



# Pregabalin and gabapentin in non-opioid poisoning deaths

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30/09/2021

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# Background

- Gabapentinoids are often connected to abuse of opioids
  - Potentiate the effects of opioids
  - Desired effects euphoria and relaxation
  - Self-medication of opioid withdrawal symptoms
- Medicinal use increasing
  - In Finland 6% increase for pregabalin and 4% for gabapentin (DDD)



# Research question

- Is there abuse/misuse/overuse of gabapentinoids that is not connected to opioids?
- Have gabapentinoids been implicated in fatal poisonings without the contribution of opioids drugs?



## Abuse and Misuse of Pregabalin and Gabapentin

Kirk E. Evoy<sup>1,2</sup> · Megan D. Morrison<sup>1</sup> · Stephen R. Saklad<sup>1</sup>

**Conclusion** Evidence suggests gabapentinoids possess potential for abuse, particularly in individuals with a history of **opioid abuse**, and reports of such abuse are increasingly being documented. Prescribers should be aware of high-risk populations and monitor for signs of abuse.



Forensic Science International

Volume 241, August 2014, Pages 1-6



## Profiles of pregabalin and gabapentin abuse by postmortem toxicology

Margareeta Häkkinen<sup>a</sup>, Erkki Vuori<sup>a</sup>, Eija Kalso<sup>b</sup>, Merja Gergov<sup>a</sup>, Ilkka Ojanperä<sup>a</sup>

In the pregabalin abuser group, 91.4% of cases showed **concomitant opioid** use, while in the rest of these cases neither alcohol nor opioids were detected, but other central nervous system acting drugs were found in each abuser case. In the gabapentin abuser group, 87.5% of cases showed **concomitant opioid** use.

Review Article | [Open Access](#) | Published: 28 August 2020

## Current Evidence on Abuse and Misuse of Gabapentinoids

Staffan Hägg<sup>✉</sup>, Anna K. Jönsson & Johan Ahlner

*Drug Safety* **43**, 1235–1254 (2020) | [Cite this article](#)

Moreover, some evidence supports the notion that patients with **opioid use** disorders may be at an increased risk of abusing gabapentinoids.

CNS Drugs (2016) 30:647–654  
DOI 10.1007/s40263-016-0359-y

ORIGINAL RESEARCH ARTICLE



## A Decade of Gabapentinoid Misuse: An Analysis of the European Medicines Agency's 'Suspected Adverse Drug Reactions' Database

Stefania Chiappini<sup>1</sup> · Fabrizio Schifano<sup>2</sup>

For both molecules, subjects typically involved were female adults. A total of 27 and 86 fatalities, respectively, associated with pregabalin and gabapentin, and **mostly in combination with opioids**, were identified.

European Addiction  
Research

Short Communication

## Gabapentinoid Abuse in Order to Potentiate the Effect of Methadone: A Survey among Substance Misusers

Baird C.R.W.<sup>a</sup> · Fox P.<sup>b</sup> · Colvin L.A.<sup>a</sup>

Gabapentinoid abuse along with **methadone** has not previously been described. These findings are of relevance to clinicians working within both substance misuse services and chronic pain services.

*Journal of Analytical Toxicology*, 2020;00:1–10  
doi: 10.1093/jat/bkz105  
Article

