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Kratom-Related Emergency Department Visits and Kratom-Involved Deaths, New Mexico, 2019–2024

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INTRODUCTION

Kratom comes from the leaves of the Mitragyna speciosa tree which is native to Southeast Asia and has traditional uses in the region. Kratom users in Thailand used the substance to alleviate opiate withdrawal symptoms, leading the Thai government to begin controlling kratom in 1943.[1] Other uses in Southeast Asia, aside from cultural and ritual uses, included wound care and fever cures.[1] In the United States (US), kratom is sold in tobacco shops, online, or in kava bars and is typically available in powder form in capsules, tablets, or packaging resembling synthetic drugs to leverage the popularity of those substances among consumers. Kratom has become increasingly popular in New Mexico (NM) because of its stimulant properties and opioid-like effects, affordability, and easy access. In low doses, kratom mimics a stimulant-like substance by reportedly producing “alertness, sociability, and increased sexual desire” while higher doses mimic opioids by potentially providing “pain and opioid withdrawal symptom relief” and at even higher doses, users may experience “calmness and a dreamlike state” after experiencing unpleasant effects like “sweating, dizziness, nausea, and dysphoria”.[8] Motivation for kratom use in the US is dependent upon the user but is typically related to management of stress, pain, or opioid withdrawal.[6] Some individuals may also use kratom to treat depression or anxiety.[6] Increasing kratom use in the US resulted in emergency department (ED) visits and contributed to deaths in 2014, leading federal agencies to issue warnings against using the substance and several states limiting or prohibiting sales.[2, 8] While establishing causality in case reports of kratom use is difficult, the consumption of kratom has been associated with negative health consequences such as toxicity, dependence, ED visits and deaths.[4] Some reported side effects of kratom use include tremors, anorexia, weight loss, seizures, psychosis, and heavy kratom users report digestive system impacts like nausea and constipation as well as fatigue, frequent urination, and dry mouth among other undesirable side effects.[8] Dependence and withdrawal are reported among kratom users, making kratom use disorder a concern. Reported withdrawal symptoms are like opioid withdrawal symptoms and include irritability, nausea, hypertension, insomnia, yawning, rhinorrhea, diarrhea, and pain.[8] The New Mexico Department of Justice (NMDOJ) highlights that currently, NM has no regulations governing products containing kratom.[7] Despite its growing use, kratom is subject to minimal regulation and inconsistent monitoring, creating significant barriers for effective public health oversight.

METHODS

This report draws on data from Electronic Surveillance System for Early Notification of Community-Based Epidemics (ESSENCE), capturing near real-time ED visit data.[3] Syndromic surveillance was conducted by querying kratom in Electronic

What is already known on this topic?

- Kratom contains active alkaloids, primarily mitragynine and 7-hydroxymitragynine, which bind to opioid receptors in the body.[5]
- Patients frequently advocate for kratom use as a natural remedy for issues like pain, anxiety, and symptoms associated with opioid withdrawal.
- Kratom is not approved for medical use, and its safety remains a subject of ongoing debate.[5]
- Previous reports have associated kratom use with serious health risks, including liver toxicity, seizures, and fatalities, often when used alongside other substances.

What is added by this report?

- This report provides insights into kratom-related ED visits and kratom-involved deaths, emphasizing notable demographic disparities and the presence of complex co-occurring health conditions.
- A total of 74 non-fatal cases and 29 fatal cases were identified.
- Most kratom-related ED visits and kratom-involved deaths were among males and most were White.
- One person that had a kratom-related ED visit later died from toxic effects of multiple drugs.
- The findings reveal a broad spectrum of co-occurring conditions, indicating that kratom use could contribute to or coincide with systemic health complications.

What are the implications for public health practice?

- Optimizing syndromic surveillance systems like ESSENCE is vital for real-time monitoring of emerging substances like kratom. Given the demographic disparities in kratom use, culturally tailored education and outreach initiatives are necessary to ensure effective public health interventions.
- Clinical awareness must also be strengthened by training healthcare providers to recognize and manage kratom-related symptoms and complications. In addition, developing regulatory frameworks to monitor kratom distribution and enforce product safety standards is essential for protecting public health.
- Most (n=25, 86.2%) kratom-involved deaths were polysubstance, highlighting that the co-involvement of other substances drives the trend of kratom-involved deaths rather than kratom on its own.

