



# **POTENTIAL HEALTH EFFECTS OF LEGALIZING MEDICAL MARIJUANA IN KANSAS**

## ***EXECUTIVE SUMMARY***

*Kansas Health Impact Assessment Project*




SEPTEMBER 2015



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## **Introduction**

This report is intended to be an accessible and informative resource for Kansas policymakers as they consider whether or not to legalize medical marijuana in Kansas. This report describes the potential health effects associated with this policy issue in an effort to inform the decision-making process.

## **Acknowledgements**

Over the course of the project, the Kansas Health Institute's Health Impact Assessment Team—further on referred to as the HIA Team—received valuable input and participation from various stakeholders including state officials, state legislators, academic researchers and representatives of social service organizations. We thank them for dedicating their time, energy and expertise to the project.

Additionally, the HIA Team extends a special thank-you to the following medical marijuana policy experts for providing valuable insight on this issue: Eric A. Voth, M.D., F.A.C.P., a specialist in internal medicine, pain management, and addiction medicine and vice president of Primary Care at Stormont-Vail HealthCare in Topeka, Kan., Ashley Brooks-Russell, Ph.D., M.P.H., Assistant Professor at the University of Colorado Denver, and Larry Wolk, M.D., M.S.P.H., director and chief medical officer of the Colorado Department of Public Health and Environment.

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## **Disclaimer**

The authors of this report are responsible for the facts and accuracy of the information presented. Any findings, conclusions or recommendations expressed in this HIA report are those of the authors and do not necessarily reflect the view of the medical marijuana policy experts and stakeholders who provided their perspectives during the process.

The Kansas Health Institute does not endorse or oppose the proposed legislation. KHI delivers credible information and research enabling policy leaders to make informed health policy decisions that enhance their effectiveness as champions for a healthier Kansas. The Kansas Health Institute is a nonprofit, nonpartisan health policy and research organization based in Topeka. KHI was established in 1995 with a multi-year grant from the Kansas Health Foundation.

## Proposed Policy

During the 2015 legislative session, Kansas lawmakers considered three bills to legalize medical marijuana in Kansas. Senate Bill 9 and House Bill 2011 were proposed to legalize multiple forms of marijuana for a range of debilitating medical conditions such as cancer, glaucoma, hepatitis C and Crohn's disease, among others. House Bill 2282 included more restrictive provisions and only allowed for the use of marijuana among those with seizure-related conditions, including those characteristic of epilepsy. The Kansas Health Institute (KHI) conducted a Health Impact Assessment (HIA) to examine how the legalization of medical marijuana might positively or negatively affect the health of Kansas residents.

An HIA is a practical tool that assesses the health impacts of policies, strategies and initiatives in sectors that aren't commonly thought of in relation to health—such as transportation, housing and the environment. The overall goal of an HIA is to inform policymakers of the potential health effects of a proposed policy during the decision-making process. The HIA provides evidence-based findings about health impacts and also identifies recommendations to maximize health benefits and mitigate health risks.

In order to assess the potential health effects of legalizing medical marijuana in Kansas, the HIA Team reviewed existing literature, analyzed state and national data and gathered stakeholder input from multiple groups, such as individuals with debilitating medical conditions, representatives of prevention organizations, school officials, academic researchers and public health professionals.

## Research Questions

The assessment of health effects was guided by several research questions related to medical marijuana, including:

*How will the legalization of medical marijuana affect the following factors? How will changes in these factors affect health?*

- Access to marijuana
- Consumption of marijuana
- Crime
- Driving under the influence of marijuana
- Accidental ingestion of marijuana
- Vulnerable populations
- *State and local tax revenue*
- *Employment*

The review of existing literature revealed limited evidence related to the impacts of medical marijuana on jobs and state and local tax revenue. As a result, the HIA Team excluded *the last two factors from further assessment*, but included stakeholder perspectives on economic impacts of the legislation in order to highlight the importance of the issues to community members. However, the HIA report does not include any findings, recommendations or projections on state and local tax revenue or employment.

The HIA assessment primarily focused on the research questions related to marijuana consumption, crime, driving under the influence, accidental ingestion and vulnerable populations. Throughout the report, special attention was given to populations that could be disproportionately affected by this policy, including at-risk youth.

## Summary of Findings and Recommendations

The analysis presented in this HIA suggested that there might be little to no impact on marijuana consumption among the general population or on property and violent crime rates. However, some increase in marijuana consumption might occur for at-risk youth. Analysis also identified that the legalization of medical marijuana may result in some increase in driving under the influence and accidental ingestion of marijuana by children. Increased access to medical marijuana may lead to some decrease in the use of other substances.

