Gesundheit Österreich GmbH

Poly-substance use and its consequences - dimensioning

Final Report

On behalf of the European Union Drugs Agency (EUDA)

Gesundheit Österreich GmbH

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Final report

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This report contributes to the implementation of the 2030 Agenda, in particular to Sustainable Development Goal (SDG) 3 „Good Health and Well-being".

Summary

Background

The EUDA's founding regulation acknowledges that the use of multiple substances is a common pattern of drug use, which increases the risks of health and social problems. The regulation tasks EUDA with monitoring 'poly-substance use and its consequences, in particular the increased risk of health and social problems, the social determinants of drug use, drug use disorders and addictions, and the implications for policies and responses'. The Austrian National Focal Point of the REITOX Network was commissioned to conduct a dimensioning study on poly-substance use and its consequences with the aim of identifying future needs and areas for action for EUDA. The project was supervised by the EUDA/NFP Joint Working Group on poly-substance use.

Methods

Two rounds of expert consultation were conducted with experts from the EUDA network. In addition, desk-based and literature research was carried out to examine definitions, data availability and operationalizations, existing gaps, and relevant stakeholders. For each (potential) data source, recommendations on how to move forward concerning poly-substance use were elaborated.

Results

Key finding was a dynamic model for defining poly-substance use, which can be specified depending on the issue at hand. 88 (research/policy) questions in 12 thematic areas were developed. Clear priority was given to questions concerning the role of poly-substance use in connection with high-risk drug use and overdoses. Holistic research requires linking a wide variety of data sources and investigating the sociocultural, sociodemographic, and socioeconomic causes, motives, and consequences of poly-substance use.

Conclusion

A flexible and context-specific definition of poly-substance use is essential to address diverse research, and policy needs and should include legal and illegal/illicit substances and addictive behaviors. Existing data systems should be expanded to include legal substances and behavioral addictions, despite current institutional limitations, to improve comparability and resource efficiency. Research should prioritize high-risk drug users, especially in relation to overdose risks and the emergence of synthetic opioids. Real-time and delayed data sources offer valuable insights but require broader coverage and adaptation to better capture poly-substance use patterns. Targeted research projects, enhancing data collection and integration, and conducting qualitative studies to understand motivations, realities of life and long-term consequences of poly-substance use are necessary.

Keywords

Poly-substance use, monitoring, dimensioning, epidemiology, illicit drugs, nicotine, alcohol, gambling, treatment, prevention, drug policies, overdose, high-risk drug use

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Abbreviations

ARQ	Annual Report Questionnaire
CDC	United Sates Center for Disease Control and Prevention
DC	Drug checking
DRD	Drug Related Death
DRUID	Driving under the influence of drugs
EDAS	European Drug Alert System
EMQ	European Model Questionnaire
EQDP	European Questionnaire on Drug Use among People Living in Prison
ESPAD	European School Survey Project on Alcohol and Other Drugs
EUDA	European Union Drugs Agency
EURO-DEN	European Drug Emergencies Network
EWS	Early Warning System
EWSD	European Web Survey on Drugs
GPS	General Population Survey
JWGPU	Joint Working Group on Polydrug use
KI	Key Indicator
NFP	National Focal Point
NPS	New Psychoactive Substance
SC	Scientific Committee
TDI	Treatment Demand Indicator
TEDI	Trans European Drug Information
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

1 Introduction

Poly-substance use is a common and increasing phenomenon and represents an important public health problem (Font-Mayolas and Calvo 2022). Already in 2006, the European Union Drugs Agency (EUDA, former European Monitoring Centre for Drugs and Drug Addiction, EMCDDA) Scientific Committee (SC) stated:

> "The EMCDDA's current mandate is based on the need to monitor and report on controlled drugs and new psychoactive substances. Reflecting this, much of its current reporting is based largely on information that is collected using drug-specific categories. However, it has been long recognised that few individuals use only a single substance and many of the problems we see in this area arise, at least in part, through the interactions that exist between psychoactive, licit, illicit or regulated substances. This is also recognised in many policies and responses that attempt to address substance use more holistically rather than targeting a specific substance. We believe a more holistic conceptual perspective to monitoring and reporting on substance use issues that extends beyond illicit drugs is necessary to ensure the Agency work remains in line with future information needs at the European level." (EMCDDA 2006).

Due to the new mandate of the EUDA and extension of investigations as well as changes in the drug situation in general monitoring and analyzing of poly-substance consumption and its consequences becomes one of the major tasks. Article 6 (1) point (b) aimed at collecting key information and data to track the use of poly-substances and their impact (EUDA Regulation 2023).

Article 7 (1) point (d) and point (e) of the Regulation state that future monitoring of "poly-substance use and its consequences, in particular the increased risk of health and social problems, the social determinants of drug use, drug use disorders and addictions, and the implications for policies and responses" is very important (EUDA Regulation 2023).

Therefore, EUDA established in 2023 a working group titled "Poly-substance use, architecture framework" consisting of EUDA experts and experts from the REITOX network. Following the recommendations of the EUDA's SC, the group has agreed that a more holistic conceptual perspective should be adopted; the poly-substance use and its consequences should be explored across various domains and indicators. The working group prepared initial mapping of what information is available from surveys and within the monitoring of drug-related deaths and identified some gaps and priorities for future.

The purpose of this dimensioning study is to explore further dimensions of poly-substance use and its consequences. The outcomes will support planning and decision-making regarding the integration of poly-substance use into the EUDA's work. The objectives are to analyse and provide information needs, identify relevant areas for future development, and suggest priorities for action.

2 Methods

As a first step, a desk-based (online research) and literature review was conducted to gather existing definitions of poly-substance use, highlight the various dimensions, and describe them according to their primary focus. The objective was to identify a comprehensive definition that encompasses all critical dimensions and provides a solid basis for future research in the field of poly-substance use (see chapter 3.1).

Subsequently, the first round of the expert consultation was prepared, aiming to map the core domains within the field of poly-substance use. To ensure a comprehensive approach, information collected by the Joint Working Group on Poly-substance use (JWGPU) and SC was integrated with the aim of formulating a broad range of research and policy questions, minimizing the risk of overlooking critical issues (see chapter 4.1). Each expert consultation was conducted via an online questionnaire.

The findings from the first round of the expert consultation were systematically analyzed and subsequently revised and used to inform the design and content of the second round. The second round aims to prioritize the most pertinent dimensions and research or policy questions to inform the EUDA's 'How to Move Forward' proposal. This process facilitates the delineation of critical areas and the formulation of targeted recommendations for action (see chapter 5.1).

Concurrently, insights from the first expert consultation round and desk-based research on how poly-substance use is operationalized across different data sources were utilized as a foundational basis to identify existing data and future needs regarding monitoring system(s) of the EUDA as well as relevant stakeholders (connected and competitive) in this field (see chapter 4 and chapter 6).

Drawing on the results of the literature and desk-based research, along with insights from the expert consultations, existing knowledge gaps and information needs in the field of poly-substance use are synthesized. These findings will inform the development of a draft call for defining future targets and identifying priority areas for action (see chapter 7).

3 Conceptualization of poly-substance use

3.1 Existing Definitions

When looking at existing definitions of the most important international institutions regarding drug use and addiction, various terms are used – such as *multiple drug use*, *multiple specified psychoactive substances use*, *polydrug use* or *poly-substance use*. At the same time, these definitions often focus on different aspects of poly-substance use. For a detailed analysis of the development of the conceptualization of poly-substance use see Font-Mayolas and Calvo (2022).

3.1.1 World Health Organization

(ICD 10 and ICD 11) – multiple drug use, multiple specified psychoactive substances use

The World Health Organization (WHO) defined „multiple drug use (French: polytoxicomanie)" as „the use of more than one drug or type of drug by an individual, often at the same time or sequentially, and usually with the intention of enhancing, potentiating, or counteracting the effects of another drug." (WHO 1994). This part of the definition combines amount, time and intent aspect of poly-substance use. Furthermore, WHO explains the connotation of multiple drug use with illicit substance consumption even though „alcohol, nicotine and caffeine are the substances most frequently used in combination with others in industrialized societies" (WHO 1994). The next part focuses on the ICD-10 F19 diagnosis '*Multiple drug use disorder*' as „Mental and behavioral disorders due to psychoactive substances" which diagnosed "only when two or more substances are known to be involved and it's impossible to assess which substance is contributing most to the disorder" (WHO 1994). In ICD 11 the terminology changes: 6C4F.72 "Obsessive-compulsive or related disorder induced by multiple specified psychoactive substances" (WHO 2025).

3.1.2 Centers for Disease Control and Prevention

(Un)intentional polysubstance use

The United Centers for Disease Control and Prevention (CDC) definition includes another relevant aspect of poly-substance use - if the poly-substance use is intentional or unintentional. Polysubstance use is defined as

> "The use of more than one drug, also known as polysubstance use, is common. This includes when two or more are taken together or within a short time period, either intentionally or unintentionally." „Intentional polysubstance use occurs when a person takes a drug to increase or decrease the effects of a different drug or wants to experience the effects of the combination. Unintentional polysubstance use occurs when a person takes drugs that have been mixed or cut with other substances, like fentanyl, without their knowledge." (CDC 2024).

3.1.3 United Nations Office on Drugs and Crime

Polydrug use

„Polydrug use is the use of two or more substances at the same time or sequentially; it is a common occurrence among both recreational and regular drug users in all regions." (UNODC 2014). According to the United Nations Office on Drugs and Crime (UNODC) definition key aspects of polydrug use are three different distinct patterns of polydrug consumption regarding the effect and substance combinations. One pattern is taking different drugs for having a *complementary respective cumulative effect*. Such pattern is commonly seen among cannabis and cocaine users, which are using the drug in combination with alcohol and/or other stimulants. Other combinations could in the use of heroin in combination with benzodiazepines, alcohol and/or other opioids like methadone, oxycodone etc. Second pattern is the consumption of one drug to *offset the adverse effect(s)* of another drug like it is in the case of cocaine and heroin use (speedball), or cocaine use with different opioids, sometime there is as well a complementary effect. The third pattern focuses on *replacing or substitution* a drug due to changes in price and/or availability or because the other drug is in fashion, for example, heroin being substituted by other opioids like oxycodone or 'ecstasy' being substituted by mephedrone or other NPS (UNODC 2014).

3.1.4 European Union Drugs Agency

Poly-substance use

The EUDA new regulation Article 3 (3) describes poly-substance use as follows

> „'poly-substance use' means the use of one or more psychoactive substances or types of psychoactive substance, whether illicit or licit, in particular medicinal products, alcohol and tobacco, at the same time as the use of drugs or sequentially within a short period of time of the use of drugs" (EUDA Regulation 2023).

Central criteria of this definition focus on the time aspect as well as on different types of substances, for example Tobacco is explicitly mentioned in comparison to other definitions.

3.2 Key Components of poly-substance use

The EUDA's SC proposed four dimensions to ensure all implications of poly-substance use were considered. A preliminary definition of poly-substance use was used "the use of more than one substance or type of substance, whether licit or illicit, by an individual consumed at the same time or sequentially" (EMCDDA 2006).

Dimension 1 focuses on the **consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are used in combination or in close succession.** This includes the increased risk of experiencing acute problems such as overdose, or the risk of more chronic problems, such as dependence. It includes increased behavioral risks, for example in sharing equipment or in terms of drug impaired driving. Moreover, it includes the

implications for responses, for example the co-dependence on alcohol increasing the risk of violence and of relapses from drug treatment (EMCDDA 2006).