Health Record (EHR) fields including chief complaint and discharge diagnosis, clinical impression, and triage notes to identify non-fatal kratom-related ED visits occurring from 2019–2024. The analysis included demographic details, co-occurring medical conditions, and visit characteristics to identify patterns and guide public health strategies. Mortality data were based on death certificates from the New Mexico Department of Health (NMDOH) Bureau of Vital Records and Health Statistics. The New Mexico Office of the Medical Investigator (OMI) utilized confirmatory toxicology testing to determine whether a substance directly contributed to death in cases involving multiple substances, as well as to assess the role it played relative to the other substances detected. Drug overdose deaths were identified by ICD-10-CM codes X40-X44, X60-X64, X85, & Y10-Y14, and a text-based search was conducted to identify substances that caused or contributed to death. This report includes kratom-involved deaths occurring among New Mexico residents regardless of occurrence from 2019–2024. At the time of this analysis, 2024 mortality data were provisional and while considered incomplete, internal quality assurance statistics showed a high percentage of completeness, indicating a low chance of not capturing a kratom-involved death in this report. Descriptive statistics were calculated for morbidity and mortality data. Kratom-related ED visits were linked with all overdose deaths using Link King for SAS 9.4 for the entire study period. Data cleaning and analysis were also completed using SAS 9.4.

RESULTS

ED Visits

Seventy-four non-fatal kratom-related ED visits were identified. Among individuals who had a kratom-related ED visit, 45 were male (60.8%) and 29 were female (39.2%) [Figure 1]. Most individuals were White (n=38, 51.4%) followed by Hispanic (n=24, 32.4%), American Indian or Alaska Native (n=2, 2.7%), and Asian (n=1, 1.4%) [Figure 2]. Race/ethnicity information was not reported for all individuals. There were no Black or African American individuals who had kratom-related ED visits during the period covered in this report. [Figure 2]. When examined by age group, most individuals were between 25-34 years old (n=33, 44.6%) followed by 35-44 years old (n=15, 20.3%) [Figure 3]. The same number of individuals aged 15-24 and 55-64 (n=10, 13.5%) visited the ED for kratom-related overdose [Figure 3]. Few individuals aged 45-54 (n=4, 5.4%) one individual aged 65-74 (1.4%) and one individual aged 75-84 (1.4%) visited the ED for kratom-related overdose [Figure 3]. There were no kratom-related ED visits among individuals aged 0-4, 5-14, or 85+ years old [Figure 3].

Deaths

Twenty-nine deaths caused by kratom overdose were identified. Among decedents who died of a kratom-involved overdose, most were male (n=23, 79.3%) [Figure 1]. Most kratom-involved overdose decedents were White (n=18, 62.1%) or Hispanic (n=11, 37.9%) [Figure 2]. There were no kratom-involved overdose decedents who identified as American Indian or Alaska Native, Asian, or Black or African American [Figure 2]. Most decedents were aged 25-34 (n=15, 51.7%) followed by 35-44 years old (n=11, 37.9%) [Figure 3]. Few decedents were aged 15-24 (n=1, 3.4%), 45-54 (n=1, 3.4%) or 55-64 (n=1, 3.4%) [Figure 3]. There were no decedents aged 0-4, 5-14, 65-74, 75-84, or 85+ years old [Figure 3]. The majority (n=27, 93.1%) of kratom-involved deaths were determined to be accidental. Most decedents (n=21, 72.4%) died in

Figure 1:
Kratom-Related ED Visits and Kratom-Involved Deaths by Sex, New Mexico, 2019–2024

