Coalition Members

American Lung Association – Oklahoma Chapter
Oklahoma Academy of Family Physicians
Oklahoma Academy of Ophthalmology
Oklahoma Academy of Physician Assistants
Oklahoma Behavioral Health Association
Oklahoma Center for Poison and Drug Information

Oklahoma Chapter – American Academy of Pediatrics
Oklahoma Hospital Association
Oklahoma Nurses Association
Oklahoma Osteopathic Association
Oklahoma Pain Society
Oklahoma Pharmacists Association
Oklahoma Psychiatric Physicians Association

Oklahoma Psychological Society
Oklahoma Society of Addiction Medicine
Oklahoma Society of Anesthesiologists
Oklahoma State Medical Association
Oklahoma Tobacco Research Center
Oklahoma’s medical community are not opposed to medical marijuana or cannabis derivatives. We have shown our support in the past by advocating for the legalization of CBD oil in our state and increased research of medical marijuana at the federal level.
Getting It Right From the Beginning

Coalition Goals:

1. Guard Patient Safety by Adopting Standards Used for Other Medicines
2. Ensure Patient Access through a Clear System of Safety and Liability Controls That Address Providers’ Concerns
3. Ensure Public Safety by Developing Safeguards, Such as Consistent Product Labeling, Controlled Access and Preventing Secondhand Smoke
Patient Safety and Medical Standards

Jean Hausheer, M.D., F.A.C.S.

President, Oklahoma State Medical Association
Clinical Professor, Dean McGee Eye Institute, University of Oklahoma
Active Medical Staff at Lawton Indian Hospital,
Comanche County Memorial Hospital and the Oklahoma City VAMC

Disclaimer: I have no financial relationships with proprietary entities that produce healthcare goods nor marijuana or its derivatives, nor do my immediate family members. The opinions and information in this presentation are on behalf of the coalition and do not necessarily reflect the views and policies of the University of Oklahoma or the hospitals with which I am affiliated.
Patient Safety in Prescribing

Accepted Prescriptive Standards

General Prescriptions (*Not* Controlled Substances) – 7 Steps

1. Examine patient and define the problem(s)
2. Review medical history and current medications
3. Discuss treatment options
4. Determine the appropriate drug therapy
5. Write a prescription with instructions
6. Discuss dosage, use and possible side effects
7. Follow-up within the first month and periodic re-evaluation at six months to a year
Patient Safety in Prescribing

Accepted Prescriptive Standards

Off-label Use of Medications – 7 Steps
1. Examine patient and define the problem
2. Review medical history and current medications
3. Discuss treatment options
4. Determine the appropriate drug therapy
5. Write a prescription with instructions
6. Discuss dosage, use and possible side effects
7. Follow-up within the first month and periodic re-evaluation at six months to a year.
Patient Safety in Prescribing

Accepted Prescriptive Standards

Controlled Substances (Schedule II Drugs) – 10 Steps**

1. Examine patient and define the problem
2. Review medical history and current medications
3. Discuss treatment options
4. Determine appropriate drug therapy
5. Consult the PMP
6. Write a prescription with instructions
7. Discuss dosage, use and possible side effects
8. Follow-up within the first month
9. Issue 30 day-renewals each month (while needed)
10. Re-evaluation at six months to a year

** Due to the passage of SB 1446, additional steps including Physician/Patient agreement and pill limits will be added
Patient Safety in Prescribing

Oklahoma’s Standards Under SQ 788

Medical Marijuana (Schedule 1) – 3 Steps

1. Examine patient and define the problem
2. Review medical history and current medications
3. Write a two-year recommendation
   ** No follow-up required

Oklahoma’s medical marijuana recommendation standards must be better defined and include the same standards as controlled dangerous substances (Schedule II) drugs
Patient Safety in Prescribing

Prescriptive Standards

0 1 2 3 4 5 6 7 8 9 10

Physician Steps

- General Prescriptions
- Off-Label Prescriptions
- Controlled Prescriptions
- Medical Marijuana

7 7 10 3
Patient Safety and Standard of Care

Standard of care is a medical or psychological treatment guideline that specifies appropriate treatment based on scientific evidence and collaboration between medical and/or psychological professionals involved in the treatment of a given condition.

Oklahoma’s providers do not have the ability to use accepted standards of care with medical marijuana as there are no conditions, no control over product strength and dosage, and no required follow-up for two years.
Patient Safety and Standard of Care

Defining a “Bona Fide Patient/Doctor” Relationship

The very first line of the Hippocratic Oath is: “First Do No Harm.” The health and safety of our patients is our greatest responsibility.
Patient Safety and Standard of Care

American Medical Association Code of Ethics (Excerpted)

- A physician shall be dedicated to providing competent medical care, with compassion and respect for human dignity and rights.
- A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.
- A physician shall recognize a responsibility to participate in activities contributing to the improvement of the community and the betterment of public health.
- A physician shall, while caring for a patient, regard responsibility to the patient as paramount.