Dimension 2 refers to the **consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are produced, marketed or sold together.** In addressing the drug market, it is important to recognize the interactions that exist between substances: these range from the fact that the same precursor chemicals may be used to produce multiple substances, drugs may be sold as replacements or displace similar acting substances, to drugs being sold in mixtures in which consumers take – either knowingly or otherwise – multiple substances. This also includes the fact that policies and responses targeting a single substance may have negative unintended consequences, if this results in the displacement of one substance by another. For example, cannabis suppression policies in prison might lead to an increase in the use of synthetic cannabinoids or opioids (EMCDDA 2006).

Dimension 3 concentrates on the **consideration of drug-related policies or interventions that target multiple substances or behaviors that are not specific to a single psychoactive substance.** Many of today's policies and responses contain a drug-specific component but may have a broader policy target. For example, programs seeking to promote healthy lifestyle choices for adolescents or reduce youth criminality will contain a drug prevention component but also have a broader target. Many countries now also have, for example, substance misuse reduction policies that target both controlled drugs and alcohol and tobacco. Some even include gambling or behavioral addictions. Moreover, when working in treatment, prevention or harm reduction, effective interventions often try and treat the client's needs holistically rather than focusing on a single substance, illicit or licit. This has important implications for monitoring and the exchange of best practice (EMCDDA 2006).

Dimension 4 means **recognizing that substance-related problems often share a common etiology and that understanding the biological or other common causes of the behavior is important for informing the development and assessment of responses.** We are entering a period where biomedical advances allow us to have a greater understanding of the mechanisms that make some people more likely to experience substance-related problems, which are often non-substance specific. Understanding this is likely to become increasingly important in order to inform interventions in this area. Moreover, some societal and individual causal factors, like social exclusion or experiencing sexual or other forms of abuse, may be associated with a greater risk of problems per se and not linked to any substance. International evidence on childhood adverse experiences is informing these developments (EMCDDA 2006).

Because of the complexity of the poly-substance phenomenon and due to monitoring and research purposes it is necessary to break down the term 'poly-substance use' into its single elements to structure the whole field (Bunting et al. 2023).

The term 'Poly' initially refers to the use of more than one substance. It also encompasses a temporal dimension, which can range from simultaneous use to use in the same year or even across a lifetime. It is important to present all these options to illustrate the full range of possibilities related to the temporal aspect. The term 'substance' refers to the substances consumed. Several aspects should be considered here: The legal status – legal, illegal and/or illicit. A distinction can also be made as to whether they are addictive or not. It can be distinguished in relation to severity between experimental, functional, regular and addiction use. Furthermore, if

it is an intentional or unintentional poly-substance use (e. g. when Cannabis is contaminated by synthetic Cannabinoids and the user does not know it). The route of administration must also be considered.

Taking this into account and looking at the different definitions presented in chapter 3.1 the following key components of poly-substance use can be identified:

Substances involved: Relevant are all substances which are psychoactive. One important distinction is whether the substance is illegal and/or illicit or legal. In line with EUDA's mandate, only poly-substance use that includes at least one illicit substance is considered relevant for EUDA's work.

Time: There is a need to clearly define the timespan within which the consumption of more than one psychoactive substance occurs. The spectrum ranges from lifetime use to use at the same occasion.

Severity of use: The spectrum of this dimension ranges from experimental use to addiction.

Intention: Poly-substance use can be intentional – for example when the person deliberately combines the effects of multiple drugs – or unintentional, such as when cannabis is contaminated by synthetic Cannabinoids without the user's knowledge.

Route of administration: Different routes of drug administration are not relevant for defining poly-substance use, as they do not change or influence the substance used. Although route of administration may influence the probability of poly-substance use.

3.3 Inclusion of behaviors with addictive potential

In the JWGPU it was discussed that in a broader sense, also behaviors with addictive potential – such as gaming or gambling – should be considered within the conceptual framework. However, in such cases, the term *poly-substance use* is no longer appropriate, as behaviors are not substances, although it is important to note that similar processes occur in the brain's reward system when engaging in addictive behaviors and when consuming psychoactive substances (Vaccaro et al. 2020).

Burleigh et al. (2019) show that disordered gambling behavior may be associated with a variety of other addictive behaviors (e.g. alcohol use disorder). Further analysis results indicate that clinical gamers were more likely to be poly-substance users when compared to clinical non gamers (Burleigh et al. 2022). Other studies also suggest that pathological gamblers have a high rate of other comorbid disorders such as nicotine use, substance use, and anxiety disorders (Lorains et al. 2011). It should be noted that behavioral addictions and substance use exhibit similar psychopathology (Leeman et al. 2013).

When it comes to the combination of psychoactive substances and behaviors with addictive potential it is not possible to create a simple term. Possible formulations might include "*combined substance-related and non-substance related use*" or "*poly-substance / behaviors with addictive potential use*".

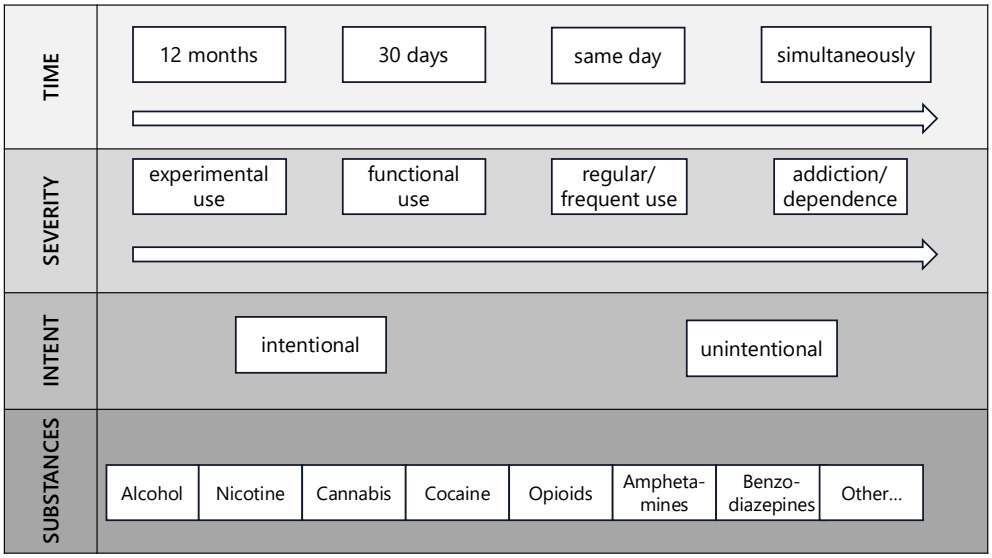
3.4 Proposal for a concept and dynamic definitions of poly-substance use for future work

The concept of poly-substance use should encompass the key components outlined above: The **use of more than one psychoactive substance** in a **defined timespan**, whether **illicit** or **legal**, **intentional** or **unintentional**, **addictive** or **non-addictive**.

This very broad definition must be specified and narrowed down in order to answer specific questions. For example, for questions relating to overdoses, only poly-substance use that occurs within a narrow time frame is relevant, and it is not relevant whether it is experimental use or addiction. For questions relating to the treatment of poly-substance use, however, experimental use is irrelevant.

A so-called dynamic definition is therefore proposed, which varies depending on the question. It is important that all aspects of the broad definition are always taken into account in the respective definitions. To reach a definition that fits the respective (policy/research) question, the following scheme can be applied (see Figure 1).

Figure 1: Scheme for dynamic definitions of poly-substance use

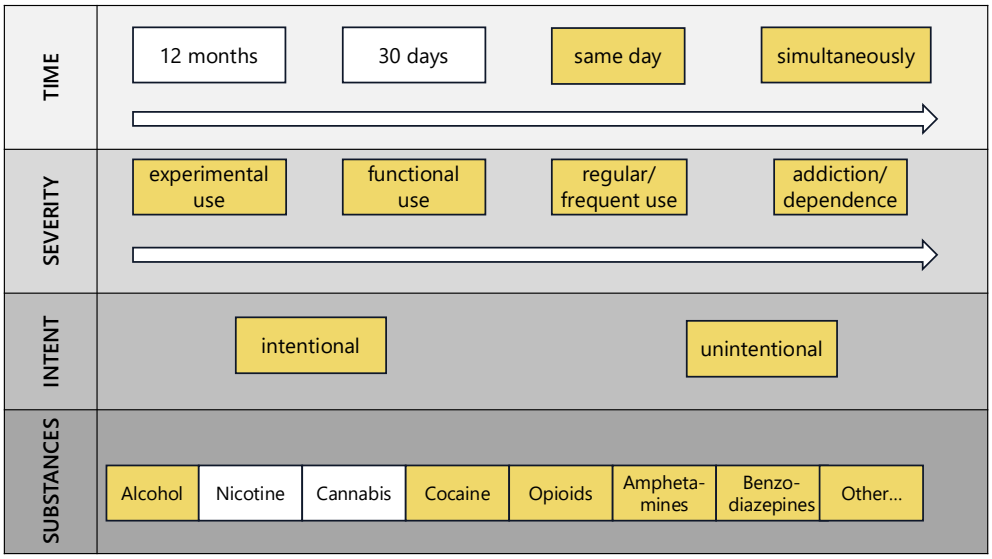


Reference: GÖG

Figure 1 shows the approach on a dynamic definition with different categories. These categories represent the relevant component to define the poly-substance phenomenon.

As already mentioned, this dynamic definition can be adapted to different (research/policy) questions respective research objectives and their main focus (see Figure 2).

Figure 2: Dynamic definition in context of preventing overdose deaths due to poly-substance use



Note: Relevant categories to define poly-substance in the context of preventing overdose deaths due to poly-substance use are highlighted in yellow.

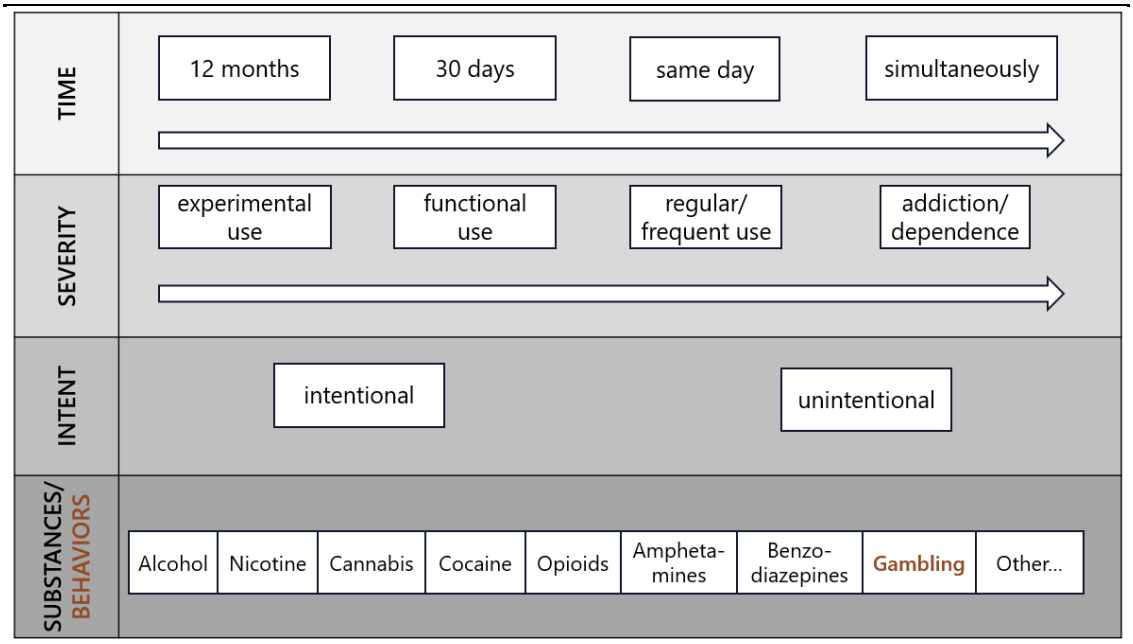
Reference: GÖG

Figure 2 shows the dynamic definition in context of the research question: *How can we prevent overdose deaths due to poly-substance use?* For this research objective, the relevant categories used to define poly-substance use are highlighted in yellow.