OXFORD

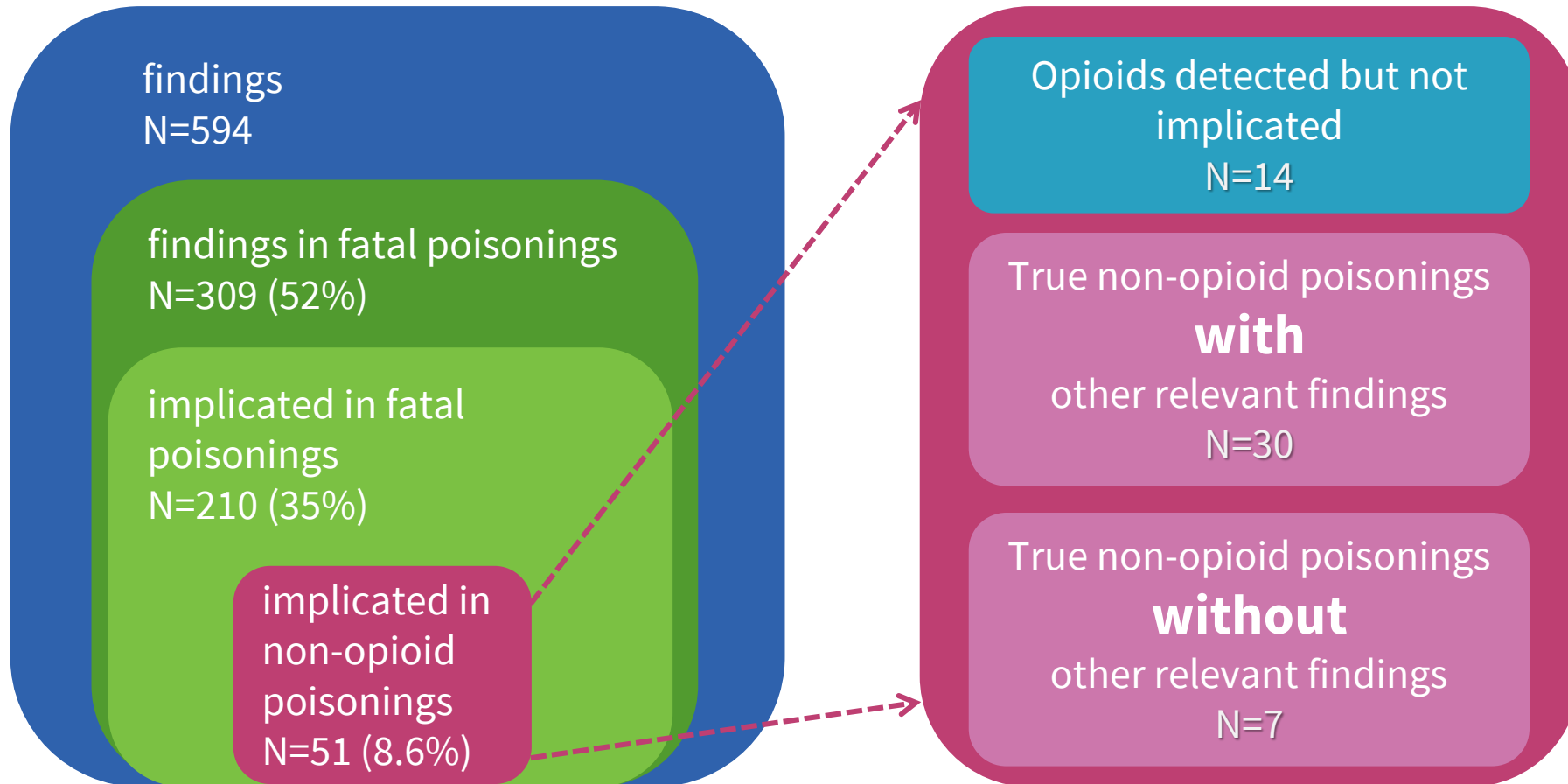
Article

## An Insight into Gabapentin and Pregabalin in Scottish Prisoners

Shaza Deeb<sup>1,2,\*</sup>, Fiona M. Wylie<sup>2</sup>, Hazel J. Torrance<sup>2</sup> and Karen S. Scott<sup>2,3</sup>