Patient Safety and Standard of Care

American Osteopathic Association Code of Ethics (Excerpted)

• A physician should make a reasonable effort to partner with patients to promote their health and shall practice in accordance with the body of systematized and scientific knowledge related to the healing arts. A physician shall maintain competence in such systematized and scientific knowledge through study and clinical applications.

• A physician shall respect the law. When necessary a physician shall attempt to help formulate the law by all proper means in order to improve patient care and public health.

Source: https://osteopathic.org/about/leadership/aoa-governance-documents/code-of-ethics/
Patient Safety and Standard of Care

Conditions That Are Effectively Treated by Medical Marijuana

- Epilepsy and Other Seizure Disorders (Unresponsive to Other Forms of Treatment)
- Nausea and Vomiting from Chemotherapy (Unresponsive to Other Forms of Treatment)
- Muscle Spasticity (MS and Parkinson’s)
- Relief for Terminal Illness (Expected to Live Less Than 1 Year)
- Wasting Syndrome from HIV/AIDS and Cancer

Conclusive Scientific Evidence for Treatment of Other Ailments is Limited Due to Continued Schedule I Status at the Federal Level

https://cosmosmagazine.com/biology/infographic-how-cannabis-works
Patient Safety and Standard of Care

How Medical Marijuanna Impacts the Brain and Body

http://headsup.scholastic.com/students/endocannabinoid

http://www.ccic.net
A cannabis plant is a mixture of +/- 100 cannabinoids and more than 500 chemicals, the strength of which vary greatly across different genetic strains and according to growth conditions.
## Patient Safety and Standard of Care

### FDA APPROVED CANNABINOID MEDICATIONS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route of Administration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidiolex® (FDA Approved)</td>
<td>Oil</td>
<td>Concentrated CBD from Cannabis extract</td>
</tr>
<tr>
<td>Nabiximol (Sativex®) (FDA Fast-Tracked)</td>
<td>Oromucosal spray</td>
<td>THC and CBD extract from two Cannabis plant varieties</td>
</tr>
<tr>
<td>Dronabinol (Marinol®; Syndros®) (FDA approved)</td>
<td>Oral capsule</td>
<td>Synthetic THC</td>
</tr>
<tr>
<td>Nabilone (Cesamet®) (FDA Approved)</td>
<td>Oral capsule</td>
<td>Synthetic cannabinoid—THC analogue</td>
</tr>
</tbody>
</table>

Patient Safety and Standard of Care
Medical Marijuana and FDA Approval

FDA’s Role In the Drug Approval Process
The FDA has not approved marijuana as a safe and effective drug for any indication. The agency has, however, approved one specific drug product that contains the purified substance cannabidiol for the treatment of seizures associated with Lennox-Gastaut syndrome or Dravet syndrome in patients 2 years of age and older. The FDA has also approved two drugs containing a synthetic version of a substance that is present in the marijuana plant and one other drug containing a synthetic substance that acts similarly to compounds from marijuana but is not present in marijuana. The FDA is aware that there is considerable interest in the use of marijuana to attempt to treat a number of medical conditions, including, for example, glaucoma, AIDS wasting syndrome, neuropathic pain, cancer, multiple sclerosis, chemotherapy-induced nausea, and certain seizure disorders.

https://www.fda.gov/newsevents/publichealthfocus/ucm421163.htm
## Patient Safety and Standard of Care