In the context of overdose deaths, the temporal dimension should focus on the categories: *within a day* or *simultaneously*. The severity of consumption is not a determining factor (it may include *experimental use*, *functional/recreational use*, *regular and/or frequent use* as well as *addictive or dependent use*). The consumption of more than one psychoactive substance may be either *intentional* and/or *unintentional*. Regarding the substances involved, the focus should be on those that contribute directly to drug-related deaths. In this context, nicotine and cannabis are excluded.

If behaviors with addictive potential are included – "*combined substance-related and non-substance related use*" or "*poly-substance / behaviors with addictive potential use*" (see chapter 3.3) – the same definitional scheme can, in principle, be applied. In this case, the component "*substances*" would be broadened to include both psychoactive substances and behaviors with addictive potential (see Figure 3).

Figure 3: Scheme for dynamic definitions of poly-substance / behaviors with addictive potential use



Reference: GÖG

4 Mapping the poly-substance use area

To gain an overview of relevant (research/policy) questions and corresponding definitions, a desk-based literature review was conducted, along with an analysis of available input of the JWGPU. Based on this overview, two rounds of expert consultation were carried out.

The objective of the first round was to create a comprehensive map of the poly-substance use landscape, ensuring that all relevant aspects were considered and to explore key (research/policy) questions (see chapter 4.1). The second round, a follow-up survey, aimed to prioritize the (research/policy) questions identified in round one (see chapter 4.2).

The target group for both expert consultations included National REITOX Focal Points, members of EUDA's SC, EUDA's network on epidemiological key indicators, the Joint Working Group on poly-substance use, academic and research institutions, and governmental bodies (excluding REITOX NFPs).

4.1 Stakeholder Consultation Round 1

4.1.1 Aim and structure

The first round was structured around four dimensions proposed by the EUDA's SC to ensure all implications of poly-substance use were considered. For more details concerning the four dimensions see chapter 3.2.

Dimension 1 focuses on the **consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are used in combination or in close succession.**

Dimension 2 refers to the **consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are produced, marketed or sold together.**

Dimension 3 concentrates on the **consideration of drug-related policies or interventions that target multiple substances or behaviors that are not specific to a single psychoactive substance.**

Dimension 4 means **recognizing that substance-related problems often share a common etiology and that understanding the biological or other common causes of the behavior is important for informing the development and assessment of responses.**

Concerning each **dimension**, the experts participating in the survey were on the basis of open questions asked:

- "In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? Please formulate as many questions as you can think of"
- "What forms of poly-substance use should be monitored in this context?"

- "What type of data/information would be needed to answer the questions you formulated above?"
- "What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?"

As **recommendations,** experts were asked to provide their feedback on the following questions:

- "Are there any relevant aspects of poly-substance use missing in the four dimensions listed above?"
- "In your area of work/expertise, what are the available data sources concerning the monitoring of poly-substance use?"
- "How do these available data sources operationalize poly-substance use?"
- "Would you like to share any additional thoughts, comments, or concerns regarding poly-substance use and its integration into EUDA's monitoring system?"

4.1.2 Data collection and response

Data collection was conducted using a questionnaire distributed via Limesurvey. The survey period began on 20th of February 2025 and ended on 20th of March 2025. Experts were invited to participate by e-mail, which included a link to the survey.

A total of 64 participants from 20 countries took part in the survey. Of these, 37 people completed the questionnaire in full, meaning they answered every single open question (see Annex I).

4.1.3 Analysis

The first round of the expert consultation resulted in a total of **442 (research/policy) questions** (original formulations see Annex I). Questions with the same content were removed, some were reformulated, and questions containing multiple topics were split into several questions. At the end, the 442 (research/policy) questions were condensed to **88 questions**, which were grouped into **12 thematic areas**.

4.2 Relevant (research/policy) questions in the area of poly-substance use

The main result of the stakeholder consultation round one were 88 (policy/research) questions, which were divided into the following **12 thematic areas**.

- Nature and extent of poly-substance use
- Harms and Consequences of poly-substance use
- Responses to poly-substances use
- Monitoring of poly-substance use
- Poly-substance use and health policy
- The influence of production, market and availability on poly-substance use
- The influence of new synthetic substances on poly-substance use
- Market monitoring

- (Policy-) reactions to the changing drug market
- Cross addiction interventions
- Cross addiction policies
- Etiology of poly-substance use

Dimension 1: Consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are used in combination or in close succession.

Nature and extent of poly-substance use

1. What is the extent of intentional poly-substance use in different groups of the population?
2. What is the extent of unintentional poly-substance use in different groups of the population?
3. Which combinations of substances are prevalent among the group of high-risk drug users?
4. Which combinations of substances are prevalent among the group of recreational drug users?
5. Which role do prescribed medicines play in poly-substance use?
6. How do different substances interact pharmacologically (both at the pharmacokinetic and pharmacodynamic level)?
7. Which poly-substance use patterns exist relating to simultaneous or sequential use of drugs and what are the motivations behind these patterns?
8. To what extent does the early use of legal substances such as tobacco increase the risk of using additional illegal drugs later on and developing a pattern of multiple substance use?

Harms and Consequences of poly-substance use

9. Which role do poly-substance use play in the field of drug impaired driving?
10. What are the short- and long-term consequences of poly-substance use among high-risk drug users?
11. What are the short- and long-term consequences of poly-substance use among recreational drug users?
12. What is the relationship between poly-substance use and engagement in other risky behaviors (such as unsafe sex or reckless driving, re-using or sharing use paraphernalia; increased aggressiveness, violence, infectious [HIV, HCV, Sexual Transmitted diseases])?
13. How does poly-drug use affect (fatal) overdoses?
14. How to reliably identify the main lethal substance in cases of drug-related deaths with multiple substance use?
15. How does poly-substance use influence the risk of dependence and mental health disorders?
16. How does poly-substance use contribute to increased risks of accidents and chronic diseases compared to single-substance use?
17. What are the economic costs of poly-substance use for society?

Responses to poly-substances use

18. What are the most effective prevention strategies to reduce the initiation and progression of poly-substance use (among adolescents and young adults)?
19. What diagnostic, predictive and preventive approaches are needed to reliably identify people at increased risk of developing a poly-substance use disorder at an early stage?

20. How can we improve public awareness regarding the risks of unknowingly consuming mixed or adulterated substances?
21. What are appropriate treatment programs for poly-substance use?
22. What are effective harm-reduction measures for poly-substance use?
23. What is the impact of poly-substance use on established harm-reduction measures?
24. How do interactions between different substances contribute to addiction development, and how can this be addressed in prevention and treatment strategies?
25. How does poly-substance use influence treatment outcomes?
26. What are the barriers to treatment and recovery for individuals engaged in poly-substance use?

Monitoring of poly-substance use

27. Which monitoring systems are needed to gain more knowledge of poly-substance use?
28. How can monitoring systems be further developed to capture temporal trends in poly-substance use more precisely and comprehensively?
29. Which coding strategies within the framework of international classification systems (e. g. ICD) are required to map drug-related deaths as a result of poly-substance use in such a way that both the substances involved, and their toxicological interactions can be documented in a transparent and analyzable manner?
30. How can it be ensured that data on poly-substance use is standardized, continuously collected and internationally comparable?
31. How can data linkage between health, social, and criminal justice systems be optimized to better understand and address poly-substance use?

Poly-substance use and health policy

32. How can drug policy reform address the complexities of poly-substance use while balancing public safety and harm reduction?
33. How do policy changes (e. g. legalization of certain substances) influence the prevalence of poly-substances use?
34. How can harm reduction policies be tailored to address the unique risks associated with poly-substance use?
35. What prevention strategies can mitigate the risk of poly-substance use in high-risk settings, such as prisons or nightlife environments?

Dimension 2: Consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are produced, marketed or sold together.

The influence of production, market and availability on poly-substance use

36. How does the consumption of certain substance combinations change as a result of market changes?
37. Which substances are substituted in the event of a shortage of certain unavailable substances?
38. What are the implications of using similar precursor chemicals to produce different substances on law enforcement?
39. What role does price, purity, and availability play in consumers' decisions to use multiple substances together?

40. How does the co-marketing of substances (e. g., selling cocaine and alcohol together) influence consumption patterns and related harms?
41. How does the darknet and cryptocurrency financing facilitate poly-drug use?
42. What impact do drug market disruptions (e. g., supply chain interruptions due to law enforcement actions) have on poly-substance use trends?
43. How does the availability of multiple substances from the same producers or markets influence poly-substance use patterns?

The influence of new synthetic substances on poly-substance use

44. What are the consequences of synthetic drugs used as adulterants in 'traditional drugs' such as cannabis, cocaine and heroin?
45. What role do synthetic cannabinoids and other new psychoactive substances (NPS) play as substitutes for traditional substances like cannabis or opioids?
46. What are the consequences of cannabis adulterated with synthetic cannabinoids?
47. What are the consequences of the use of synthetic cathinones instead of amphetamines or ecstasy?
48. What are the consequences of heroin adulterated with synthetic opioids (e. g. nitazene or xylazine)?

Market monitoring

49. How can we gain more information about poly-substance production and trafficking?
50. What data must be used in the future to analyze changes in the drug market?
51. What monitoring systems are most effective in detecting and responding to rapid changes in substance combinations?
52. How can forensic drug testing methods be further developed to enable routine and reliable detection of multiple substances in drugs traded on the black market?
53. Which data can we use to monitor the rise of drug producing laboratories?

(Policy-) reactions to the changing drug market

54. How can early warning systems be strengthened to detect emerging trends in substance mixtures and adulteration?
55. What new drug and health policy strategies are needed to respond to changes in the availability of substances and their production?
56. What policies can effectively disrupt the production and distribution networks that promote poly-substance use?
57. Do new prevention measures have to be developed due to the availability of new substances?
58. What interventions can prevent the rise of poly-substance use in response to shifts in drug market supply chains?
59. To what extent does the prohibition of the use of a legal substance lead to the use of an illegal substance?
60. How can policies be adapted to address the displacement of substances in response to enforcement actions, such as cannabis suppression increasing synthetic cannabinoid use?
61. What are the consequences of prohibiting NPS (single or generic groups) with regard to the rise of new drugs sold as NPS?

62. Do changes in prescription practices of legal medicines (e. g. benzodiazepines) result in substitution use of other (illicit) substances, like designer benzodiazepines or synthetic opioids?
63. How can we be prepared of the consequences on online sales of illegal substances?
64. How can healthcare systems be better prepared to address the complexities of poly-substance use related to market changes?

Dimension 3: Consideration of drug-related policies or interventions that target multiple substances or behaviors that are not specific to a single psychoactive substance.