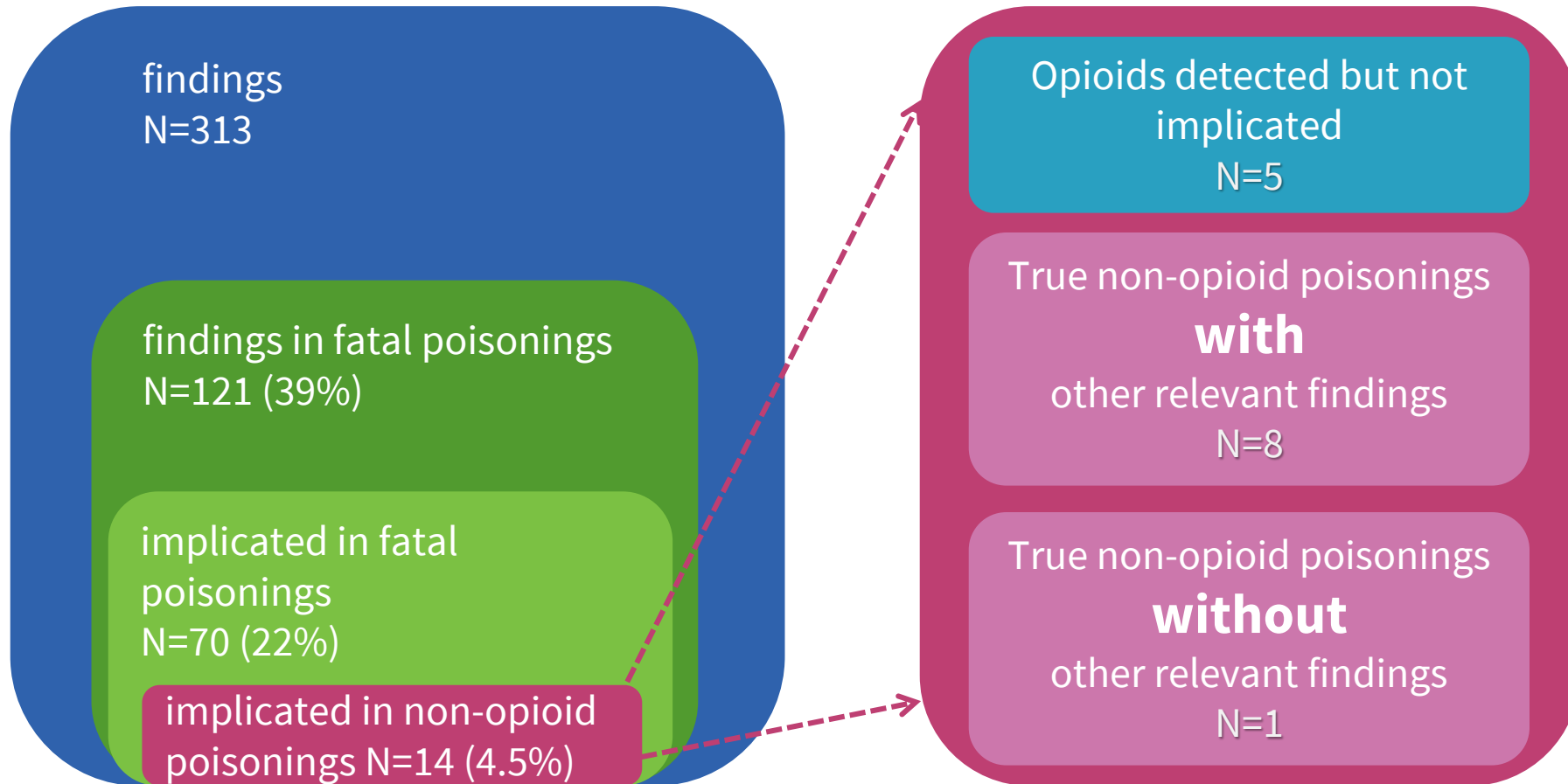
Benzodiazepines, **opiates** and cannabis were the most frequently detected drugs.