### Example of Clinical Trial Research Phases

<table>
<thead>
<tr>
<th>Phase</th>
<th>Primary goal</th>
<th>Dose</th>
<th>Patient monitor</th>
<th>Typical number of participants</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preclinical</td>
<td>Testing of drug in non-human subjects to gather efficacy, toxicity and pharmacokinetic information</td>
<td>Unrestricted</td>
<td>Scientific researcher</td>
<td>Not applicable (in vitro and in vivo only)</td>
<td></td>
</tr>
<tr>
<td>Phase 0</td>
<td>Pharmacokinetics; particularly, oral bioavailability and half-life of the drug</td>
<td>Very small, subtherapeutic</td>
<td>Clinical researcher</td>
<td>10 people</td>
<td></td>
</tr>
<tr>
<td>Phase I</td>
<td>Testing of drug on healthy volunteers for safety; involves testing multiple doses dose-ranging</td>
<td>Often subtherapeutic, but with ascending doses</td>
<td>Clinical researcher</td>
<td>20–100 normal healthy volunteers (or for cancer drugs, cancer patients)</td>
<td>Approximately 70%</td>
</tr>
<tr>
<td>Phase II</td>
<td>Testing of drug on patients to assess efficacy and side effects</td>
<td>Therapeutic dose</td>
<td>Clinical researcher</td>
<td>100–300 patients with specific diseases</td>
<td>Approximately 33%</td>
</tr>
<tr>
<td>Phase III</td>
<td>Testing of drug on patients to assess efficacy, effectiveness and safety</td>
<td>Therapeutic dose</td>
<td>Clinical researcher and personal physician</td>
<td>300–3,000 patients with specific diseases</td>
<td>25–30%</td>
</tr>
<tr>
<td>Phase IV</td>
<td>Postmarketing surveillance – watching drug use in public</td>
<td>Therapeutic dose</td>
<td>Personal physician</td>
<td>Anyone seeking treatment from their physician</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Patient Safety and Standard of Care

Medical Marijuana Studies Offer Few Conclusive Scientific Recommendations

- There are vast differences in study design, characteristics of marijuana or cannabinoid exposure and populations studied.
- Studies based on ‘case reports,’ editorials, by ‘anonymous’ authors, commentaries and conference abstracts do not carry the same scientific weight as clinical trials/primary research (must be reproduceable).
- At this moment in time, the medical community places highest priority on recently published primary research and reviews since 2011.
Patient Safety and Standard of Care

Medical Marijuana Studies Offer Few Conclusive Scientific Recommendations

- Some research on the impact marijuana and compounds found in marijuana is available
- University of Mississippi is the SINGLE source of legal marijuana for research
- The marijuana’s THC levels are lower than some of the more popular medical marijuana available
- Research approval is very limited (in 2016, only 39 requests for research marijuana were filled)
- Only a few studies have human subjects. Instead, many studies are actually conducted on rats, which results in findings that aren’t always consistent with human outcomes.
Patient Safety: Recommendations

1. Oklahoma Must Form the Regulatory Medical Marijuana Board of Patients, Physicians and Health Researchers
   • Develop Best Practices and Clinical Standards
   • Evaluate Effectiveness of Treatment
   • Make Patient Safety/Caregiver Recommendations
   • Review Scientific Research Methods and Outcomes
Patient Safety: Recommendations

2. Begin Program with Five Specific Qualifying Conditions
   • Epilepsy and Other Seizure Disorders
   • Nausea and Vomiting from Chemotherapy (Unresponsive to Other Forms of Treatment)
   • Muscle Spasticity (MS and Parkinson’s)
   • Relief for Terminal Illness (Expected to Live Less Than 1 Year)
   • Wasting Syndrome from HIV/AIDS and Cancer
Patient Safety: Recommendations

3. Allow Physicians to Withdraw Patient Recommendations in Instances of Misuse, Addiction to Another Substance or Severe Health Risk to the Patient

4. Require Physicians Provide In-Person Exam ONLY Within Their Established Office Locations to Medical Marijuana Patients. Physicians May Not Have Ownership in a Dispensary or Conduct Exams Within a Dispensary
Patient Safety: Recommendations

5. Patient Must Keep Follow-Up Exams to Gauge Interactions and Effectiveness as a Requirement for Renewals

6. Establish a Physician Registry and Require Annual Continuing Medical Education and Updates
Patient Safety: Recommendations

7. Allow Medical Boards the authority to provide guidance on medical marijuana regulatory and safety issues
Patient Safety: Smokeables

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University of Oklahoma College of Medicine
Board of Directors of the North American Quit Line Consortium

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Patient Safety: Smokeable Products

Why Should We Be Concerned About Marijuana Smoke?

Smoke is smoke. Both tobacco and marijuana smoke cause similar harm to blood vessel function.

The chemicals in marijuana smoke are similar to those in tobacco smoke, including cancer causing agents, such as acetaldehyde, ammonia, arsenic, benzene, cadmium, chromium, formaldehyde, hydrogen cyanide, isoprene, lead, mercury, nickel and quinolone.

The tar found in marijuana smoke is at least three to four times greater than in tobacco smoke.
Patient Safety: Smokeable Products

Marijuana deposits four times more tar in the lungs than tobacco
Patient Safety: Smokeable Products

Smoking Is Not the Only Way to Deliver Quick Relief

• It’s true that many drugs, including nicotine and cannabinoids, are absorbed into the blood stream very rapidly through the lungs.

• In fact, some medications, especially respiratory medications, are given by various types of inhalers.

• There are several safer delivery systems for cannabinoids, including ingesting, topical preparations and aerosols.