Cross addiction interventions

65. What role do school- and community-based interventions play in addressing multiple risk behaviors simultaneously (school-based resilience work, parenting classes to address intergenerational harm)?
66. How can we leverage digital and social media interventions for broad-based prevention of poly-substance use and behavioral addictions?
67. To what extent can digital interventions - such as telemedicine, e-health applications or digital self-help ser-vices - contribute effectively to supporting recovery processes for poly substance use?
68. How to adapt risk perception, attitudes, and beliefs regarding poly-substance use / addictive behavior?
69. What are best practices for integrating harm-reduction strategies across poly-substance use in combination with behavior addictions?
70. How effective are interventions that combine pharmacological and behavioral treatments for individuals using multiple substances?
71. What integrated care models show the best outcomes for people with poly-substance use?

Cross addiction policies

72. How can national and local addiction strategies effectively combine efforts targeting the use of legal and illegal substances and addiction related behavior?
73. Which target groups and aspects must cross-addictions prevention approaches include in the context of poly-substance use?
74. How can evidence-based prevention models for (poly-)substance use - such as the Icelandic model, community capacity building approaches or participatory decision-making - be implemented?
75. What targeted support strategies can be developed to strengthen local communities in their comprehensive prevention work against poly-substance use, crime and mental health problems, taking into account the frequent interactions between these factors?
76. What are the best strategies to implement cross-addiction (substance and behavioral) treatment approach with poly-substance use?
77. What synergies can be developed between drug prevention, mental health and youth crime reduction programs?
78. What role can public health campaigns play in addressing the combined risks of alcohol, and illicit drug use?
79. How can synergies between alcohol, nicotine and drug policies and existing services be developed?

Dimension 4: recognizing that substance-related problems often share a common etiology and that understanding the biological or other common causes of the behavior is important for informing the development and assessment of responses.

Etiology of poly-substance use

80. What mechanisms and interactions between socio-economic factors - such as poverty, inadequate access to healthcare and housing instability - promote the development and maintenance of poly-drug addiction?
81. How does the use of multiple substances affect the educational and labor market participation of affected individuals, particularly with regard to functional performance, social integration and long-term opportunities for participation?
82. What gender-specific differences are there in the patterns of multiple drug use and the corresponding consequences (e. g. need for medical care, access to treatment, risk of overdose)?
83. What is the role of early-life trauma, abuse, or social exclusion in developing poly-substance use behaviors?
84. How do genetic predispositions and biological factors influence vulnerability to and likelihood of poly-substance use?
85. How can interventions address both biological predispositions and social determinants of poly-substance use simultaneously?
86. What are the socio-environmental risk factors (peer influence, social relationships, familiar background, cultural context, neighborhood) that promote poly-substance use?
87. How are motivational and socio-cognitive factors - such as individual attitudes, social norms, the influence of the social environment and subjective risk perception - related to the occurrence and maintenance of poly-drug use?
88. How can understanding shared etiology provide more effective, cross-substance prevention and intervention strategies?

5 Prioritization Exercise

5.1 Stakeholder Consultation Round 2

All 88 questions which were elaborated in round one were prioritized using a five-point scale ranging from "*no priority*" to "*high priority*". In addition, experts were asked to select the three most important thematic areas out of the 12 in which the questions were grouped. They were also invited to propose three potential research projects by providing a title and a brief description for each (see Annex II).

5.1.1 Data collection and response

Data collection was conducted using a questionnaire distributed via Limesurvey. The survey period began on 17th of June 2025 and ended on 8th of July 2025. Experts were invited to participate by e-mail, which included a link to the survey link.

The data collected was analyzed descriptively. Frequencies, mean and grouped medians were analyzed. Answers on open questions were complied. A total of 59 participants from 21 countries took part in the survey (see Annex II Table 30).

Experts from the following areas participated in the survey (see Table 31):

- Prevalence and patterns of drug use
- Drug-related deaths
- Drug-related infectious diseases
- Treatment
- Harm-reduction
- High-risk drug use
- Prevention
- Drug policy
- Law-enforcement
- Education and training
- Forensic toxicology
- Social determinants of drug use

Members listed below were represented in the survey (see Table 32):

- National Focal Point (NFP)
- EUDA's Scientific Committee
- EUDA's network on key indicators (a national expert)
- Joint Working Group on poly-drug use
- Academic/research institution
- Governmental body (other than NFP)
- National Institute of Legal Medicine and Forensic Sciences

5.1.2 Results

With regard to prioritizing the questions and areas, five different types of evaluation were carried out

- the five research questions with the highest priority overall;
- the three research questions with the highest priority per dimension (more information about the four dimensions see chapter 3.2);
- the research question with the highest priority per area;
- ranking of areas by priority;
- the five highest prioritized substance combinations

All answers given, along with the prioritized research questions, can be found in Annex II.

The **five questions with the highest priority overall** are listed below.

Table 1: The five questions with the highest priority overall

Question	Mean	Grouped median
How does poly-substance use affect (fatal) overdoses?	3,62	3,76
Which combinations of substances are prevalent among the group of high-risk drug users?	3,55	3,63
What are the consequences of heroin adulterated with synthetic opioids (e.g. nitazene or xylazine)?	3,43	3,54
What synergies can be developed between drug prevention, mental health and youth crime reduction programs?	3,37	3,45
How can early warning systems be strengthened to detect emerging trends in substance mixtures and adulteration?	3,36	3,43

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

The highest priority is given to the topic of poly-substance use and overdoses. The three questions rated as highest priority address aspects of this topic. A focus is laid on synthetic opioids. The question with the fifth highest priority also indirectly addresses this topic in relation to the EWS. The question with the fourth highest overall priority concerns synergies between addiction prevention, mental health and youth crime reduction programs.

In the following the **three highest prioritized questions for each dimension** are listed below. Furthermore, the five most important substance combinations can be found in Table 8.

Table 2: The three highest prioritized questions for Dimension 1: Consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are used in combination or in close succession

Question	Mean	Grouped median
How does poly-substance use affect (fatal) overdoses?	3,62	3,76
Which combinations of substances are prevalent among the group of high-risk drug users?	3,55	3,63
How can it be ensured that data on poly-substance use is standardized, continuously collected and internationally comparable?	3,33	3,48

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

Two issues considered most important overall come from dimension 1 and relate, as mentioned above, to overdoses and poly-substance consumption patterns among high-risk drug users. In addition, improving and securing appropriate monitoring is considered very important in this dimension.

Table 3: The three highest prioritized questions for Dimension 2: Consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are produced, marketed or sold together

Question	Mean	Grouped median
What are the consequences of heroin adulterated with synthetic opioids (e.g. nitazene or xylazine)?	3,43	3,54
How can early warning systems be strengthened to detect emerging trends in substance mixtures and adulteration?	3,36	3,43
Which substances are substituted in the event of a shortage of certain unavailable substances?	3,12	3,19

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

Two other questions that were rated as the most important overall come from dimension two and relate to the consequences of heroin adulterated with synthetic opioids and the EWS in connection with mixtures of substances. Another question that was rated as important also focuses more generally on the replacement of substances by others due to market changes.

Table 4: The three highest prioritized questions for Dimension 3: Consideration of drug-related policies or interventions that target multiple substances or behaviors that are not specific to a single psychoactive substance

Question	Mean	Grouped median
What synergies can be developed between drug prevention, mental health and youth crime reduction programs?	3,37	3,45
What integrated care models show the best outcomes for people with poly-substance use?	3,13	3,32
What role do school- and community-based interventions play in addressing multiple risk behaviors simultaneously (school-based resilience work, parenting classes to address intergenerational harm)?	3,12	3,23

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

One of the question considered most important overall comes from Dimension three and relates to synergies between addiction prevention, mental health and youth crime reduction programs. The other two questions considered most important in Dimension three focus on integrated treatment, prevention and harm minimization in relation to poly-substance use.

Table 5: The three highest prioritized questions for Dimension 4: substance-related problems often share a common etiology and that understanding the biological or other common causes of the behavior is important for informing the development and assessment of responses

Question	Mean	Grouped median
What mechanisms and interactions between socio-economic factors - such as poverty, inadequate access to healthcare and housing instability - promote the development and maintenance of poly-drug addiction?	3,07	3,17
What are the socio-environmental risk factors (peer influence, social relationships, familiar background, cultural context, neighborhood) that promote poly-substance use?	3,05	3,23
How can understanding shared etiology provide more effective, cross-substance prevention and intervention strategies?	2,97	3,11

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

None of the five questions rated as most important come from dimension 4. The three highest-priority questions in this dimension cover research into various aspects of the etiology of poly-substance use as a basis for effective prevention and treatment.

The evaluation of the **most important questions in each area** also corresponds to the prioritization results already mentioned. Table 6 is sorted by the order of the areas.

Table 6: The most important questions in each area

Area	Question	Mean	Grouped median
Dimension 1			
Nature and extent of poly-substance use	Which combinations of substances are prevalent among the group of high-risk drug users?	3,55	3,63
Harms and Consequences of poly-substance use	How does poly-substance use affect (fatal) overdoses?	3,62	3,76
Responses to poly-substances use	How can we improve public awareness regarding the risks of unknowingly consuming mixed or adulterated substances?	3,29	3,38
Monitoring of poly-substance use	How can it be ensured that data on poly-substance use is standardized, continuously collected and internationally comparable?	3,33	3,48
Poly-substance use and health policy	What prevention strategies can mitigate the risk of poly-substance use in high-risk settings, such as prisons or nightlife environments?	3,21	3,33
Dimension 2			
The influence of production, market and availability on poly-substance use	Which substances are substituted in the event of a shortage of certain unavailable substances?	3,12	3,19
The influence of new synthetic substances on poly-substance use	What are the consequences of heroin adulterated with synthetic opioids (e.g. nitazene or xylazine)?	3,43	3,54
Market monitoring	What monitoring systems are most effective in detecting and responding to rapid changes in substance combinations?	3,00	3,17
Market monitoring	How can forensic drug testing methods be further developed to enable routine and reliable detection of multiple substances in drugs traded on the black market?	3,00	3,11
Dimension 3			
(Policy-) reactions to the changing drug market	How can early warning systems be strengthened to detect emerging trends in substance mixtures and adulteration?	3,36	3,43
Cross addiction interventions	What integrated care models show the best outcomes for people with poly-substance use?	3,13	3,32
Cross addiction policies	What synergies can be developed between drug prevention, mental health and youth crime reduction programs?	3,37	3,45
Dimension 4			
Etiology of poly-substance use	What mechanisms and interactions between socio-economic factors - such as poverty, inadequate access to healthcare and housing instability - promote the development and maintenance of poly-drug addiction?	3,07	3,17

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

The **highest prioritized areas** can be found in Table 7. The rankings are sorted in descending order.

Table 7: Ranking of the most important research areas

Research area	N	Ranking
Harms and Consequences of poly-substance use	30	1
Monitoring of poly-substance use	25	2
Nature and extent of poly-substance use	21	3
Responses to poly-substances use	18	4
Poly-substance use and health policy	13	5
Cross addiction interventions	9	6
Etiology of poly-substance use	8	7
Cross addiction policies	6	8
The influence of new synthetic substances on poly-substance use	6	9
(Policy-) reactions to the changing drug market	4	10
Market monitoring	4	11
The influence of production, market and availability on poly-substance use	3	12

Reference: Expert Consultation Round two

Harms and Consequences of poly-substance use, Monitoring of poly-substance use, Nature and extent of poly-substance use, Responses to poly-substances use and poly-substance use and health policy are ranked as the five most important research areas. Areas focusing on the drug market are ranked with the lowest priority.