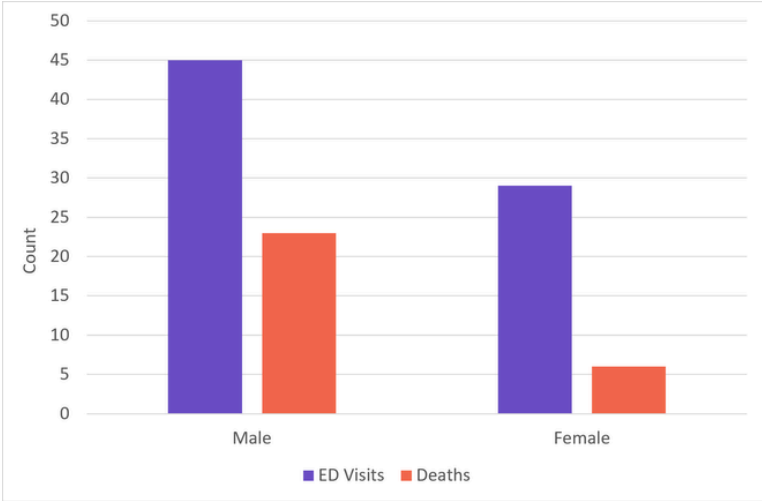


Figure 2:
Kratom-Related ED Visits and Kratom-Involved Deaths by Race/Ethnicity, New Mexico, 2019–2024

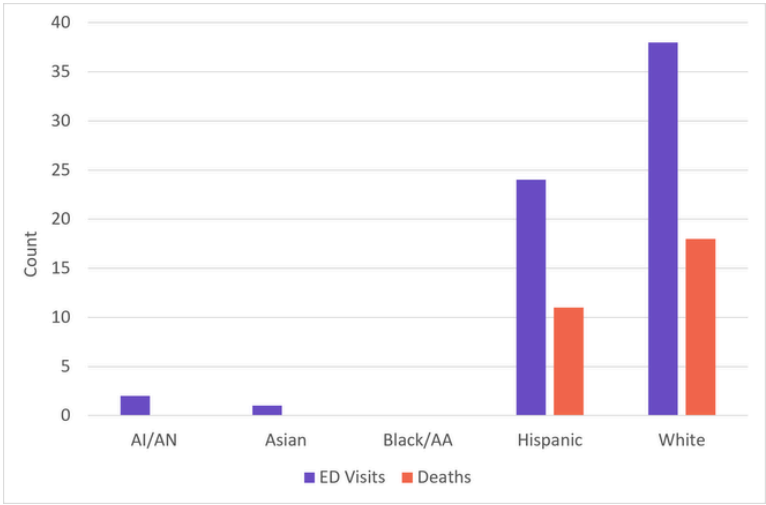
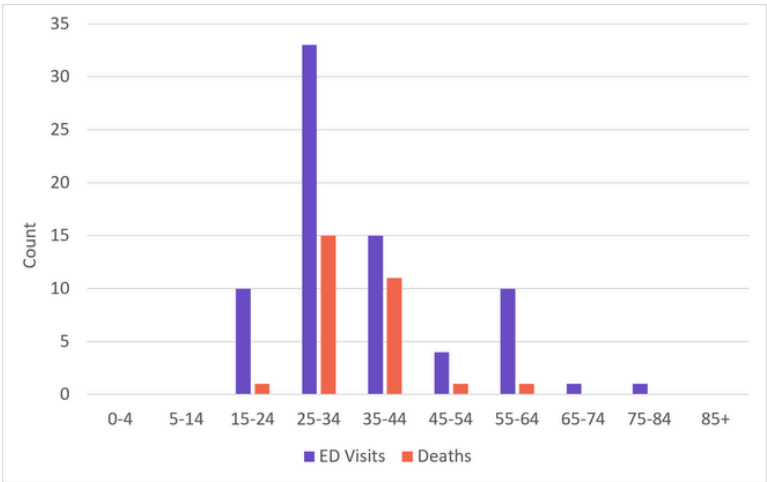


Figure 3:
Kratom-Related ED Visits and Kratom-Involved Deaths by Age Group, New Mexico, 2019–2024



their own residence while the remainder died in other locations. Most (n=25, 86.2%) kratom-involved overdose deaths were polysubstance, four deaths (13.8%) involved kratom without any other substances, and four deaths (13.8%) involved more than five substances. An average of 3.22 substances were Involved in kratom-involved deaths with a maximum of nine substances involved in a single death. Illicit and prescription substances were equally involved (n=16, 55.2%) in kratom-involved deaths. Nine kratom-involved deaths (31.0%) involved both illicit and prescription substances. Fentanyl and its analogues were involved in 15 kratom-involved deaths (51.7%) though other illicit substances were substantially less involved. For example, methamphetamine was involved in four (13.8%) kratom-involved deaths, and cocaine was involved in three kratom-involved deaths (10.3%). Out of the prescription substances, benzodiazepines were the most involved (n=9, 31.0%) followed by antidepressants (n=8, 27.6%). Non-fentanyl prescription opioids were involved in four kratom-involved deaths (13.8%), nearly equivalent to the involvement of over-the-counter medications (n=3, 10.3%). Acute alcohol involvement contributed to seven kratom-involved deaths (24.1%).