### Findings

**Access to Marijuana:** The legalization of medical marijuana may result in increased access to marijuana for certain groups. Access will likely increase for individuals with qualifying medical conditions. Additionally, while literature points to the possibility that medical marijuana may be sold or given to youth and adults who are not authorized to use it, the extent to which this occurs may depend on regulation and law enforcement practices.

**Consumption of Marijuana:** The legalization of medical marijuana may result in little to no impact on consumption of marijuana among the general population in Kansas. However, some increase in marijuana consumption might occur for at-risk youth. It is important to note that changes in youth consumption would also depend on regulations and other state-level factors, such as cultural norms and law enforcement practices. Additionally, findings from the literature review suggest that the medical marijuana distribution model (e.g., self-grow, dispensaries) could impact consumption of marijuana.

**Crime:** The legalization of medical marijuana may have no impact on violent and property crime rates. However, areas that are located in close proximity to dispensaries might experience increases in

crime. This could be in part due to dispensaries being more likely to open in areas with higher crime. The data analysis found that in all but one of the states studied (Colorado), rates of violent and property crimes remained unchanged or decreased after medical marijuana was legalized. It is important to note that decreases in property and violent crimes might be attributed to other factors (e.g., economic conditions).

**Driving Under the Influence of Marijuana:** The legalization of medical marijuana may result in an increase in driving under the influence of marijuana and related traffic accidents. Studies consistently show that marijuana use could impair driving. Literature that examined whether legalization of medical marijuana would increase or decrease driving under the influence and/or traffic accidents showed mixed results. However, studies leaned toward an increase, particularly in states with dispensaries. Nationally, the rate of marijuana-related traffic fatalities has increased over time both in states with medical marijuana laws and in those without such laws. In more than half of the states studied (7 out of 13), the increase was significant post-legalization. However, some literature suggests that the legalization of medical marijuana may prompt law enforcement to test for marijuana in crash victims more frequently.

**Accidental Ingestion of Marijuana:** The literature suggests that accidental exposure to marijuana could increase. Specifically, children could be at increased risk of accidental ingestion. States with medical marijuana laws experienced slight increases in accidental exposures among children, prompting Colorado to establish child-proof packaging for marijuana. Observed increases could be due to several factors; for instance, individuals may be more likely to seek treatment for accidental ingestion and health care providers may be more likely to test patients for cannabinoids. Literature findings for adults are mixed. Additionally, one study suggested that states with medical marijuana laws observed a decrease in deaths related to opioid painkillers.



## Recommendations

To maximize the potential positive health effects and mitigate the potential negative health effects associated with the legalization of medical marijuana in Kansas, the HIA Team, with input from Kansas stakeholders, developed a set of recommendations to inform the decision-making process.

Key recommendations are listed below. The asterisk (\*) indicates the recommendations that were identified as high priority by the stakeholders in terms of their feasibility, responsiveness to predicted impacts, and whether they addressed vulnerable populations.

## Youth Prevention

Kansas Department of Health and Environment could consider:

- Encouraging parents and caregivers to hold regular discussions with their children about risks associated with marijuana use.
- Discouraging adults from using marijuana in the presence of children because of the influence of role modeling by adults on child and adolescent behavior.\*

## Provider Accountability

Kansas Department of Health and Environment could consider:

- Identifying evidence-based practices that keep health care providers accountable to the types of prescriptions/recommendations they make for medical marijuana such as Kansas Tracking and Reporting of Controlled Substances (K-TRACS).\*

## Monitoring and Surveillance

Kansas Department of Health and Environment could consider:

- Adding questions in the state-added module of Behavioral Risk Factor Surveillance System (BRFSS) related to marijuana use, including:
  - Medical marijuana use and marijuana use in general,
  - Source of marijuana,
  - Concurrent use of marijuana with other substances such as alcohol, and
  - Whether youth are using someone else's medical marijuana.
- Monitoring adult and youth marijuana addiction treatment rates.

## Regulation

Kansas Department of Health and Environment could consider:

- Enacting regulations for child-proof packaging in order to prevent accidental ingestion of marijuana.\*
- Limiting the number of types of edibles, and require those that are allowed be less attractive to kids and youth (e.g., they should not be made to look like candy).

The full list of findings and recommendations is available in *Appendix C*, page 54.

The following table summarizes potential health impacts associated with legalizing medical marijuana in Kansas for each of the areas studied (*Figure 1*, page 5). See *Figure 2*, page 6, for the legend that corresponds to *Figure 1*.