No FDA-approved medications are delivered by smoke.
Patient Safety: Smokeable Products

Hazards Of Secondhand Marijuana Smoke

• Secondhand tobacco smoke is known to endanger the heart, blood vessels and lungs. Secondhand marijuana smoke carries these same risks

• THC in secondhand marijuana smoke can also be absorbed by others. In fact, it has been found in bystanders’ blood, urine and sputum (mixture of saliva and mucus). In addition, mind-altering effects, such as euphoria or paranoia, have also been measured in bystanders

• Secondhand smoke from marijuana contains matter that can be breathed deeply into the lungs, which can cause lung irritation, asthma attacks and makes respiratory infections more likely. Exposure can also exacerbate existing health problems, especially for people with respiratory conditions like asthma, bronchitis or COPD
According to a study done by the American Academy of Pediatrics, 1 in 6 infants and toddlers admitted to a Colorado hospital with coughing, wheezing and other symptoms of bronchiolitis tested positive for marijuana exposure.
Patient Safety: Smokeable Products

Other Public Health Reasons to Control Secondhand Marijuana Smoke

• Oklahoma’s healthcare community has worked for decades to promote smoke-free workplaces and public places. Smoke-free policies eliminate exposure to secondhand smoke, support smokers who are trying to cut back or quit smoking, and reduce initiation and addiction among youth.

• Marijuana smoking in public spaces will harm public health and send inconsistent messages, especially to young people.
Patient Safety: Smokeable Products

W: 100% Smoke-free Non-Hospitality Workplaces
R: 100% Smoke-free Restaurants
B: 100% Smoke-free Bars

Locality Type with a 100% Smoke-free WRB Law

City
County

State and Commonwealth/Territory Law Type

100% Smokefree Non-Hospitality Workplace, Restaurant, and Bar Law
Law doesn't cover 100% Smokefree Non-Hosp. Workplaces & Restaurants & Bars

U.S. 100% Smokefree Laws in Non-Hospitality Workplaces AND Restaurants

American Nonsmokers’ Rights Foundation

As of July 1, 2018

Note: American Indian and Alaska Native sovereign tribal laws are not included.
Patient Safety: Recommendations

1. There Is No Medicinal Role In Smoking. If This Is Medical Marijuana, Oklahoma Should Keep Delivery Methods of the Drug Consistent With That of Other Treatments

2. We Must Close Loopholes in Oklahoma’s Clean Air Laws, Specifically Titles 21 And 63, to Ensure Smokefree Policies Are Extended to Combustible /Vaped Tobacco and Medical Marijuana
Patient Safety: Recommendations

3. Protect Minors from the Harms of Secondhand Smoke by Outlawing Smoking in Places Not Covered by the Public Places Law, Such as Cars
Patient Safety: Dispensing Practices

Debra Billingsley, J.D.
Executive Director, Oklahoma Pharmacists Association

Shonda Lassiter, Pharm.D.

Disclaimer: OPhA is a 501 (c) (6) non profit association that advocates for the profession of pharmacy. Our mission is to unite and promote the profession of pharmacy through advocacy, communication and education. We facilitate in the development of innovative pharmacy practices that demonstrate improved health outcomes for patients.
Patient Safety: Dispensing Practices

Why Pharmacists Should be in Dispensaries

• First and foremost, pharmacists spend 6-8 years in pharmacy school learning about medicinal chemistry, pathophysiology and pharmacotherapy. They have expertise, training and knowledge to know how drugs are absorbed, distributed in the body, metabolized and excreted.

• A pharmacist is the best professional to counsel and advise a patient to maximize desired effects and minimize adverse effects of drugs.

• A pharmacist’s role in understanding, interpreting and evaluating medications ensure positive patient outcomes.
Patient Safety: Dispensing Practices

Why Pharmacists Should be In Dispensaries

• Along with marijuana, there can be a great deal of misinformation dispensed in areas where pharmacists are not required.

• For example, a Denver Health study reports that most dispensaries recommend marijuana to pregnant women with morning sickness, contrary to medical advice - May 9, 2018

• A researcher posing as a pregnant woman called 400 Colorado dispensaries asking about products for morning sickness. Denver Health researcher Dr. Torri Metz says 70 percent recommended marijuana, even though prior research shows pot use in pregnancy may have adverse effects on the fetus.