Co-occurring Conditions

Individuals with kratom-related presentations to the ED had additional diagnosis codes upon discharge. These co-occurring conditions spanned a broad spectrum of diagnoses, although most were mental and behavioral disorders (n=43, 58.1%). Among these conditions, anxiety and stress-related disorders accounted for nearly half (n=20, 46.5%) and included conditions like phobic anxiety and general nonpsychotic disorders. Other conditions included in this category were opioid-related disorders (n=5, 11.6%), other psychoactive substance-related disorders (n=10, 23.3%), psychotic disorders (n=3, 7.0%), alcohol-related disorders (n=2, 4.7%), bipolar disorder (n=2, 4.7%), and one occurrence of a depressive episode (2.3%). General symptoms were also commonly reported (n=29, 39.2%) among individuals with kratom-related presentations to the ED. Digestive symptoms were most common (n=13, 44.8%) and included nausea/vomiting (n=6, 20.7%) and abdominal pain (n=5, 17.2%). Other general symptoms (n=10, 34.5%) included weight loss, cachexia, headache, convulsions, syncope, and pain. Cognitive and emotional symptoms (n=6, 20.7%) were also reported and included dizziness, restlessness, and emotional disturbance. Metabolic disorders including acidosis, nutrient deficiencies, and fluid/electrolyte imbalances were diagnosed among some kratom-related ED patients (n=8, 10.8%). Kidney related conditions were less common (n=7, 9.5%) and included conditions like acute kidney failure, chronic kidney disease, or tubule-interstitial nephritis. Heart conditions (n=4, 5.4%) and liver diseases (n=3, 4.1%) were infrequently diagnosed in kratom-related ED patients but included conditions like long QT syndrome, arrhythmia, and bundle-branch block or alcoholic liver disease, respectively. Poisonings were infrequently diagnosed (n=7, 9.5%) and were typically unspecified drugs (n=5, 71.4%) or narcotics/hallucinogens (n=2, 28.6%). Some visits included diagnosis codes for injuries (n=9, 12.2%), like falls, assaults, or injuries to the foot, leg, shoulder, or head. Diagnoses of complications of care for surgical/medical complications were rare (n=2, 2.7%). Other conditions were also infrequently diagnosed, like respiratory and infectious diseases (n=3, 4.1%), gastrointestinal disorders (n=5, 6.8%), musculoskeletal and neurological disorders (n=3, 4.1%), and reproductive and counseling encounters (n=3, 4.1%).

Linkage

Because ESSENCE does not contain direct patient identifiers such as name, date of birth, or address, ED data from NMDOH eReporting repository were used to support the record-linkage component of this study. No linked cases were found when linking 74 kratom-related ED visits to overdose deaths (n=5,147). One linked case was found when linking overdose deaths to kratom-related ED visits. This

accidental death occurred among a female decedent who was aged 15-24 and her death was due to toxic effects of multiple drugs. The decedent's kratom use was identified through text search of the clinical impression notes from her ED visit.

DISCUSSION

Kratom-related ED visits showed significant sex and racial disparities, with complex co-occurring conditions requiring targeted public health interventions. The findings highlight possible multifaceted health effects of kratom, as ED visits frequently involve complications across multiple organ systems and mental health concerns. The overrepresentation of White and Hispanic males in ED visit and mortality data points to the need for targeted prevention efforts within these populations. The presence of co-occurring renal and gastrointestinal issues raises alarm about kratom's potential for systemic toxicity, while its link to mental health conditions suggests it has the potential to be harmful when used as a form of self-medication. Kratom-involved mortality data revealed a high involvement of fentanyl, which could suggest that some kratom decedents were likely using the substance to mitigate their opioid use disorder. This could indicate a lack of access to adequate treatment such as medications for opioid use disorder (MOUD) like buprenorphine or methadone, particularly due to the lower involvement of non-fentanyl prescription opioids, which includes MOUDs. Antidepressants were also involved in nearly one-third of kratom-involved deaths, possibly indicating that mental health conditions were common among this population, which aligns with the literature indicating that kratom users anecdotally use the substance to alleviate depression and anxiety.

