

Emergency Department Visits for Cannabis Related Adverse Events Oregon, March–December 2015

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Division of Scientific Education and Professional Development

Cannabis

- Psychoactive properties
- Desirable effects
 - Euphoria
 - Philosophical thinking
 - Appetite stimulation
- Adverse effects
 - Tachycardia and hypertension
 - Nausea and vomiting
 - Anxiety and paranoia
 - Altered sensorium – increased injuries



Cannabis in Oregon

- 1998: medical cannabis permitted
- 2014: voters approved non-medical use
- July 2015: legal possession permitted
- Use is common in Oregon
 - 1 in 8 Oregonians over age 12 years
 - 1 in 12 nationwide over age 12 years

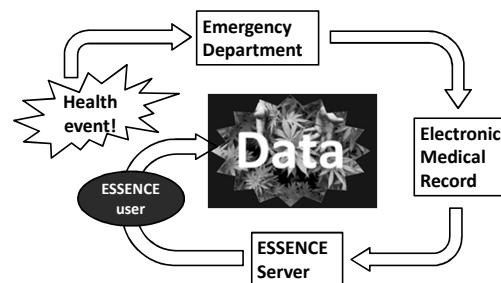
Objectives

- Identify and characterize emergency department (ED) visits for cannabis-related adverse events
- Determine if ED visits increased after possession was permitted (July 1, 2015)
- Evaluate a syndromic surveillance system

Emergency Department Surveillance System

- Oregon ESSENCE
 - All 60 non-federal emergency departments
- Excerpts from medical record
 - Chief complaint and clinical impression fields
- Automatically transmitted daily
- Secure web interface

ESSENCE Data Acquisition



ESSENCE Query

- Text terms
- Geographic region
- Time range

ESSENCE Query

- Text terms
 - Marijuana
 - Cannabis
 - THC
 - Smoke pot
 - Smoke weed
 - Hash
 - Brownie
- Geographic region
 - All Oregon EDs
- Time range
 - March 1, 2015–December 31, 2015

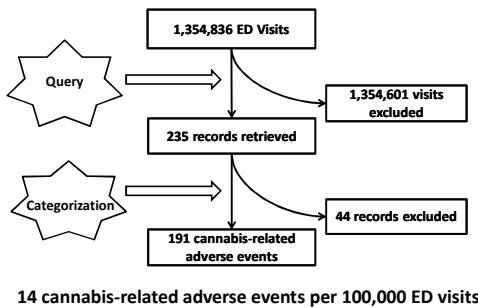
Visit Categorization

- Reviewed each ESSENCE record
- Adapted categories from SAMHSA
 - Drug Abuse Warning Network (DAWN)
 - Drug-related ED visits
 - Selected metropolitan areas
- Excluded visits if:
 - Incidentally mentioned
 - Insufficient information to categorize
 - False positive

Statistical Analysis

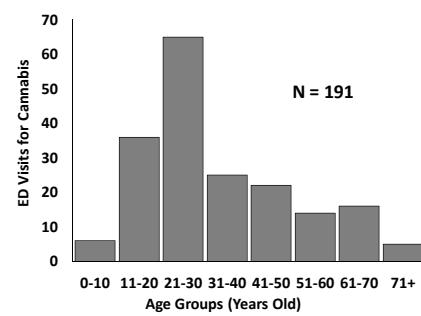
- Cannabis-related adverse events per month
- July 1, 2015
- Poisson distribution
- Stata