Source: “Recommendations From Cannabis Dispensaries About First-Trimester Cannabis Use” by Betsy Dickson, MD, Chanel Mansfield, MPH, Maryam Guiahi, MD, MSc, Amanda A. Allshouse, MS, Laura M. Borgelt, PharmD, Jeanelle Sheeder, PhD, Robert M. Silver, MD and Torri D. Metz, MD, MS
Patient Safety: Dispensing Practices
Pharmacists’ Roles in Other States with Marijuana

- Arkansas requires each marijuana dispensary to appoint a pharmacist consultant
- Connecticut permits only pharmacists to apply for and obtain a marijuana dispensary license. Connecticut has also scheduled marijuana as a C-II and requires prescriptions be reported to the PMP.
Patient Safety: Dispensing Practices
Pharmacists’ Roles in Other States with Marijuana

- Minnesota permits only pharmacists to give final approval for the distribution of medical marijuana to a patient
- New York requires a pharmacist to be on the premises and supervise the activities within a marijuana dispensing facility whenever the facility is open or in operation
- Pennsylvania requires that a physician or pharmacist be on site at all times during hours when a registered dispensary is open

Dispensary pharmacists provide patients with important information about drug interactions and side effects.
Patient Safety: Dispensing Practices
Pharmacists’ Position on Medical Marijuana and Their Role

- Members of the Oklahoma Pharmacists Association (OPhA) were surveyed in the fall of 2017 about the topic of medical marijuana
- 56.8% of respondents reported they would vote “Yes” to legalize medical marijuana in Oklahoma, only if for medical purposes
- 72.5% wanted pharmacists to be involved in dispensing for medical purposes
- Pharmacists believe that all drugs that are for medical purposes should be under the same regulatory scheme and laws should be uniform. As such respondents objected to SQ788 because it was under the Dept of Health and not the Board of Pharmacy
Patient Safety: Dispensing Practices
Pharmacists’ Role in Medical Marijuana Dispensaries

• Pharmacists are trained in establishing and maintaining confidentiality, privacy and security
• Pharmacists are educated on proper labeling of prescriptions
• Pharmacists are educated on drug interactions. Cannabis is just like any other medication, with drug interactions, side effects, and dosing considerations
• As with any other controlled substance, pharmacists are trained to conduct nightly and monthly audits within state and federal guidelines, respond to discrepancies, and enact policies that ensure there is no diversion of inventory
• Pharmacists are prepared to lead state inspectors through unannounced inspections
• Pharmacists are trained to maintain records regarding delivery and inventory manifests, maintain pedigrees of product
Patient Safety: Dispensing Practices
Pharmacists’ Role in Medical Marijuana Dispensaries

• Pharmacists are trained to develop and maintain programs to monitor actual and potential adverse drug events. This would include tracking, review and outcome of adverse drug events

• Pharmacists are trained in how to maintain drugs under conditions that would ensure their safety, identity, strength, quality and purity

• They are trained to develop and maintain drug recall procedures that can be readily activated which assures that drugs involved, inside and outside the dispensary, are returned for proper disposition

• Pharmacists are trained on handling products that are outdated, damaged, deteriorated, misbranded or tainted
Patient Safety: Dispensing Practices
Clearing the Misconceptions About Pharmacists and DEA Licenses

• While the DEA provides a license to individual and mid-level practitioners who prescribe controlled substances, such as M.D., D.O., D.D.S., etc., pharmacists are not required to obtain one.

• Certain businesses must hold a DEA permit such as a pharmacy, hospital, clinic, teaching institution, manufacturer, importer, distributor, researcher, canine handler, analytical labs and narcotic treatment centers

• No pharmacy is able to dispense a Schedule I drug

Pharmacists are not required to hold a DEA permit.
Patient Safety: Dispensing Practices

Need for PMP Access in Dispensaries

• The purpose of the PMP is to have information related to controlled substances available to health care providers to monitor possible side effects and to prevent abuse by monitoring the number of scheduled drugs a patient uses.

• It is possible, and recommended, that controlled substances such as medical marijuana be added to the PMP.

• Due to patient privacy laws (HIPAA), full access is limited to only certain health care roles, including pharmacists. If no pharmacist or pharmacy technician is involved, OK PMP has the ability to create a limited access role that allows a user to enter data but not review patient records.

• However, a pharmacist and a pharmacist’s delegate have detailed access to the PMP and can review a patient’s history.
Patient Safety: Dispensing Practices

An Investment In Healthier Patients

• Pay is dependent on the pharmacist’s role, i.e. audits, diversion control, state inspections, maintaining records, drug utilization review, dispensing standards and control, etc.

• According to the US Dept of Labor in May 2017 the annual means wage for a pharmacist in Oklahoma was $114,190 or $54.90 an hour

• Retail typically pays more for a pharmacist than consulting pharmacy
Patient Safety: Recommendations

1. Recommendations Should Include Physicians Order and Be Transmitted Electronically

2. Require Pharmacist Oversight In Dispensaries
Patient Safety: Recommendations

3. Require Entry of Medical Marihuana Purchases in the PMP to Prevent Controlled Substance Abuse and Interactions
Patient Safety: Mental Health and Addiction

Jason Beaman, D.O., M.S. M.P.H., F.A.P.A.

