strong and well-implemented.
    - Investment in strong and effective public health surveillance and monitoring systems for marijuana
    - Investment in and education for local law enforcement to ensure effective implementation of legalization that takes an equity approach
    - Investment in development of an annual public report that tracks and reports on the tax revenue: how much was collected, how it was allocated, and how it was used (see below for more detail).

- Research to evaluate the health impacts of legalization and public policy

Create a Strong Public Health Leadership and Regulatory Scheme, including Local Control

Public health and equity stakeholders should play a leading role in any adult-use marijuana legalization efforts to protect the public from health or social harms and ensure the most equitable outcomes from the economic and criminal justice reform benefits. Local control should be preserved both to reflect the values of communities and to permit innovation and learning.

Start with a Slow, Phased-In Approach

Initiating a slow, phased-in approach to legalization will help protect vulnerable populations (i.e. slowing down commercialization can protect youth from advertising and increased access), facilitate the monitoring of the impact of legalization (i.e. ensure proper surveillance systems are in place to examine impacts before widespread access and commercialization), and allow for effective implementation of the rules and regulations for legalization in the state (i.e. allow enough time for the state to properly implement the rules and regulations to ensure product safety). As a Schedule 1 drug, the U.S. Food and Drug Administration provides few testing or oversight functions of marijuana plants or products, unlike for tobacco and alcohol products. Therefore, each state that legalizes marijuana must create its own regulatory and testing oversight processes to ensure product safety, and this system can take significant time to implement and significant financial resources to be done effectively.

A slow, phased-in approach could:

- Start with a very limited number of retail licenses granted
- Only allow marijuana plant, unflavored vaping oils, and a limited number of edible products on the market, to slow down the commercialization of the product, limit youth access, and protect against high-potency products linked with a higher frequency of psychoses and dependency
- Ensure a strong monitoring and surveillance system to track the impact of adult-use marijuana legalization on health, public safety, and social conditions
- Ensure a high-quality regulatory scheme is put in place that carefully considers potential health and social impacts, streamlines processes across agencies, and considers approaches to mitigating the long-term costs of regulating marijuana in Illinois in the absence of Federal Drug Administration regulations

State Regulatory Control

The state agencies working to implement the medical marijuana program should be the same as the state agencies implementing adult-use marijuana legalization. The agencies, including the Illinois Department of Public Health (IDPH), Department of Professional Regulation (DPR), and Department of Agriculture (DAg), should continue working together to help write the rules and regulations for adult use. IDPH should play a leadership role in ensuring that regulations around marketing limitations, required warning signs and labels, public education/communications campaign, food

safety enforcement and training, and budtender training, meet best practice. The following recommendations are made:

- **The adult-use marijuana regulatory agencies should be the same as the medical cannabis regulatory agencies to streamline as much of the regulatory process as possible between the two systems**, **build on the expertise and capacity that has been developed, and save the state money.** Previous legislative proposals have placed the responsibility for dispensary licensing at the Department of Revenue, and stakeholders strongly urge the alignment of the medical cannabis and adult-use marijuana regulatory systems, keeping the licensing responsibility with the Department of Professional Regulation. In other states, the experience has been that adult-use marijuana retailers are often co-located with medical cannabis dispensaries, and a single regulatory entity would provide for consistency and streamlining.
- The **state should ensure additional funds are provided to the state agencies designing the rules and regulations**, testing the products, and enforcing the rules to ensure it is implemented with high-quality and fidelity.
- IDPH should work closely with the Department of Professional Regulation to develop regulations around the number, density and operations of retailers. They should also work closely with the Department of Agriculture to oversee testing laboratories and test products for potency and contaminants and ensure proper labeling and that food safety guidelines are in place.

Local Regulatory Control

While the state assumes primary responsibility for the regulatory control of adult-use marijuana, the following recommendations are made related to local regulatory control:

- **Local governments should have the authority to more strictly regulate marijuana sales in their jurisdictions** to help protect public health. While the state regulations would set a floor at which to protect public health and promote equity, this local authority could create additional rules limiting marketing of marijuana, marijuana retailer density, allowable products for sale, delivery and retail sale (including whether retail sales or delivery are allowed). However local government should not be able to ban individual possession or cultivating a small number of plants in compliance with state rules.
- **Existing community-based providers and local health departments specializing in primary prevention strategies should play a strong role in community education and youth use prevention efforts in the regions**.

Other Taxing and Regulatory Considerations

- **State and local governments should have the authority to levy and raise taxes on marijuana over time**. As with tobacco and alcohol, keeping prices high through taxation can help prevent youth access and use of marijuana. Local governments should have the ability to levy additional taxes to benefit local revenues above state tax rates. However, there needs to be careful balance of setting the price low enough to ensure a full transition away from the illegal market to the legal market, yet high enough to protect youth. The state and local

jurisdictions should have the authority at the outset to levy and modify taxes over time to help maintain the balance as prices change.