Another question concerned the **prioritization of substance combinations.**

Table 8: The five highest prioritized substance combinations

Combination	Mean	Grouped median
Alcohol with other psychoactive substances	3,56	3,61
Opioids and Benzodiazepines	3,55	3,60
Opioids and Stimulants	3,54	3,59
Cannabis with other psychoactive substances	3,08	3,30
Cannabis and synthetic cannabinoids	2,73	2,76

Note: 0 means no priority and 4 means high priority

Reference: Expert Consultation Round two

Alcohol combined with other psychoactive substances ranks first here. Although this combination does not fall entirely within the EUDA's mandate (it only does so if an illicit drug is involved), it reflects the epidemiological reality. Two of the five most important substance combinations assessed relate to opioids and another two to cannabis.

All other substance combinations mentioned by respondents can be found in Table 39. These responses show that there is a need to monitor not only illegal substances, but also illicit and legal substances such as tobacco/nicotine and alcohol, as well as medications.

6 Data sources, operationalizations and recommendations

This section provides an overview of existing data sources related to poly-substance use. Each data source is introduced with a "**Short description**", followed – where available – by the specific "**Definition of poly-substance use"** applied within that source. The analysis is based on the input of the JWGPU, guidelines of EUDA, standard tables and questionnaires available.

The "**Operationalization**" section outlines how the data source is or could be used to monitor certain aspects of poly-substance use. "**Stakeholders**" gives a rough impression of who owns or manages the data. The section "**Usefulness to answer (some aspects) of question**" links the data source to the 88 (research/policy) questions listed in chapter 4.2, indicating which questions the source may help address. "**Usefulness for topics related to poly-substance / behaviors with addictive potential use**" assesses whether the data source could also be applied within this broader definition also. The final "**Recommendations**" section offers suggestions for how to further develop or utilize the respective data source.

The chapter starts with the epidemiological key indicators (KI) defined by EUDA which are relevant for poly-substance use. **Prevalence and patterns of drug use** is one of the key indicators used by EUDA to assess the drug situation in Europe. It helps with understanding patterns of use, risk perceptions, social and health correlates, as well as the consequences of the use of illicit drugs. This indicator makes use of several tools including data from general and school population drug surveys, as well as innovative new approaches such as wastewater-based drug epidemiology, and targeted surveys, including web surveys[1].

The key indicator **Problem drug use** collects data on the prevalence and incidence of problem drug use at national and local level. The indicator, which has recently been revised mainly due to the changing drug situation, focuses on 'recurrent drug use that is causing actual harm (negative consequences) to the person (including dependence, but also other health, psychological or social problems), or is placing the person at a high probability/risk of suffering such harms'.[2]

The **Treatment demand indicator** collects information on the number of people entering treatment for a drug problem, provides insight into general trends in problem drug use and also offers a perspective on the organization and uptake of treatment facilities. 'Treatment demand data' come from each country with varying degrees of national coverage, principally from outpatient and inpatient centers' treatment records. The Treatment Demand Indicator is one of the key epidemiological indicators which contribute to the overall EUDA aim of providing objective, reliable and comparable information at a European level concerning drugs, drug addiction and their consequences.[3]

Drug-related mortality is a complex phenomenon, which accounts for a considerable percentage of deaths among young people in many European countries. The EUDA, in collaboration with national experts, has defined an epidemiological indicator with two components at present:

[1] Prevalence and patterns of drug use | www.euda.europa.eu [accessed: 15.06.2025]

[2] Problem drug use | www.euda.europa.eu [accessed: 15.06.2025]

[3] Treatment demand and treatment demand indicator (TDI) hub | www.euda.europa.eu [accessed: 15.06.2025]

deaths directly caused by illegal drugs (drug-induced deaths) and mortality rates among problem drug users.[4]

The following sections consist of data sources partly discussed in the JWGPU, partly based on a systematic review of all data sources available at EUDA and UNODC with a focus on poly-substance use and on the results of the expert consultation (round 1). Some recommendations in the following sections are based on the discussion in the JWGPU and are marked accordingly.

6.1 General Population Surveys (part of KI Prevalence and Patterns of Drug Use)

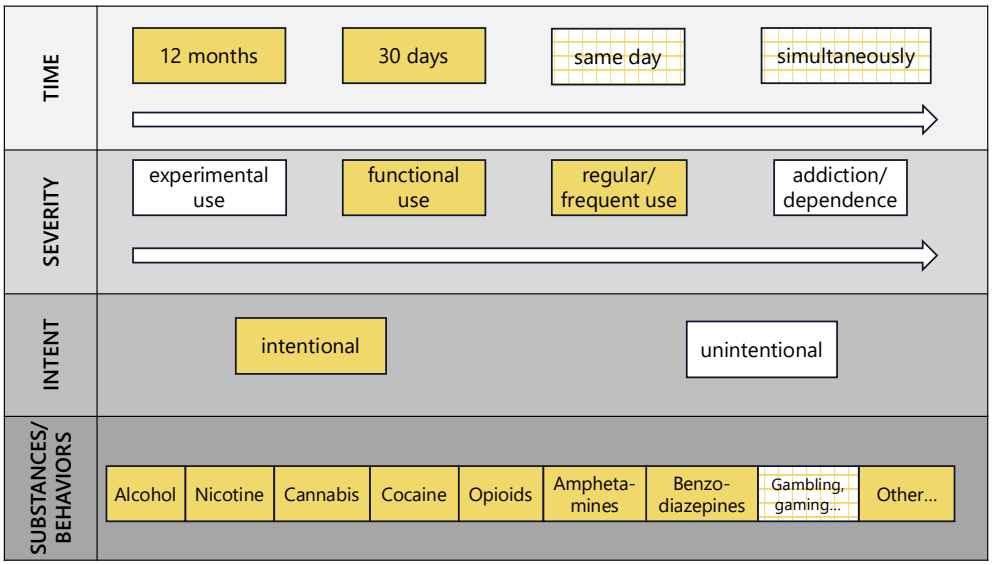
Short description: Harmonized data collection on drug use in the general population based on representative samples (EMCDDA 1999, EMCDDA 2002, EMCDDA 2013). The data is collected via General Populations Surveys (GPS) based on methodological guidelines elaborated in an ongoing international working group co-ordinated by EUDA.

Definition of poly-substance use: There is no common definition.

Operationalization: In principle, the use of more than one substance in the last thirty days may serve as a proxy for poly-substance use (JWGPU). Based on raw data, all possible combinations of two or more substances can be examined. Additionally, some countries collect information - albeit in varying formats - on the concurrent use of different drugs during the same occasion.

[4] Drug-related deaths and mortality | www.euda.europa.eu [accessed: 15.06.2025]

Figure 4: Dynamic definition model of GPS data



Note: Checkered lines indicate that the selected category is only queried in certain countries, but not in every country.

Reference: GÖG

Stakeholders: Institutions carrying out GPS.

Usefulness to answer (some aspects) of question: 1, 4, 5, 8, 12, 34, 36, 80, 82, 86

Usefulness for topics related to poly-substance / behaviors with addictive potential use: Some surveys include information (e. g. screening scales) on behaviors with addictive potential like gambling, gaming, social media etc.

Recommendations: It would be beneficial to analyse raw data on consumption patterns at a central level. To enable this, adjustments in data collection methods (central data collection of raw data at EUDA) or the implementation of dedicated research projects supported by EUDA may be required. An European Model Questionnaire (EMQ) module should be developed to harmonise questions for countries interested in capturing information on the concurrent use of multiple substances. Similarly, EMQ modules could be designed to address behaviors with addictive potential. Given the availability of extensive contextual data - such as sociodemographic information - it would also be feasible to explore the broader context of poly-substance use within the general population. Considering the established links between poly-substance use (including both drug use and addictive behaviors) and psychosocial problems, the development of an EMQ module addressing these issues, like the approach used in ESPAD, would be a logical and valuable step.

6.2 European School Survey Project on Alcohol and Other Drugs (part of KI Prevalence and Patterns of Drug Use)

Short description: The European School Project on Alcohol and Other Drugs (ESPAD) is a collaborative effort of independent research teams in more than 40 European countries and the largest cross-national research project on adolescent substance use in the world. The overall aim of the project is to repeatedly collect comparable data on substance use among 15–16-year-old students in as many European countries as possible. Harmonized data collection on drug use in school population on representative samples[5]. ESPAD exists for 30 years and is supported by EUDA (e. g. yearly assembly).

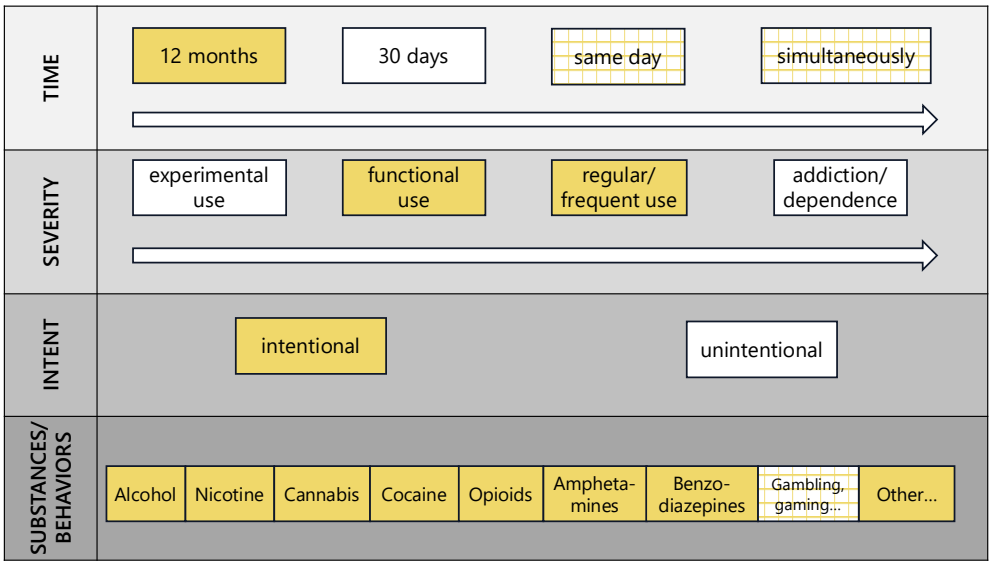
Definition of poly-substance use: There is no common definition.

Operationalization: The use of more than one substance in the last thirty days like in GPS cannot be used because the use in the last thirty days is not asked for all substances. To take use in the last year or in lifetime is possible but it must be considered that these might not be use of more than one drug on one occasion. This operationalization has been already used in several studies (Colasante et al. 2019) used. In addition, there in the ESPAD questionnaire used 2024 are some questions on specific combinations of substances:

- Cannabis mixed with tobacco
- Alcohol together with medicines in order to get high
- Alcohol and marijuana/hashish at the same time

[5] Welcome to ESPAD | www.espad.org [accessed: 15.06.2025]

Figure 5: Dynamic definition model of ESPAD data



Note: Checkered lines indicate that the selected category is only queried in certain countries, but not in every country.

Reference: GÖG

Stakeholders: Institutions/countries carrying out ESPAD, Steering committee of ESPAD.

Usefulness to answer (some aspects) of question: 1, 4, 5, 8, 12, 36, 80, 82, 86

Usefulness for topics related to poly-substance / behaviors with addictive potential use: ESPAD includes questions concerning gaming and gambling which can be used for analysis of poly-substance / behaviors with addictive potential use.