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Editor in Chief Oklahoma State Medical Proceedings

Disclaimer: I am solely and exclusively presenting in the capacity as an individual and not representing or attempting to speak on behalf of OSU or the OSU CHS.
Patient Safety: Mental Health and Addiction

Areas of significant health and safety concerns:

1. Potency – High levels of THC
2. Intensity of Use - Daily/near daily use
3. Neonatal exposure
4. Marijuana use and opioids
### Patient Safety: Mental Health and Addiction

### Potency

- Average THC levels for *commercially sold* marijuana is 20.6% for flower and 68.7% for extracts.
- Newer extraction techniques produce extremely high-potency products of 75% THC or more.
- CBD content is falling at the expense of increased THC content.

<table>
<thead>
<tr>
<th>CONCENTRATE</th>
<th>Indica</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHO Shatter Sunset</td>
<td>Honu</td>
</tr>
<tr>
<td>BHO Wine Berry</td>
<td>Ca Gardens</td>
</tr>
<tr>
<td>CO2 Oil Grape Kush</td>
<td>Wildfire</td>
</tr>
<tr>
<td>Crumble Sour Grapes</td>
<td>WA Grower</td>
</tr>
<tr>
<td>Dabber RSO Training Day</td>
<td>Liberty Reach</td>
</tr>
</tbody>
</table>
Patient Safety: Mental Health and Addiction

Why does potency matter?

Use of high THC potency marijuana is associated with:

• Increased admission to first time drug treatment
• Increased severity of marijuana dependence and addiction
• Increased risk and earlier onset of psychosis; a 5-fold increase with daily use of high THC, low CBD marijuana
• Higher THC levels may explain the rise in emergency room visits involving marijuana use
Patient Safety: Mental Health and Addiction

Intensity of Use is Increasing

- Daily marijuana use is at the highest level since the early 1980s for college age youth.
- Daily or near daily use of marijuana for all ages is up by about 50% from 2002, when only 12% consumed the drug daily or near-daily.
- More than 2 in 5 marijuana users are daily or near-daily users – Between 1992 and 2014, the number of daily or near-daily marijuana users grew by 770%.
- Marijuana users are nearly three times as likely as drinkers to consume daily.
Patient Safety: Mental Health and Addiction

Why does Intensity of use matter?

• Higher rates of addiction – 1 in 6 among adolescent users and 25-50% of daily users
• Risk of schizophrenia and psychosis
• Dependence, use of illicit drugs, suicide attempts, depression, and less high school completion/degree attainment among youth
• Highly related to cigarette use – daily marijuana use occurs predominately among cigarette smokers
• Cognitive Decline - Persistent marijuana use linked to significant decrease in IQ (average of 6-8 fewer points) between childhood and midlife
• Injury - There is substantial evidence of an association between marijuana use and increased the risk of being involved in a motor vehicle crash. In states where marijuana use is legal, there is increased risk of overdose injuries. Among marijuana, cocaine and heroin, only marijuana, is associated with significant increases in the number of emergency department visits - a 62% increase when used in combination with other drugs and a 100% increase when used alone
Patient Safety: Mental Health and Addiction

Neonatal Exposure

• Marijuana use during pregnancy is increasing significantly; highest rates of use in the first trimester.

• Nearly 70% of Colorado dispensaries recommended marijuana use to treat nausea in the first trimester (medical dispensaries recommended most frequently at 83%)
Patient Safety: Mental Health and Addiction

Why Does Use During Pregnancy Matter?

• Marijuana crosses the placenta and accumulates in fetal tissues, especially the brain.
• Infants exposed to marijuana in utero have lower birth weight and are more likely to be admitted to the neonatal intensive care unit.
• Documented neurodevelopmental deficits in children, adolescents, and young adults who were prenatally exposed to marijuana.
Patient Safety: Mental Health and Addiction

Marijuana Use and Opioids

- Marijuana use increases non-medical use of opioids
- Marijuana use not necessarily related to decrease in opioid overdose
- Marijuana not useful for chronic pain
Patient Safety: Mental Health and Addiction
Recommendations

1. THC Levels Should be Limited to 12% or less
2. No THC Consumption or Sales to Patients Under 25
3. Patients should be assessed for addiction and mental health risk
4. Physicians should be required to consult the PMP prior to issuing a recommendation

5. Physician recommendation should include prescriptive orders to include product, route of administration, dose, duration of use and instructions
Scott Schaeffer, R.Ph., D.A.B.A.T.
Managing Director,
Oklahoma Center for Poison and Drug Information

Disclaimer: I have no financial relationships with proprietary entities that produce healthcare goods nor marijuana or its derivatives, nor do my immediate family members. The opinions and information in this presentation are on behalf of the coalition and do not necessarily reflect the views and policies of the University of Oklahoma.
Poison control at your fingertips.