- **All marijuana smoking should be subject to Illinois' existing state and local Smoke Free and clean indoor air laws**.

Monitoring and Surveillance

One key lesson from other states related to monitoring is that laboratories responsible for testing products must report their findings to state regulators and the public rather than only to the manufacturers/retailers of those products. State and public accountability is critical to product safety.

Track and Trace: Illinois should implement a track and trace system that allows full surveillance of the market. All data from the system should be public record. This is currently in place for medical cannabis and should be adopted for adult-use marijuana.

For public health and equity surveillance, the following data should be collected, at least annually, statewide and regionally, related to marijuana legalization:

- Self-reported youth use (via the Youth Risk Behaviors Survey and/or Illinois Youth Survey)
- Self-reported adult use (via the Behavioral Risk Factor Surveillance Survey)
- Marijuana-related hospital and emergency room utilization rates
- Marijuana-related overdoses and poison control data
- Marijuana-related psychoses
- Problem cannabis-use
- Marijuana-related impaired driving and traffic crash rates (note- there is no known limit of THC and/or consumption for which driving is deemed safe like the 0.08 blood alcohol level cutoff for alcohol)
- Prevalence of infants born testing positive for marijuana/THC
- Public perceptions of use and risk of harm
- Average THC potency in products available in Illinois
- Differences in outcomes based on varying local control regulations
- Revenue collected from marijuana taxation and how the revenue was used
- Marijuana retail licenses granted and locations
- Expungement numbers and rates for non-violent marijuana-related past crimes
- Marijuana related arrests
- Number of individuals completing required budtender training

Finally, the **agencies responsible for collecting this data should all agree to share the data annually with one state agency, such as the Illinois Department of Public Health or Office of the Governor, to release an annual comprehensive report** on the impact of adult-use marijuana legalization in Illinois.

Topics that Need More Discussion and Research

While there are many lessons learned from other states and from public health experiences with tobacco and alcohol, there are some areas of marijuana legalization considerations that need additional discussion and research. These topics include:

- Potency caps could be considered. Since the 1970s the potency of flower marijuana has increased as much as tenfold from 3-4% for flower to as high as 30% today.[33] The national average THC potency is 11.04% for flower and 55.45% for concentrates. Yet, in states that have commercialized adult-use marijuana, potency is even higher.[34] Washington state sees an average of 21.24% for flower and 72.76% for concentrates. Mislabeling of potency is also a common problem.[35] This trend bears great similarity to the manipulation of nicotine levels in cigarettes recognized by Judge Kessler in her landmark decision in *US v. Philip Morris*.[36] Butane extracts and products like shatter and wax can have over 90% THC. Edible products have been sold with as much as 1,000 mg of THC in a single cookie. As noted earlier, high THC levels have been linked to more mental health issues such as addiction, psychoses, anxiety and suicidality. There is insufficient research to identify an "appropriate" maximum level of THC that minimizes health harms. The Netherlands, for example, has proposed 15% potency cap for flower. The rapid trend to higher potency products is a particularly worrisome characteristic of the emerging adult-use market in other states, with a potential to increase addiction, psychoses and other ill-effects on a significant population scale. Experts from Getting it Right from the Start recommend setting potency caps at 20% for flower and 50% for concentrates/extracts, and that edibles should be wrapped in individual dose packages. Illinois must carefully consider if and what caps to place on potency and ensure that potency regulations are aligned across cultivation, manufacturing and retailing.
- While many national public health experts recommend not allowing marijuana use in public spaces to avoid normalization of use, some equity stakeholders worry about the legal implications to users who may not be allowed to use marijuana in their homes (rented or public) or on the street, and therefore have no safe space to use the legal product. Additional research and discussions on the pros and cons to public use should be explored.
- The taxing structure for adult-use marijuana should be further discussed. Sales and excise taxes can help prevent youth access and use by keeping prices high. While a flat-rate tax has been proposed by legislators in Illinois,[37] many states have implemented taxes based on percent of sale/price. Some public health experts are calling for the tax to be placed on THC level, since higher THC levels are correlated with greater health harms. The state should carefully consider the best tax structure to ensure equity, protect youth and vulnerable populations, and minimize health harms.
- Additional discussion on how to ensure compliance with budtender training requirements, and the content of that training, is needed.
- More discussion is needed on how much of the revenue generated through taxation should be spent on the various programs and initiatives cited above.
- Another area of concern is how the state circumvents federal law in collecting "illegal" proceeds and protects growers and sellers from prosecution, allows them to pay payroll,

property, and income taxes and buy property and liability insurance and secure business loans.