Recommendations: It would make sense to analyse raw data concerning substance related consumption patterns on central level as well as on poly-substance / behaviors with addictive potential use. Based on this analysis more specific combinations of drugs may be asked for.

6.3 European Web Survey on Drugs (part of KI Prevalence and Patterns of Drug Use)

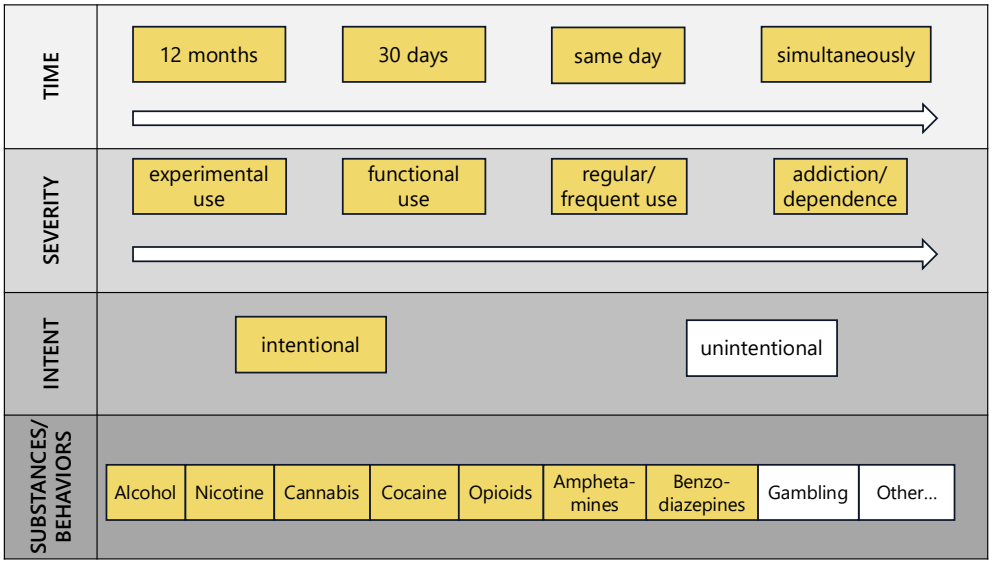
Short description: The European Web Survey on Drugs (EWSD) is an online survey coordinated by the EUDA. It targets adults (18+) who use or have used illicit drugs, aiming to gather detailed insights into drug use patterns across Europe.

Definition of poly-substance use: There is no common definition.

Operationalization: The same operationalizations are possible as in GPS. In addition, there is a question about substances concurrently used in the last 12 months. Concrete question "In the last 12 months, when you used Substance X, what other substances have you usually used on

the same occasion?" can be answered with multiple choice answer category with a list of substances (EUDA 2025a).

Figure 6: Dynamic definition model of EWSD data



Reference: GÖG

Stakeholders: Countries and institutions carrying out EWSD.

Usefulness to answer (some aspects) of question: 3, 4, 5, 36, 37, 42, 45, 59, 82, 86, 87

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None at the moment.

Recommendations: Beneath collecting data on poly-substance use patterns EWSD would be a good opportunity for in-depth questions concerning background and motivation for poly-substance use:

- Asking for specific reasons why there have been used more than one drug and for the motivation regarding the specific substance combinations.
- Asking if there is any specific intent for using special combinations.
- Asking where these substances that are consumed together are purchased.
- Asking how the unavailability of one substance does affect the consumption of another substance.

Furthermore, consideration could be given to extending the scope to include addictive behaviors (e.g. gaming, gambling).

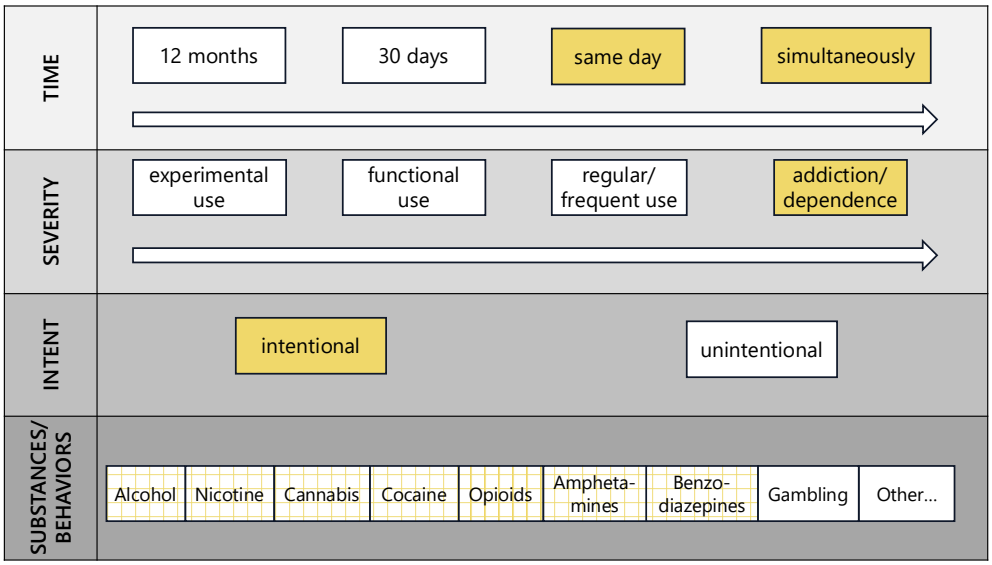
6.4 Key Indicator Problem Drug Use

Short description: Estimation of prevalence of high-risk drug use based on indirect methods (e. g. capture-recapture method) (EMCDDA 2003, Scalia et al. 2008, EMCDDA 2009). The estimates use in most cases routine data. There are methodological guidelines elaborated in an ongoing international working group co-ordinated by EUDA. Most estimates exist concerning problem opioid use[6].

Definition of poly-substance use: None, at the moment.

Operationalization: Overlap of estimates of different kinds of problem drug use.

Figure 7: Dynamic definition model of KI Problem Drug Use data



Note: Checkered lines indicate that the selected category is only queried in certain countries, but not in every country.

Reference: GÖG

Stakeholders: (Research) institutions carrying out prevalence estimates.

Usefulness to answer (some aspects) of question: 1, 3, 17, 82

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None, at the moment.

Recommendations: Considerations could be made on how to estimate the proportion of specific types of poly-drug use within broader prevalence estimates (JWGPU) – for example, determining the percentage of high-risk opioid users who also use cocaine. Additionally, it would be valuable

[6] Statistical Bulletin 2025 — problem drug use | www.euda.europa.eu [accessed: 20.06.2025]

to explore methodologies for estimating the prevalence of behavioral addictions and their overlap with (poly-)substance use disorders.

6.5 Key Indicator Treatment Demand Indicator

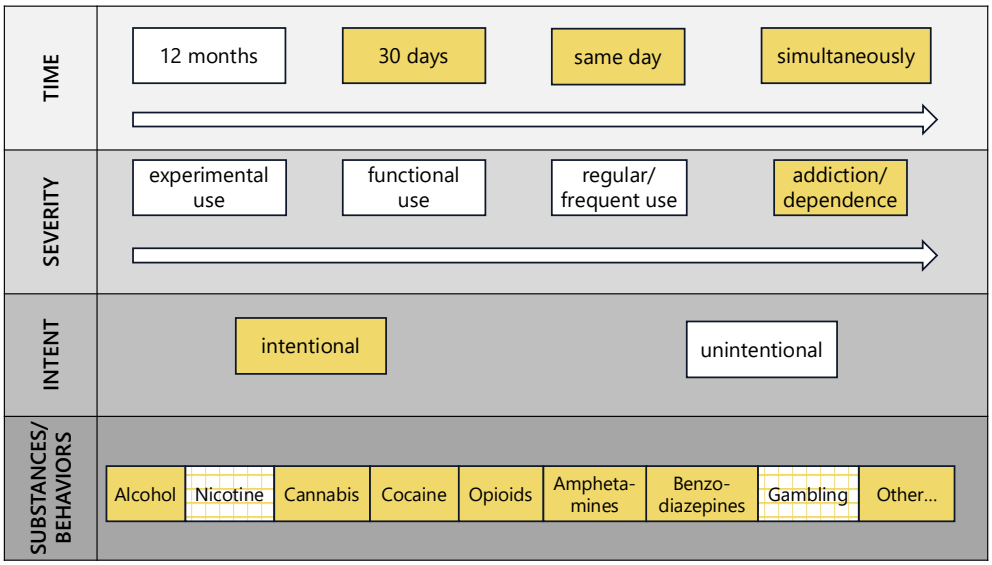
Short description: Harmonized data collection on clients in drug related treatment (EMCDDA 2012). Data collection focuses on patients with problems involving illegal drugs, but problems with alcohol and psychoactive medicines are also taken into account if an illicit drug is the primary drug. There are methodological guidelines elaborated in an ongoing international working group co-ordinated by EUDA. Several years ago, there was a special working group on poly-substance use.

Definition of poly-substance use (EUDA): The working group on poly-substance use mentioned above came to the following definition: 'Polydrug use problem' refers to when two or more drugs are involved in the drug problem of the client at the same time, and it is very difficult to assess which was the primary drug that caused the treatment entry. This concept will be used in a very restricted approach as in the ICD-10.

Operationalization: Polydrug use problem existing? Yes/No/not known. In addition to primary drug and secondary drugs. In addition to this special question on poly-substance use clients are asked for one primary drug (which is somehow contradictory to the concept of poly-substance use[7]) and for secondary drugs (all drugs in addition to the primary drug that causes problems except for tobacco).

[7] This contradiction led, for example, to Austria allowing the reporting of multiple primary drugs, which are then reduced to a single primary drug for transmission to the EUDA based on a 'drug hierarchy'.

Figure 8: Dynamic definition model of KI TDI data



Note: Checkered lines indicate that the selected category is only queried in certain countries, but not in every country.

Reference: GÖG

Stakeholders: Treatment facilities, EUDA (Standard Tables).

Usefulness to answer (some aspects) of question: 3, 5, 10, 12, 15, 17, 25, 36, 70, 80, 81, 82, 86

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None, at the moment.

Recommendations: In principle, detailed analyses of primary and secondary drug combinations are feasible using raw data. To gain meaningful insights into patterns of poly-substance use and poly-dependence, analyses at the EUDA level would be highly valuable. However, this would require adaptations in data collection practices or the implementation of dedicated research projects.

The current exclusion criterion -'contacts in which drug use is not the main reason for seeking help' - should be reconsidered. It may be worthwhile to include individuals presenting with primary alcohol problems and secondary drug issues, in order to more accurately capture the scope of poly-substance use. Also, tobacco/nicotine as problem drug should not be excluded. In some EU countries, such as Austria, there are ongoing initiatives to expand TDI data collection to include legal substances (e.g. nicotine, alcohol) and behavioral addictions. These efforts should be supported and encouraged at the EUDA level to ensure a more comprehensive understanding of addiction patterns across Europe.

