

## Complications related to chemsex: what can be observed in the data from Poison Control Centers in France?

Genestier Fabien<sup>1</sup>, Chevallier Cécile<sup>1</sup>, French PCC Research group, Paret Nathalie<sup>1</sup>

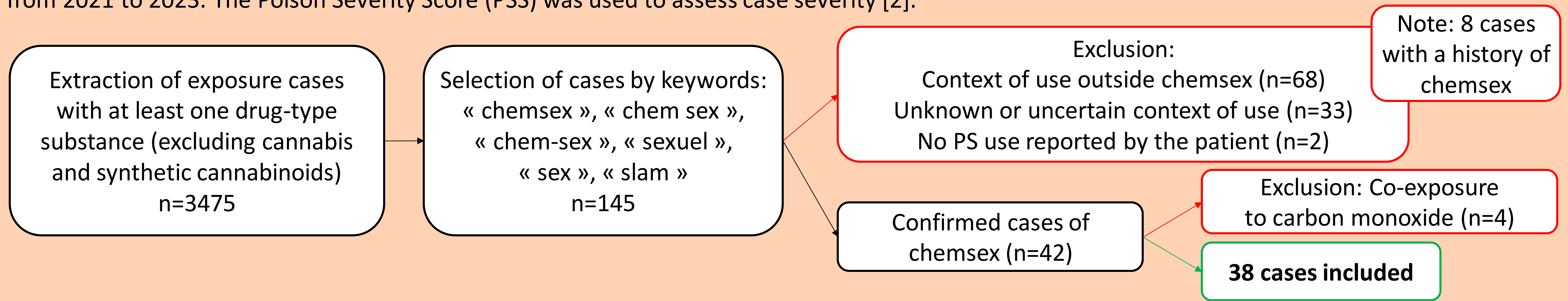
<sup>1</sup>Lyon Poison Control Center, Hospices Civils de Lyon, Lyon, France

### Context & objectives

- Chemsex refers to the consumption of psychoactive substances (PS) for sexual purposes to initiate, facilitate, prolong or enhance sexual encounters [1], primarily among men who have sex with men (MSM).
- The prevalence of this practice is difficult to estimate. In France, it is estimated to range from 3% to 20.9% among MSM [1].
- The most commonly used substances in chemsex today are synthetic cathinones and GHB or its precursor, GBL. Polydrug use is common in this practice, significantly increasing the risk of intoxication and infection.
- **Data from Poison Control Centers (PCC) are one of the lenses through which public health surveillance of chemsex can be conducted.**
- **Objective: identify and analyze cases reported to French PCCs, particularly focusing on patient profiles and physical complications.**

### Material & methods

This retrospective study examines cases of intoxication by PS in the context of chemsex in France, using data from the PCC information system (SICAP) from 2021 to 2023. The Poison Severity Score (PSS) was used to assess case severity [2].



### Results

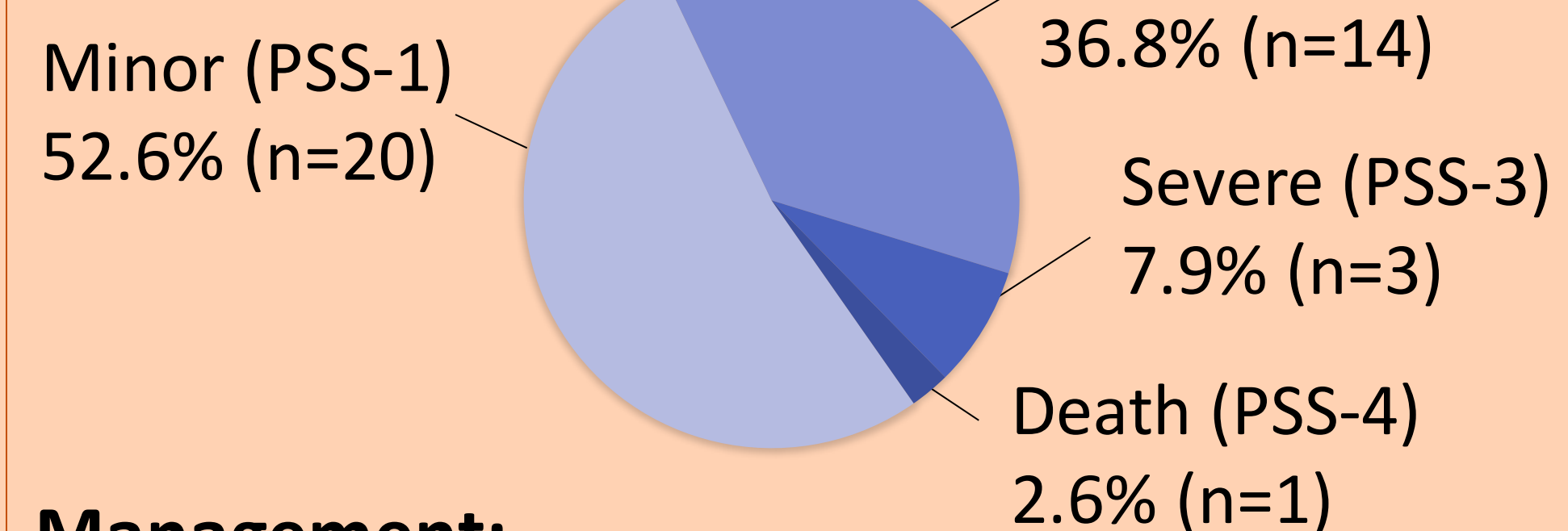
**Median age:** 38 years [15 ; 76]  
**Sex:** ♂ 100 %