Figure 1. Summary of Health Impacts of Legalizing Medical Marijuana in Kansas

Health Factor or Outcome	Literature Review	Data Analysis	Stakeholder Perspectives	Based on Literature and Data					Literature
				Overall Projection	Expected Health Impact	Magnitude of Impact	Likelihood of Impact	Distribution	Quality of Evidence
Access to Marijuana	Increase	N/A	Increase	Increase	Uncertain	Medium	Possible	At-risk youth, people with qualifying medical conditions	***
Consumption of Marijuana (illegal) (general population)	Mixed	None	N/A	None	None	N/A	Uncertain	N/A	**
Consumption of Marijuana (illegal) (youth)	Mixed	None	N/A	Mixed	Negative	Low	Likely	At-risk youth (those in substance abuse treatment, individuals already using drugs)	****
Consumption of Marijuana (legal)	N/A	Increase	Increase	Increase	Uncertain	Low	Likely	People with approved qualifying conditions	**
Violent Crime	Mixed	None	Mixed	None	None	N/A	Possible	N/A	**
Property Crime	Mixed	None	Mixed	None	None	N/A	Possible	N/A	**
Driving Under the Influence of Marijuana	Increase	Increase	Increase	Increase	Negative	Low	Likely	People who use marijuana and drive, passengers	***
Accidental Ingestion	Increase	Increase	Increase	Increase	Negative	Low	Possible	Children under 5 years old	****
Other Substance Use	Decrease	N/A	Mixed	Decrease	Uncertain	Low	Possible	Substance users and people who use prescription drugs	**

Source: KHI Medical Marijuana HIA Project, 2015. Legend: Figure 2, page 6.

Figure 2. Legend: Health Impacts for Kansas

CRITERIA	DESCRIPTION
Literature Review	<p>Increase – Literature review found that this indicator might increase.</p> <p>Decrease – Literature review found that this indicator might decrease.</p> <p>Mixed – Literature lacked consensus about this indicator’s potential direction.</p> <p>None – Literature review didn’t find a change for this indicator.</p> <p>N/A – Literature was not available or a review was not performed on this indicator.</p>
Data Analysis	<p>Increase – Data analysis found that this indicator might increase.</p> <p>Decrease – Data analysis found that this indicator might decrease.</p> <p>Mixed – Data analysis lacked consensus about this indicator’s potential direction.</p> <p>None – Data analysis didn’t find a change for this indicator.</p> <p>N/A – Data were not available or analysis was not performed for this indicator.</p>
Stakeholder Perspectives	<p>Increase – Stakeholders anticipated that this indicator might increase.</p> <p>Decrease – Stakeholders anticipated that this indicator might decrease.</p> <p>Mixed – Stakeholders were divided in their opinions for this indicator.</p> <p>None – Stakeholders didn’t anticipate a change for this indicator.</p> <p>N/A – Stakeholders didn’t express an opinion regarding this indicator.</p>
Overall Projection	<p>Increase – The assessment found that this indicator might increase.</p> <p>Decrease – The assessment found that this indicator might decrease.</p> <p>Mixed – The assessment lacked consensus about this indicator’s potential direction.</p> <p>None – The assessment didn’t find a change for this indicator.</p> <p>N/A – The assessment wasn’t performed for this indicator.</p>
Expected Health Effect	<p>Positive – Changes may improve health.</p> <p>Negative – Changes may impair health.</p> <p>Uncertain – Unknown how health might be affected.</p> <p>Mixed – Changes may be positive as well as negative.</p> <p>None – No identified effect on health.</p>
Magnitude of Impact (number of people affected)	<p>High – Affects most or all people in Kansas.</p> <p>Medium – Affects a moderate number of people, such as a segment of the population (e.g., youth).</p> <p>Low – Affects few or very few people, such as people with certain medical conditions. It is important to note, that although only some groups of people might be affected, the impact on a particular individual might be high.</p> <p>None – Affects no people.</p> <p>N/A – It was not possible to estimate the magnitude of impact.</p>
Likelihood of Impact	<p>Likely – It is likely that impacts might occur as a result of the proposed changes.</p> <p>Possible – It is possible that impacts might occur as a result of the proposed changes.</p> <p>Unlikely – It is unlikely that impacts might occur as a result of the proposed changes.</p> <p>Uncertain – It is uncertain whether impacts would occur as a result of the proposed changes.</p>
Distribution	<p>People most likely to be affected by changes in the indicator.</p>
Quality of Evidence (based on literature review)	<p>*** – Strong literature and/or data.</p> <p>** – Sufficient literature and/or data.</p> <p>* – Lacks either quality literature and/or data.</p>

Source: KHI Medical Marijuana HIA Project, 2015.

## **KANSAS HEALTH INSTITUTE**

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