# Pregabalin in fatalities in 2016-2018



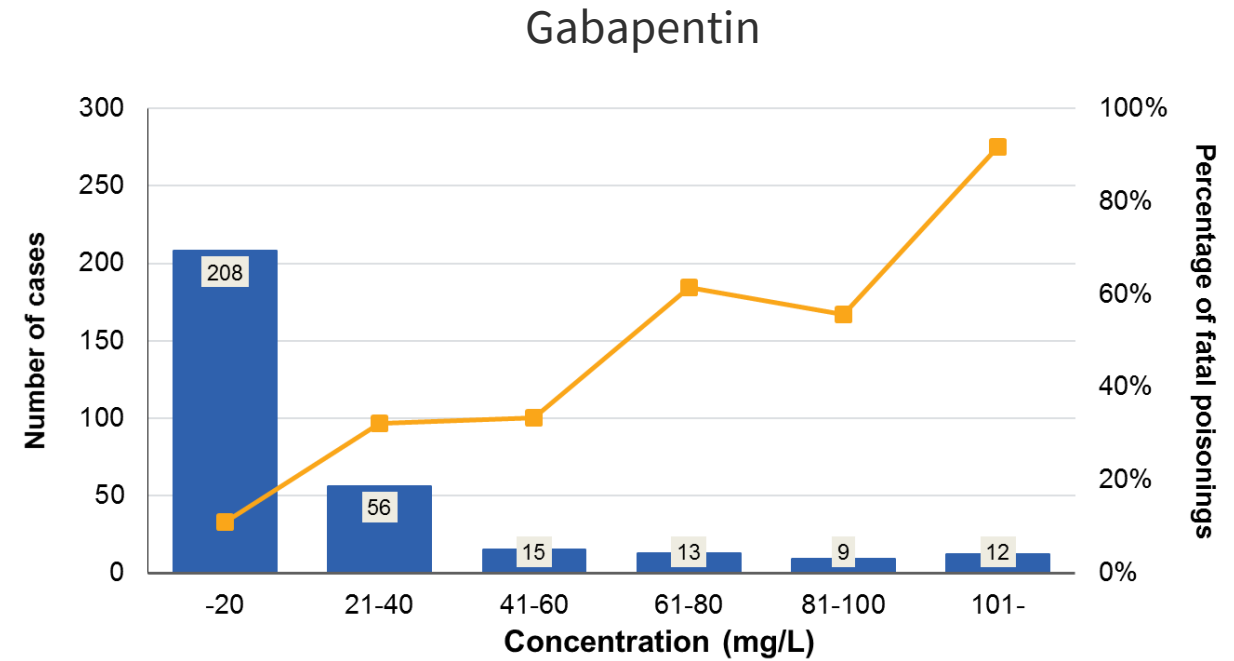
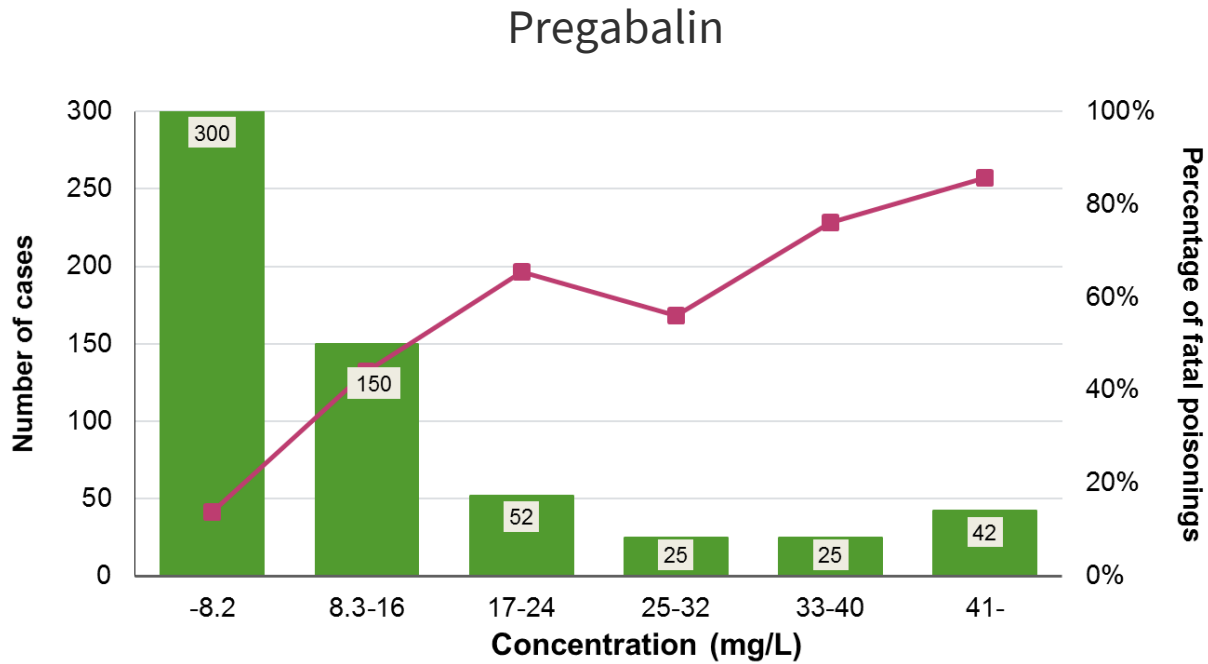
The percentages are calculated from the total number of cases in which the drug was detected.