[1] United States Drug Enforcement Agency (2018). Drug scheduling. Retrieved September 19, 2018 from https://www.dea.gov/drug-scheduling.
[2] Getting it Right from the Start (2018). Legislation in other states. Retrieved September 19, 2018 from https://www.gettingitrightfromthestart.org/other-states-legislation-regulation.
[3]American Academy of Pediatrics (2015). American Academy of Pediatrics reaffirms opposition to legalizing marijuana for recreational or medical use. Retrieved September 19, 2018 from https://www.aap.org/en-us/about-the-aap/aap-press-room/pages/American-Academy-of-Pediatrics-Reaffirms-Opposition-to-Legalizing-Marijuana-for-Recreational-or-Medical-Use.aspx.
[4] American Academy of Family Physicians (2018). Marijuana. Retrieved September 19, 2018 from https://www.aafp.org/about/policies/all/marijuana.html
[5] American Society of Addiction Medicine, Inc. (2015). Public policy statement on marijuana, cannabinoids and legalization. Retrieved September 19, 2018 from https://www.asam.org/docs/default-source/public-policy-statements/marijuana-cannabinoids-and-legalization-9-21-20156d6e0f9472bc604ca5b7ff000030b21a.pdf?sfvrsn=e0d26fc2_0.
[6] The National Academies of Sciences, Engineering and Medicine (2017). Nearly 100 conclusions on the health effects of marijuana and cannabis-derived products presented in new report; one of the most comprehensive studies of recent research on health effects of recreational and therapeutic use of cannabis and cannabis-derived products. Retrieved September 19, 2018 from http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=24625.
[7] Desai, R., Patel, U., Sharma, S. et al. (2017). Recreational marijuana use and acute myocardial infarction: Insights from nationwide inpatient sample in the United States. *Cureus* 9(11): e1816. DOI 10.7759/cureus.1816
[8] Yankey, B., Rothenberg, R., Strasser, S. (2017). Effect of marijuana use on cardiovascular and cerebrovascular mortality: A study using the National Health and Nutrition Examination Survey linked mortality file. *European Journal of Preventive Cardiology* 2017, Vol. 24(17) 1833–1840
[9] National Association of County and City Health Officials (2017). Statement of policy: Medical and recreational cannabis and cannabinoids. Retrieved September 19, 2018 from https://www.naccho.org/uploads/downloadable-resources/17-06-Medical-and-Recreational-Cannabis-and-Cannabinoids.pdf.
[10] Public Health Institute (2018). Getting it right from the start: Our mission. Retrieved September 19, 2018 from https://www.gettingitrightfromthestart.org/about.
[11] Illinois General Assembly (2018). Public health (410 ilcs 130/) Compassionate use of medical cannabis pilot program act. Retrieved September 19, 2018 from http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3503&ChapterID=35.
[12] Rep. Kelly Cassidy (2018). Cannabis legalization. Retrieved September 19, 2018 from https://www.repcassidy.com/legalization/.
[13] JB for Governor (2018). Legalizing marijuana. Retrieved September 19, 2018 from https://www.jbpritzker.com/marijuana/.
[14] Coalition for a Safer Illinois (2018). Get informed. Retrieved September 19, 2018 from https://www.saferillinois.org/get-informed/.
[15] McCoppin, R. (2017). Marijuana referendum could strengthen movement to legalize in Illinois, but naysayers say ballot question unfair. The Chicago Tribune, March 22, 2018. Retrieved September 19, 2018 from http://www.chicagotribune.com/news/local/breaking/ct-met-marijuana-legalize-illinois-cook-county-20180321-story.html.
[16] McCoppin, R. (2018). Marijuana referendum could strengthen movement to legalize in Illinois, but naysayers say ballot question unfair. *Chicago Tribune*, March 22, 2018. Retrieved October 12, 2018 from http://www.chicagotribune.com/news/local/breaking/ct-met-marijuana-legalize-illinois-cook-county-20180321-story.html.
[17] National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research.* Washington, DC: The National Academies Press. doi: 10.17226/24625. Retrieved September 26, 2018 from https://www.nap.edu/download/24625.

[18] Ingraham, C. (2017). Teen marijuana use falls to 20-year low, defying legalization opponents' predictions. *The Washington Post*. Retrieved December 14, 2018 from https://www.washingtonpost.com/news/wonk/wp/2017/09/07/teen-marijuana-use-falls-to-20-year-low-defying-legalization-opponents-predictions/?utm_term=.e2dad72f76e6.