Text POISON to 797979 to add poison control as a contact in your mobile phone.

BE PREPARED ANYTIME & ANYWHERE WITH #POISONHELP
Pediatric Exposures in Oklahoma

• In 2017, the majority of pediatric exposures reported to the Oklahoma Poison Center were among the 13-17 year old age group

• Children ≤ 5 years old accounted for about 15% of pediatric exposures

• Overall, numbers were fairly low (54 reported cases). Reporting exposures to the poison center is not mandatory
Patient Safety: Poisoning and Exposures

Pediatric Exposures

• In Colorado, after legalization of marijuana Emergency Department visits for pediatric exposures doubled after legalization of recreational marijuana

• Nearly 50% of these visits involved children who ate infused edibles

• Calls to the Rocky Mountain Poison and Drug Information Center increased 5-fold from 2009 to 2015

Patient Safety: Poisoning and Exposures

Pediatric Exposures

• Primary effect is drowsiness
• More significant effects including coma (14%) and elevated blood pressure can occur
• 15% of children were hospitalized in an Intensive Care Unit
• As THC concentration increased, likelihood of coma increased

Marijuana Transaction Limitations Too Lax Under SQ788

- According to 310:681-5-12, the patient can purchase in a single transaction “…seventy-two (72) ounces of medical marijuana products…”
- No limit on the maximum concentration of THC in the medical marijuana product is specified, however
- A race to produce the most potent products is distinctly possible
Patient Safety: Poisoning and Exposures

Comprehensive Product Testing

- Food Safety Standards Board has recommended to OSDH Board that all edible products be tested for pesticides, solvents, metals and bacterial/fungal contaminants
- Board has not yet voted to adopt recommendations, and no such recommendations exist for plant product
- Studies performed in California, on samples obtained from dispensaries, found a wide array of bacterial and fungal contamination of the product
- Risk of infection is likely to be higher in children, seniors, and the immunocompromised

Patient Safety: Recommendations

1. Make child-resistant packaging mandatory
2. Use of a universal symbol to indicate the product is derived from marijuana
Patient Safety: Recommendations

3. Specify maximum concentration (or dose per retail unit) for various formulations, including edibles

4. Opaque packaging to limit visibility of product.

5. Poison Center number on all retail packaging
Patient Safety: Recommendations

5. Make all forms of medical marijuana subject to similar testing in order to minimize risk of toxicity.

6. Require batch numbers on all medical marijuana products, and mandate the ability to initiate recall procedures to the patient level should contaminants be identified.
Public Health and Youth Protection

Julie Croff, Ph.D., M.P.H.

Executive Director, Center for Wellness & Recovery
Associate Professor, Rural Health
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Disclaimer: I am solely and exclusively presenting in the capacity as an individual and not representing or attempting to speak on behalf of OSU or the OSU CHS.
Public health saves money, improves our quality of life, helps children thrive and reduces human suffering.
Public Health and Youth Protection

What Drives Public Health?

- **Physical/social environment**
  (i.e., living conditions, income levels and community demographics, discrimination)

- **Lifestyle/health behaviors**
  (i.e., activity level, eating habits, drug and alcohol use, smoking, etc.)

- **Medical care**
  (i.e., quality of care, appropriate care, access to care, and affordable insurance)

- **Genetics**
  (i.e., gender, age, predisposition to disease or injury, etc.)

Social factors, more than genetics and health care, determine the health of Oklahomans.

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What Drives Public Health?

Patient Health:
- Focuses on individual patients - How can we achieve optimal health for my patients?
- Diagnoses, treats and cares for individual patients
- Protects patients with clinical interventions such as treatment planning, education and evidence-based treatments

Public Health:
- Focus on populations - How can we achieve optimal health for Oklahoma?
- Prevents disease and promotes wellbeing for whole community
- Protects the public with health education, study of data, evidence-based programs and policy design
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Drivers of Youth Substance Use

Substance use is affected by:
1. Availability – Physical and economic access
2. Perception of harm – Marketing & social norms

Perceptions of harm are decreasing across all age groups.