#### Substances:

- Median number: 2 [1 ; 5]
- Reported IV route: 34.2% (n=13)
- Reported substances:

	n	% of cases
Cathinones	38	100.0%
GHB/GBL	15	39.5%
Poppers	8	21.1%
PDE5 inhibitors	5	13.2%
Alcohol drinks	4	10.5%
Amphetamines	3	7.9%
Ketamine	2	5.3%
Cocaine	2	5.3%
Opioids	2	5.3%
Cannabis	1	2.6%

#### Severity:



#### Management:

In the emergency department: 68.4% (n=26)  
In intensive care : 13.2% (n=5)

#### Associated psychiatric disorders:

- 2 suicide attempts by PS following the initial intake in a chemsex setting (5.3%)
- Psychiatric disorder: 47.4% (n=18):
  - Substance use disorder: 34.2% (n=13)
  - Suicide attempt: 10.5% (n=4)
  - Depressive disorder: 7.89% (n=3)

#### Associated infectious risk:

- HIV pre-exposure prophylaxis: 18.4% (n=7)
- HIV+: 13.2% (n=5)
- History of other sexually transmitted infections: 21.1% (n=8)

#### Moderate and severe symptoms:

	n	% of PSS 2-4 cases
<b>Neuropsychiatric</b>	12	66.7%
severe agitation (n=5), coma (GCS 3) (n=3), mental confusion (n=3), delirium (n=2), seizures (n=2), ataxia (n=1), cerebral edema (n=1), dissociative state (n=1), facial motor impairment (n=1)		
<b>Metabolic</b>	5	27.8%
metabolic acidosis with pH < 7.24 or bicarbonate < 14 mmol/L (n=3), hypokalemia < 2.9 mmol/L (n=2)		
<b>Cardiovascular</b>	4	22.2%
bradycardia < 40 bpm (n=2), cardiac arrest (n=1), hypertension > 180 mmHg (n=1), QT prolongation (n=1)		
<b>Respiratory</b>	3	16.7%
apnea (n=2), bradypnea (n=1), atelectasis (n=1)		
<b>General</b>	3	16.7%
hypothermia (n=2), prolonged hyperthermia (n=1)		
<b>Hematological</b>	2	11.1%
methemoglobinemia + cyanosis (n=2)		
<b>Renal</b>	2	11.1%
acute renal failure (n=2), anuria (n=1), acute tubular necrosis (n=1)		
<b>Other</b>	3	16.7%
rhabdomyolysis (n=1), lymphangitis (n=1), persistent vomiting (n=1)		

### Conclusion

The small number of cases identified suggests a probable underestimation of toxic complications related to chemsex, as the context of PS use is not systematically recorded during PCC calls. However, it seems crucial to identify patients practising chemsex. Firstly, because this context often involves the use of multiple substances, which can complicate clinical presentations and management. Secondly, because these patients are at risk of infectious, addiction or psychiatric disorders, requiring multidisciplinary medical care.

### References :

- [1] Benyamina A. [Report on drug use in the context of 'chemsex' submitted to the Ministry of Solidarity and Health] [cited 20 October 2024]. Available from [https://sante.gouv.fr/IMG/pdf/2022\\_03\\_17\\_cp\\_rapport\\_chemsex\\_vdef.pdf](https://sante.gouv.fr/IMG/pdf/2022_03_17_cp_rapport_chemsex_vdef.pdf) French.
- [2] Persson HE, Sjöberg GK, Haines JA, et al. Poisoning severity score. Grading of acute poisoning. J Toxicol Clin Toxicol. 1998;36:205-13.