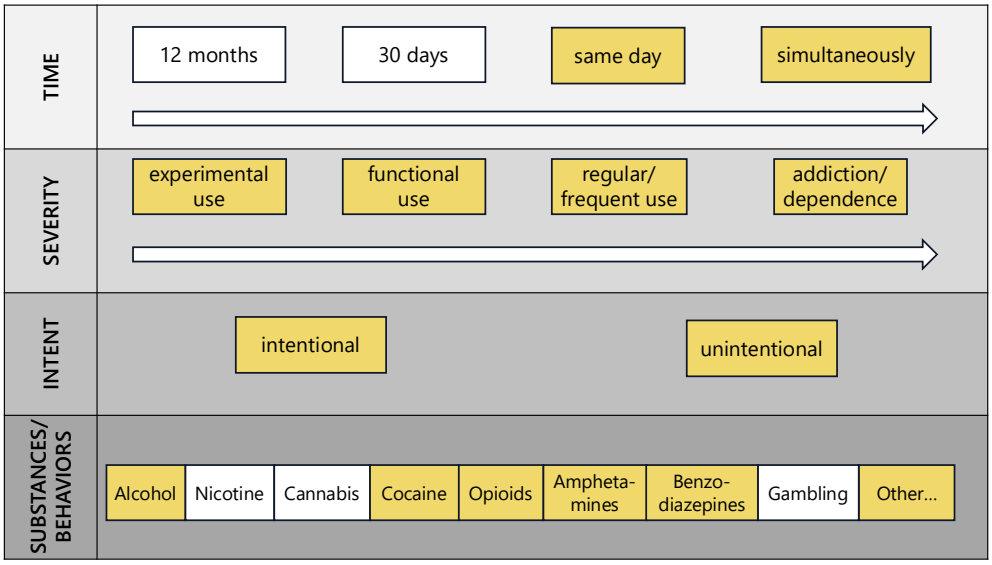
6.6 Drug related deaths (part of KI Drug-related deaths and mortality)

Short description: Harmonized data collection on direct drug related deaths (fatal overdoses). In some countries exist special registries concerning drug related deaths, in other countries the drug related deaths are extracted from the General Mortality Registry. There are methodological guidelines for both kind of data collection elaborated in an ongoing international working group co-ordinated by EUDA.

Definition of poly-substance use: None, at the moment.

Operationalization: EUDA Standard tables: Mentions of heroine, methadone, buprenorphine, cocaine, amphetamine, methamphetamine, MDMA, hallucinogens, cannabis, volatile substances, unspecified WITH alcohol only / WITH other opioids only (with or without alcohol) / WITH other opioids and other substances (with or without alcohol) / WITH other substances but no opioids (with or without alcohol). This operationalisation is possible in special registries only. General mortality registers are based on ICD-coding (mostly ICD 10) which does not offer many possibilities to analyse different kinds of substance combinations. Introduction of ICD 11 will solve this problem partly.

Figure 9: Dynamic definition model of DRD data



Reference: GÖG

Stakeholders: General Mortality Registries, Special Registries, Forensic Institutes, Toxicology, EUDA (Standard Tables).

Usefulness to answer (some aspects) of question: 1, 2, 3, 4, 5, 6, 13, 14, 17, 29, 36, 37, 40, 42, 44, 46, 47, 48, 59, 61, 62, 82

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations:

- Leverage existing toxicological data from Special Registries in various countries for collaborative scientific analyses (JWGPU).
- Support the implementation of Special Registries and harmonized data collection on toxicological data.
- Enhance the scope and quality of toxicological examinations (JWGPU).
- Prepare for the integration of GMR data using ICD-11, which offers greater potential for coding specific drugs, including prescription medicines (JWGPU).
- Combine data concerning drug related deaths with "social autopsies" (including history of prescription of OAT and other psychoactive medications) (JWGPU)

6.7 United Nations Office on Drugs and Crime (ARQ)

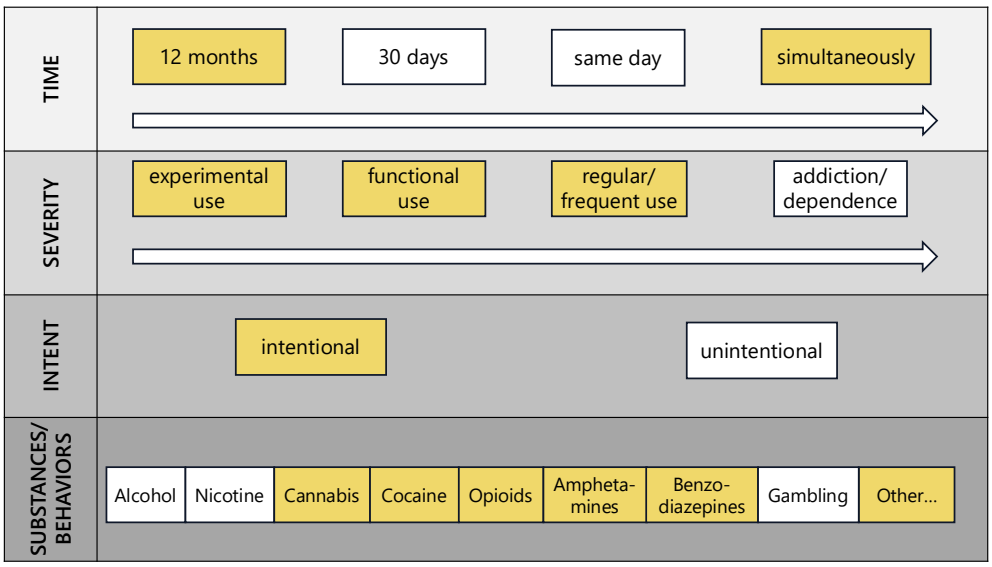
Short description: Yearly worldwide data collection on drug use on drug problems.

Definition of poly-substance use: See chapter 3.1.

Operationalization: In the Annual Report Questionnaire (ARQ) there are two questions related to poly-substance use.

- Up to three of the most common combinations of drugs consumed simultaneously or sequentially by drug users and the main methods of their consumption (i.e., routes of administration) in the general population (not in problem or high-risk drug users).
- Please provide the proportion (percentage) of the general population that has used more than one type of drug in the last 12 months (annual prevalence).

Figure 10: Dynamic definition model of ARQ data



Reference: GÖG

Stakeholders: UNODC.

Usefulness to answer (some aspects) of question: 1, 4

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: In the ARQ there is no data source explicitly mentioned.

> "Please specify the survey on which the information and data on polydrug use are based (preferably a household or general population survey). If they were based on a different survey or study to those reported above, please provide basic information about the survey or study, such as time frame, geographical coverage, methodology and the data sources used".

It is not possible to extract the information from Surveys based on the guidelines from EUDA. The data collection of UNODC and EUDA should be harmonised concerning poly-substance use.

6.8 Substance related police notifications

Short description: Data on drug law offences depending on the countries drugs legislation. EUDA collects data concerning possession/purchase/personal use, cultivation/production for personal use, cultivation/production not for personal use, cultivation/production/total; Whole-sale trading, street selling of minor quantities, other known supply, unspecified supply, use and supply, other types of unknown/missing, total (all type) for each drug, NPS and psychoactive medicines.

Definition of poly-substance use / poly-substance dealing: None, at the moment.

Operationalization: None, at the moment.

Stakeholders: Police; EUDA (Standard Table 11).

Usefulness to answer (some aspects) of question: 5, 17, 36, 37, 40, 42, 43, 49, 50, 53, 59, 61, 62

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: Definition and operationalization should be elaborated by the reference group using the dynamic definition model based on research questions prioritized – possibilities could be for example: notification concerning more than one substance at the same time or in a selected time period. Feasibility studies could check, to what extent poly-substance use is captured.

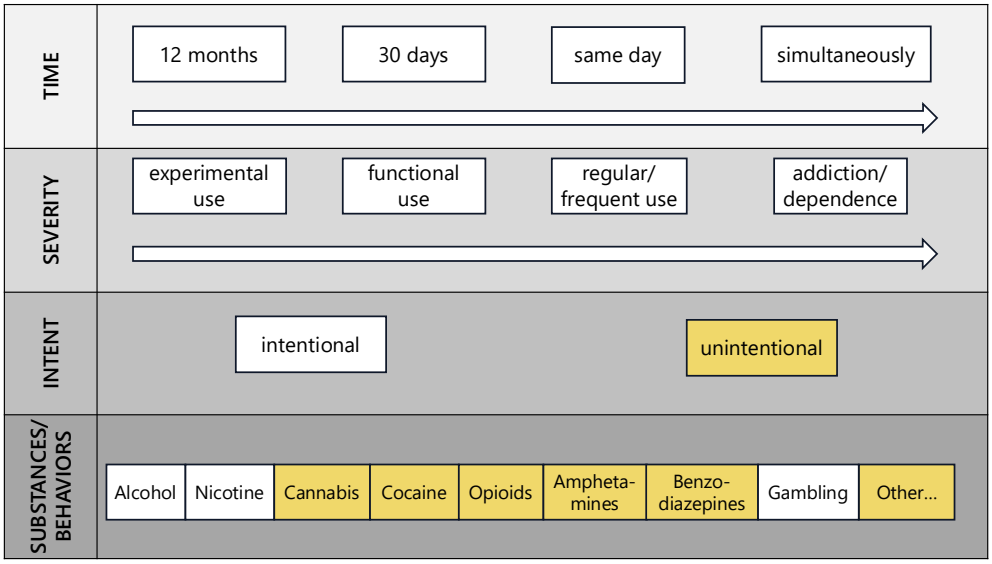
6.9 Seizures (including chemical analysis)

Short description: EUDA collects data concerning on quantity seized, number of seizures, retail, middle and wholesale concerning drugs, medicines, precursors and alcohol. Concerning purity and price information on sample size, minimum, maximum, arithmetic mean, weighted mean, median, mode and level of market are collected.

Definition of poly-substance use / poly-substance dealing: None, at the moment.

Operationalization: None, at the moment.

Figure 11: Dynamic definition model of data on Seizures



Reference: GÖG

Stakeholders: Police; EUDA (Standard Table 13, 14 and 16).

Usefulness to answer (some aspects) of question: 2, 5, 20, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53, 56, 61, 62

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: The definition and operationalization of poly-substance use should be developed by the reference group, using a dynamic definition model guided by prioritized research questions. Very important would be a routine documentation of seizures where substances are mixed especially when they are sold under a wrong name (e.g. heroin contaminated with synthetic opioids sold as heroin). Seizures could therefore be an important data source for unintentional poly-substance use. Another possibility could be focussing seizures of more than one substance at the same occasion. This could be used for documentation of co-marketing. Concerning prices there is a need for methodological guidelines to harmonise data collection.