# Gabapentin in fatalities in 2016-2018



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# Concentration ranges and fatal poisoning

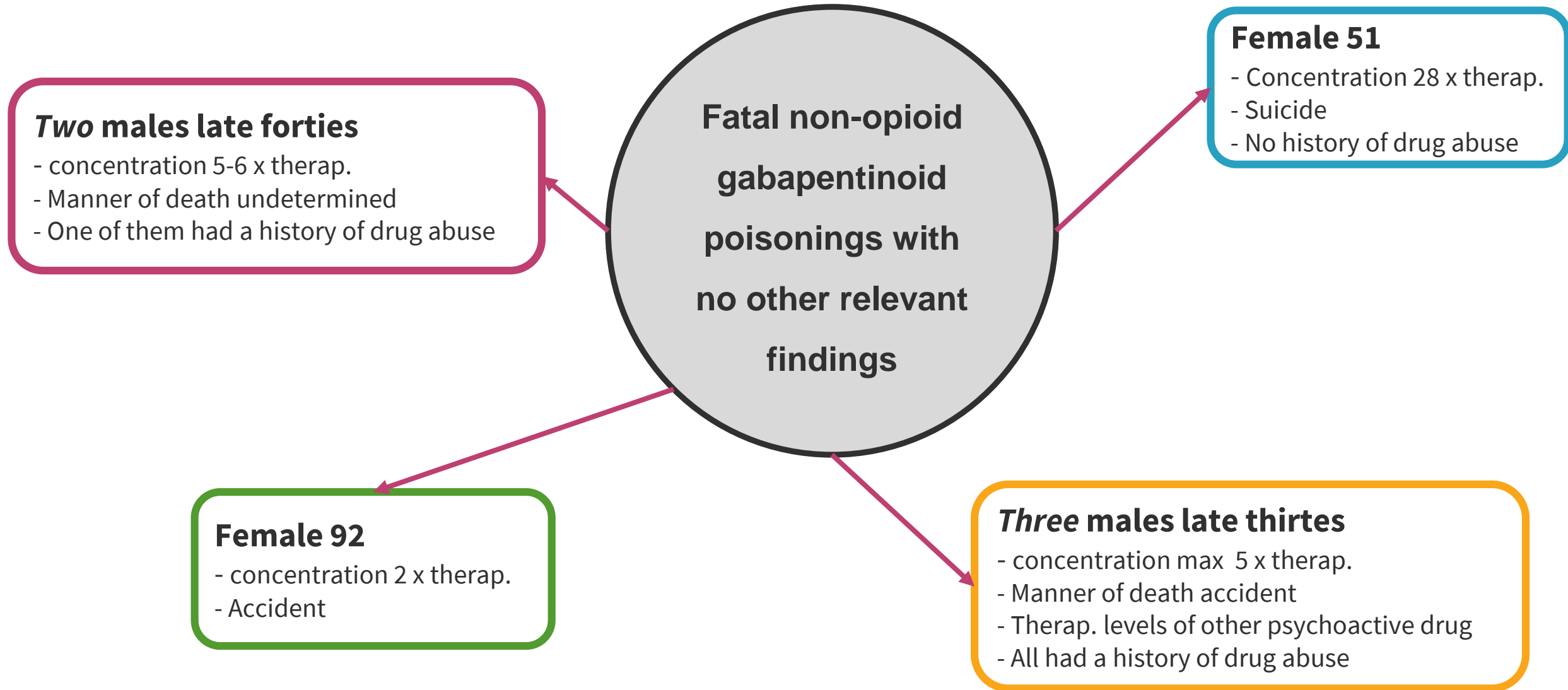


# Non-opioid poisoning deaths

- No opioids were implicated in
  - 51 (24%) of the fatal pregabalin poisonings
  - 14 (20%) of the fatal gabapentin poisonings
- In most of these cases, other psychoactive substances were implicated in addition to the gabapentinoid



# Not a homogenous group of people



# Summary

- A large number of gabapentoid-related deaths were reviewed
- Confirmed relatively low toxicity when used appropriately in medical supervision
- Low prevalence of non-opioid poisoning deaths – no specific group of people
- Still, some individuals may be at risk of overdose by gabapentinoids even if no opioids are involved





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