[19] D'Amico, E. J., Rodriguez, A., Tucker, J. et al (2018). Planting the seed for marijuana use: Changes in exposure to medical marijuana advertising and subsequent adolescent marijuana use, cognitions, and consequences over seven years. *Drug and Alcohol Dependence*, Volume 188, (July 2018), Pages 385-391. doi:10.1016/j.drugalcdep.2018.03.031. Retrieved October 8, 2018 from https://www.rand.org/pubs/external_publications/EP67625.html.

[20] Oregon Research Institute (2018). Recreational marijuana legalization: Do more youth use or do youth use more? Retrieved December 14, 2018 from https://www.sciencedaily.com/releases/2018/01/180108161204.htm.

[21] National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research.* Washington, DC: The National Academies Press. doi: 10.17226/24625. Retrieved September 26, 2018 from https://www.nap.edu/download/24625

[22] Smart Approaches to Marijuana (2018). Lessons learned from marijuana legalization in four U.S. states and D.C. Retrieved September 26, 2018 from https://learnaboutsam.org/wp-content/uploads/2018/03/SAM-Digital-C-4.pdf.

[23] National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research.* Washington, DC: The National Academies Press. doi: 10.17226/24625. Retrieved September 26, 2018 from https://www.nap.edu/download/24625

[24] Smart Approaches to Marijuana (2018). Lessons learned from marijuana legalization in four U.S. states and D.C. Retrieved September 26, 2018 from https://learnaboutsam.org/wp-content/uploads/2018/03/SAM-Digital-C-4.pdf.

[252525] National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research.* Washington, DC: The National Academies Press. doi: 10.17226/24625. Retrieved September 26, 2018 from https://www.nap.edu/download/24625

[26] Pacula, R. L., Kilmer, B., Wagenaar, A., et al (2014). Developing public health regulations for marijuana: Lessons learned from alcohol and tobacco. *American Journal of Public Health*. 2014;104: 1021–1028. doi:10.2105/AJPH.2013.301766.

[27] Schauer, G. (2018). State cannabis policy: Updates and implications for public health. Presented at the Public Health Law Conference, October, 2018.

[28] Silver, L. (2018). Suggested principles for marijuana legalization: For discussion. *Getting it Right from the Start.* Received via email September 2018.

[29] Dickson, B., Mansfield, C., Guiahi, M. et al. (2018). *Recommendations from cannabis dispensaries about first-trimester cannabis use*. American College of Obstetricians and Gynecologists. Published by Wolters Kluwer Health, Inc. All rights reserved. ISSN: 0029-7844/18.

[30] Pacula, R. L., Kilmer, B., Wagenaar, A., et al (2014). Developing public health regulations for marijuana: Lessons learned from alcohol and tobacco. *American Journal of Public Health*. 2014;104: 1021–1028. doi:10.2105/AJPH.2013.301766.

[31] American Civil Liberties Union (2013). The war on marijuana in black and white: Billions of dollars wasted on racially biased arrests. Retrieved September 27, 2018 from https://www.aclu.org/sites/default/files/field_document/1114413-mj-report-rfs-rel1.pdf.

[32] American Civil Liberties Union (2013). The war on marijuana in black and white: Billions of dollars wasted on racially biased arrests. Retrieved September 27, 2018 from https://www.aclu.org/sites/default/files/field_document/1114413-mj-report-rfs-rel1.pdf.

[33] El Sohly, M. A., Mehmedic, Z., Foster, S., Gon, C., Chandra, S., & Church, J. C. (2016). Changes in Cannabis Potency Over the Last 2 Decades (1995-2014): Analysis of Current Data in the United States. Biological Psychiatry, 79, 613–619. doi:10.1016/j.biopsych.2016.01.004.

[34] Smart R, Caulkins JP, Kilmer B, Davenport S, Midgette G. Variation in cannabis potency and prices in a newly legal market: evidence from 30 million cannabis sales in Washington state. Addiction. 2017 Dec;112(12):2167-2177. doi: 10.1111/add.13886. Epub 2017 Jul 4.

[35] Smart Approaches to Marijuana (2018). Lessons learned from marijuana legalization in four U.S. states and D.C. Retrieved September 26, 2018 from https://learnaboutsam.org/wp-content/uploads/2018/03/SAM-Digital-C-4.pdf.

[36] Kessler, G. Amended Final Opinion in US. V Philip Morris USA Inc. United States District Court for the District of Columbia. Civil Action No. 99-2496 (GK) 449 F.Supp.2d 1 (D.D.C. 2006).

[37] Rep. Kelly Cassidy (2018). Cannabis legalization. Retrieved September 19, 2018 from https://www.repcassidy.com/legalization/.