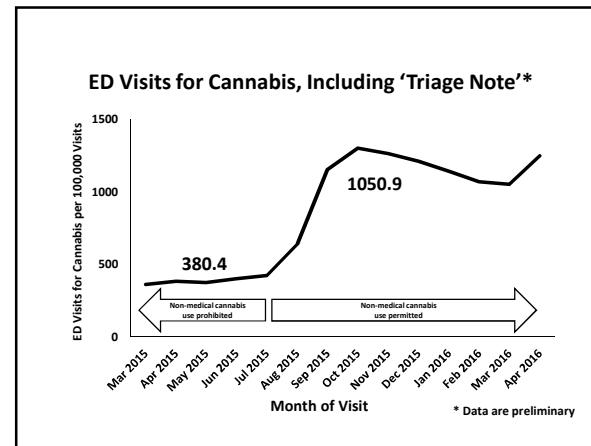
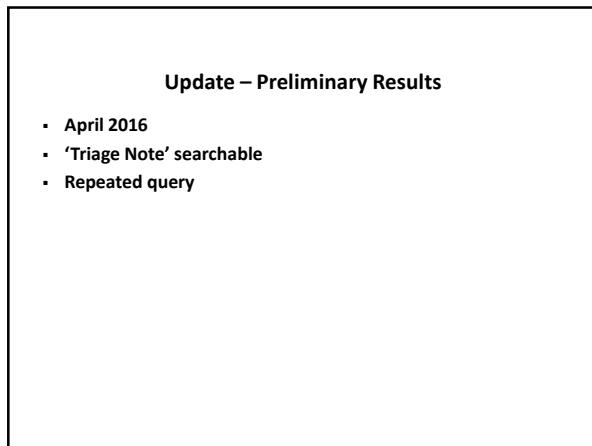
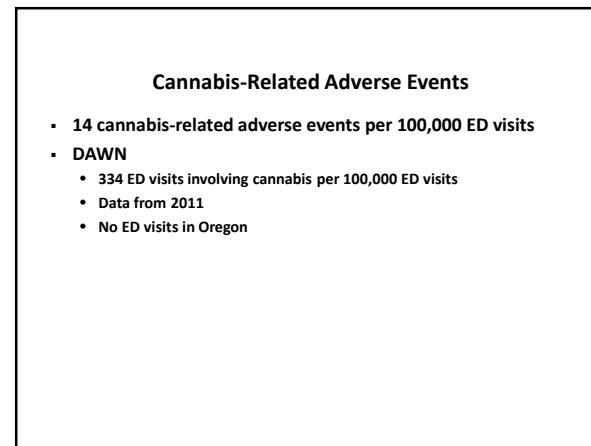
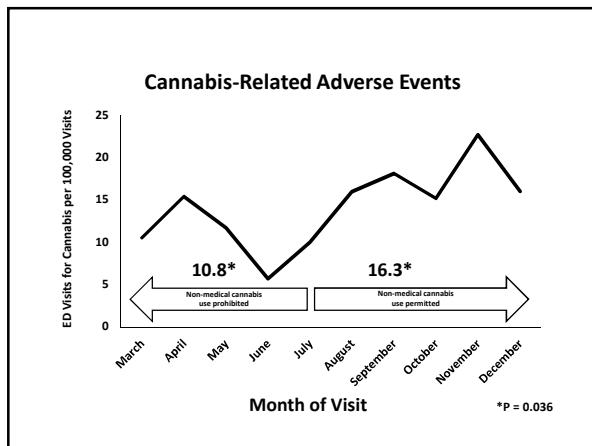
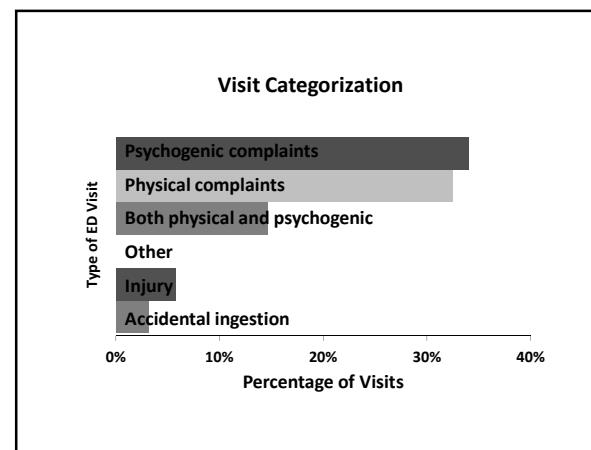
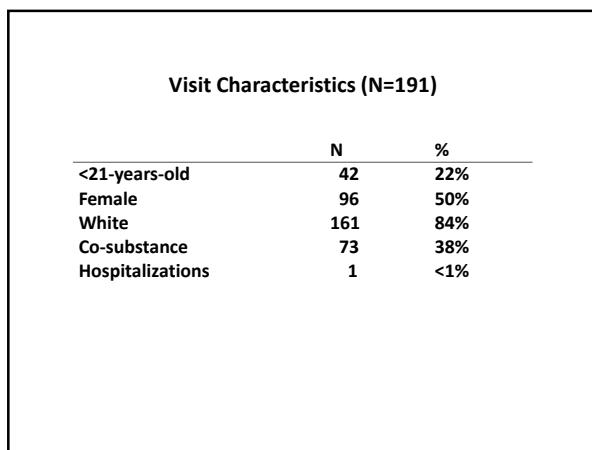
Query Flow Diagram



14 cannabis-related adverse events per 100,000 ED visits

Visit Characteristics





Summary

- Complaints for acute adverse effects (e.g., anxiety and palpitations) comprised the majority of ED visits
- Following permission of possession, visits increased
- Search terms that identify cannabis were rare
- Recent enhancement may have improved usefulness

Limitations

- Data in ESSENCE is variable and incomplete
- No comparison to gold standard – medical charts
- Effect of changing social norms on reporting

Recommendations

- Educate the public about adverse effects of cannabis
- Continue surveillance with ESSENCE
- Work with EDs to improve data quality
- Collaborate with other states using ESSENCE



Oregon Cannabis Universal Symbol

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