LIMITATIONS

Because ED data were only available from non-federal facilities, Indian Health Service (IHS) and Veterans Affairs (VA) data were excluded from the analysis. Although more than 80% of non-federal facilities report to NMDOH, case counts for the affected populations are likely underestimated. ED data consistency might also be affected by temporary facility outages, as facilities that are onboarding or offline cannot transmit data to ESSENCE, resulting in reporting gaps. In addition, missing or incomplete ED records further reduce the completeness of data received from reporting facilities, potentially limiting the usefulness of ED insights. Identification of kratom-related ED visits relies on patient-reported information, which likely reduces the reliability of measurement across responses. Furthermore, standard post-mortem toxicology panels do not routinely include testing for kratom/mitragynine, which could lead to underreporting of kratom-involved deaths when expanded toxicology testing is not performed.

RECOMMENDATIONS

Kratom-related ED visits and kratom-involved deaths indicate a need for coordinated public health actions. First, expanding syndromic surveillance by broadening data collection to include detailed toxicology reports and follow-up outcomes can enhance understanding of kratom-related health incidents. Public health agencies could promote health information about the potential risks associated with kratom in communities with high kratom use, harm reduction organizations, and retailers. In clinical settings, developing standardized guidelines for screening, management, and documentation of kratom-related presentations in EDs could improve patient care and reporting accuracy. Consideration of regulatory oversight at both federal and state levels to ensure proper labeling and control of kratom sales could help reduce misuse. Finally, investing in longitudinal research is crucial to evaluating kratom's long-term health effects and its interactions with other substances, as well as informing future public health interventions.

SUMMARY

- Mental health and substance-related diagnoses were found in a majority of kratom-related ED visits.
- Systemic toxicity was evident, with frequent kidney, liver, and metabolic complications.
- General and digestive symptoms were common and consistent with the literature, suggesting widespread physiological impact.
- Poisoning and injury-related visits reflect acute presentations, possibly linked to kratom misuse or high doses resulting in sedation.

REFERENCES

1. Assanangkornchai, S., Muekthong, A., Sam-Angsri, N., & Pattanasattayawong, U. (2009). The Use of Mitragynine speciosa ("Krathom"), an Addictive Plant, in Thailand. *Substance Use & Misuse, 42*(14), 2145–2157. https://doi.org/10.1080/10826080701205869
2. Bachu, A. K., Singal, P., Griffin, B., Harbaugh, L., Prasad, S., Jain, L., Mohiuddin, S., Papudesi, B. N., Nagi, T., Youssef, N. A., Chopra, A., & Ahmed, S. (2023). Kratom use and mental health: A systematic literature review and case example. *Journal of Addictive Diseases, 42*(4), 301–312. https://doi.org/10.1080/10550887.2023.2273192
3. ESSENCE Site. (n.d.). https://essence.syndromicsurveillance.org/
4. FDA and Kratom. (2025, September 25). U.S. Food and Drug Administration. https://www.fda.gov/news-events/public-health-focus/fda-and-kratom
5. Kratom: Drugs of concern. (n.d.). United States Drug Enforcement Administration. https://www.dea.gov/factsheets/kratom
6. McCurdy, C. R., Sharma, A., Smith, K. E., Veltri, C. A., Weiss, S. T., White, C. M., & Grundmann, O. (2024). An update on the clinical pharmacology of kratom: uses, abuse potential, and future considerations. *Expert Review of Clinical Pharmacology, 17*(2), 131–142. https://doi.org/10.1080/17512433.2024.2305798
7. *New Mexico Department of Justice warns of risks associated with Kratom products; encourages new Mexicans to share their experiences.* (2025, November 7). [Press release]. https://nmdoj.gov/press-release/new-mexico-department-of-justice-warns-of-risks-associated-with-kratom-products-encourages-new-mexicans-to-share-their-experiences/
8. Warner, M. L., Kaufman, N. C., & Grundmann, O. (2015). The pharmacology and toxicology of kratom: from traditional herb to drug of abuse. *International Journal of Legal Medicine, 130*(1), 127–138. https://doi.org/10.1007/s00414-015-1279-y

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