Two currently legal drugs (tobacco and alcohol) are the most costly to society - because they are widely used – not because they are the most dangerous.
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Percentage of U.S. 12 Grade Students Reporting Daily Marijuana Use vs. Perceived Risk of Regular Marijuana Use

Source: The Monitoring the Future study, the University of Michigan
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Marijuana Use Patterns

• What’s happening with youth use?
• We should ask, “Why isn’t youth use sharply declining?”
• Use is high in legalized states

• Certain groups of youth are really impacted:
  • Pregnant teens
  • Daily/near daily users
  • Youth smokers

Nearly 52% of youth tobacco smokers are also current marijuana users, compared to just 5% of non-smokers.
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Marijuana Use Patterns

Last-month use, ages 12-17 (as of 2015)

Legend:
- = "Recreational" use legalized as of 2015
= "Medical" use legalized as of 2015
= Neither "medical" nor "recreational" use legalized as of 2015

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The Dangers of Marijuana-Based Advertising
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Economic Access

• The role of price cannot be overstated.
• A number of studies by economists and public health researchers have found that when the price of marijuana decreases, the prevalence of marijuana use increases.
• Marijuana is no ordinary commodity.
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Where Will Young People Get Their Information About Marijuana?

• Nearly 60% of Oklahoma youth report not having even one conversation with a parent about the dangers of drug use in the last year.

• Oklahoma students are not required to receive drug prevention in schools.

• Exposure to marijuana marketing is prevalent among adolescents.

• Exposure to marketing is significantly associated with adolescents’ intention to use marijuana and their actual marijuana use 1 year later.
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Where Will Young People Get Their Information About Marijuana?

“Research suggests that roughly 80 percent of marijuana expenditures in the United States are made by 20 percent of the users. These are the heavy users who report using marijuana on a daily or near-daily basis. If a profit-maximizing firm wants to make serious money in the marijuana market, they will have to focus on creating and maintaining a large stock of heavy users. There are also concerns that a for-profit industry and its lobbyists will fight against regulation and taxation.”

- Beau Kilmer on Profit Motive as an issue of concern for states
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Physical Access
## Public Health and Youth Protection

### Table 2: Patient, product safety and dispensary laws by state effective 1 February 2017.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Product safety</th>
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<tbody>
<tr>
<td>Requires mandatory health screening</td>
<td>Requires risk-benefit disclosure</td>
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<tr>
<td>Requires patient registration</td>
<td>Permits registration revocation</td>
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<tr>
<td>Requires patient education</td>
<td>Permits patient cultivation</td>
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<tr>
<td>Protects patient privacy</td>
<td>Protects patients against discrimination</td>
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<tr>
<td>Requires safety testing for all products</td>
<td>Requires safety features</td>
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<tr>
<td>Regulates product packaging</td>
<td>Regulates product labeling</td>
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<tr>
<td>Specific disposal procedures</td>
<td>Specific waste procedures</td>
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<tr>
<th>State</th>
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Limits: dispensary density, restricts dispensary locations, permits local zoning, regulates product supply source(s), regulates waste disposal amount.
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Physical Access: Outlet Number and Density

- Applying lessons learned from alcohol
- Alcohol and marijuana outlet density both associated with violent crime.
- An additional one dispensary per square mile in a zip code was associated with a 6.8% increase in the number of marijuana hospitalizations
- Outlets are often disproportionately sited
- Outlet density plays a role in advertising exposure

There are reported to be more medical dispensaries in Denver than Starbucks and McDonalds combined
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Physical Access: Co-Location of Sales
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Physical Access: Co-Location of Sales

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Product Types and Packaging
Public Health and Youth Protection

Product Types and Packaging
Public Health and Youth Protection: Recommendations

1. Develop a public information campaign to clarify the law; highlight risks; and promote quit/treatment programs – consistent and credible messages should be developed by public health professionals not affiliated with commercial marijuana.

2. Regulate advertising of commercial marijuana to prohibit false or misleading statements; prohibit advertisements that target or induce young people under 21; prohibit advertising in public transit or property; prohibit outdoor advertising; and limit retail signage and outdoor displays.
3. Marijuana and marijuana products should not be in forms that attract or target children

4. Discounted, free, or other product promotions or inducements should not be allowed

5. If high potency and intoxicating products are allowed, differential tax/pricing structures should be used to set higher prices on more harmful products
Public Health and Youth Protection: Recommendations

6. Dispensaries should be limited in number; not be located near places where children frequent; and restricted for density. A system of public notification should be required.

7. Dispensaries should not sell products other than medical marijuana and should not be co-located with other businesses. Marijuana sales or sampling should not be allowed off-premise (i.e. community events).

8. Marijuana should be secured behind the counter, no self-service machines or displays, and only licensed adult patients or caregivers should be allowed to enter dispensaries.