6.10 European Drug Emergencies Network

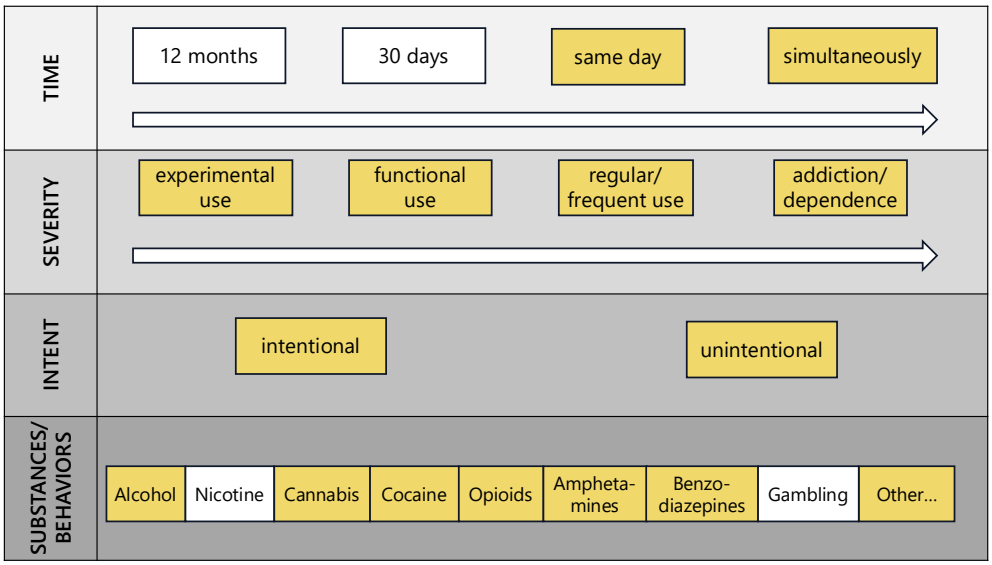
Short description: The European Drug Emergencies Network (Euro-DEN Plus) project involves the collection of data on emergency department presentations (or visits) with acute drug toxicity in participating countries in Europe. The project aims to provide detailed information on the nature and extent of harm associated with the use of drugs such as (but not limited to) cannabis,

cocaine, heroin and other opioids, amphetamines, polydrug use with alcohol, as well as non-medical (recreational) use of prescription and over the counter medicines, and new psychoactive substances[8].

Definition: None, at the moment.

Operationalization: Up to six "agents" can be selected from a list and further free text field.

Figure 12: Dynamic definition model of EURO-DEN Plus data



Reference: GÖG

Stakeholders: Hospitals taking part in EURO-DEN, EUDA

Usefulness to answer (some aspects) of question: 1, 2, 3, 4, 5, 6, 13, 36, 37, 40, 42, 44, 46, 47, 48, 59, 61, 62

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: Since seven agents can be selected an analysis of combinations would be possible. Analysis of combinations of agents. In addition, the data could be placed in context with data from medical histories, or additional qualitative data could be collected, e.g. on consumption motivations. Attempts should be made to expand the network to other hospitals and countries.

[8] European Drug Emergencies Network (E61uro-DEN Plus): data and analysis | www.euda.europa.eu [accessed: 20.06.2025]

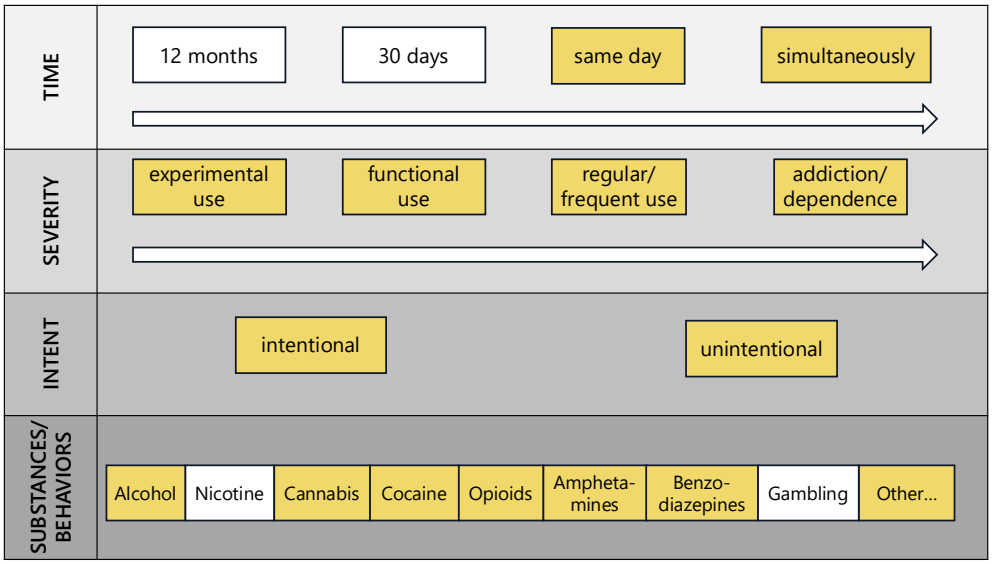
6.11 Drugs and Driving

Short description: Recent statistics reveal that more than 25,000 people die on European roads each year and many more are seriously injured. No less than a quarter of these deaths are estimated to be caused by drink-driving. And although alcohol is by far the most prevalent and well-documented psychoactive substance affecting drivers, concerns have been mounting about increasing reports of road deaths linked to illicit or medicinal drugs[9]. Although it seems that the problem might increase and there is data available in different forms as well as for traffic accidents under the influence of psychoactive substances as well as for driving under the influence of these substances there is no routine data collection on these topics, just studies dating 2012 (EMCDDA 2012).

Definition of poly-substance use: None, at the moment.

Operationalization: None, at the moment.

Figure 13: Dynamic definition model of data from the section of drugs and driving



Reference: GÖG

Stakeholders: Police

Usefulness to answer (some aspects) of question: 1, 4, 9, 82

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: To better assess the situation and interpret trends, measures should be taken to harmonise data collection on driving and traffic accidents under the influence of psychoactive substances. Consideration should be given to whether it would be useful to develop

[9] Drugs and driving | www.euda.europa.eu [accessed: 27.07.2025]

appropriate standard tables. Negative test results would also be important in this context. Special attention should also be paid to the simultaneous detection of several substances to cover the issue of poly-substance use. A repetition of the Driving under the influence of drugs(DRUID)-study from 2012 in all European countries with a focus on detection of more than one psychoactive substance would make sense.

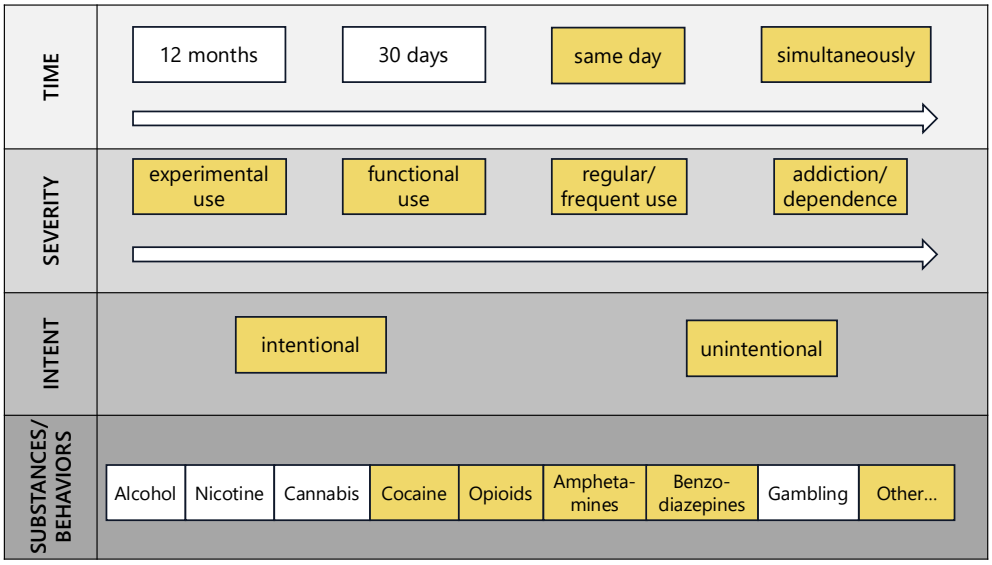
6.12 Syringe residues analysis

Short description: The European Syringe Collection and Analysis Project Enterprise (ESCAPE) project seeks to complement existing data on substances injected by users, by providing timely and local information derived from the analysis of the residual content of used syringes[10].

Definition of poly-substance use: None, at the moment.

Operationalization: Detection of more than one psychoactive substance in one syringe.

Figure 14: Dynamic definition model of ESCAPE data



Reference: GÖG

Stakeholders: Research teams and low threshold facilities, EUDA standard table 10.

Usefulness to answer (some aspects) of question: 2, 3, 5, 7, 36, 37, 42, 45, 47, 48, 59, 61, 62

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: Although it is stated that

[10] Syringe residues analysis (ESCAPE) | www.euda.europa.eu [accessed: 27.07.2025]

"A third of syringes contained residues of two or more drug categories, which may indicate that people who inject drugs often inject more than one substance or that syringes are reused. The most frequent combination is a mix of a stimulant and an opioid."[11]

No data on these combinations are published. Since EUDA maintains the platform of the ESCAPE project detailed analysis of combinations of substances detected should be done and published. There should be considerations if there are possibilities to estimate the proportion of "more substances in one syringe due to needle sharing". In addition, efforts should be made to extend ESCAPE to all European countries.

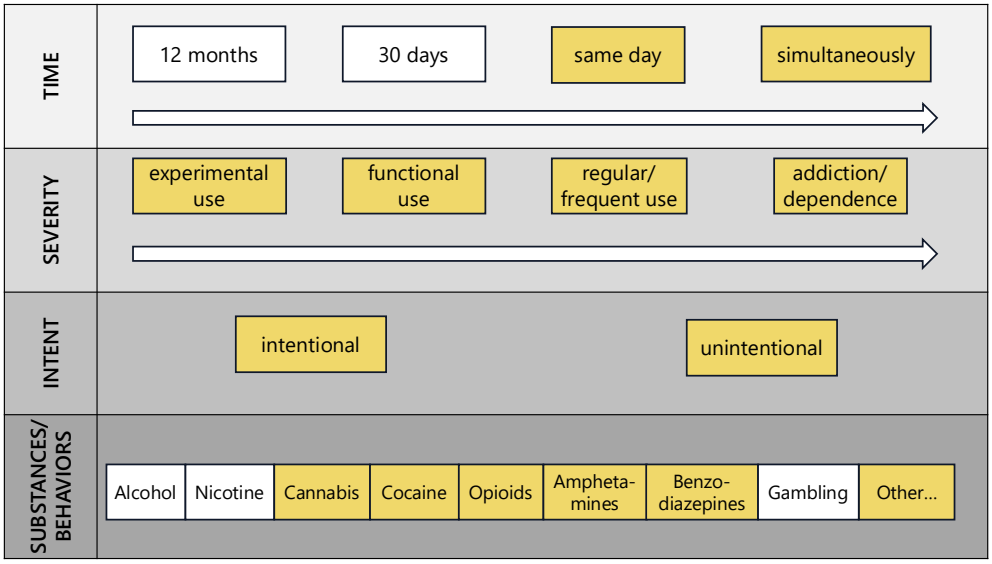
6.13 Drug Checking

Short description: National services which offer drug testing (e.g. on-site at music events or stationary at drop-in centers) on psychoactive substances. Trans European Drug Information (TEDI) network collects data on the outcomes of analytical testing conducted by all participating European drug checking services using a standardized, common data collection form[12]. Complete set of aggregated city-level data for every six months are available (EUDA 2025b).

Definition of poly-substance use: None, at the moment.

Operationalization: None, at the moment.

Figure 15: Dynamic definition model of Drug Checking Data



Reference: GÖG

[11] Most recent data from the European Syringe Collection and Analysis Project Enterprise (ESCAPE): data explorer, analysis and key findings | www.euda.europa.eu [accessed: 30.06.2025]

[12] More information about the TEDI Guidelines are available here: https://tedinetwork.org/wp-content/uploads/2023/10/TEDI_Guidelines_A5.pdf#page=70.04 [accessed: 30.06.2025]

Stakeholders: TEDI, different national institutions offering drug checking services.

Usefulness to answer (some aspects) of question: 1, 2, 4, 20, 30, 35, 39, 41, 46, 47, 51

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: Currently, the 'Summary' table shows the result from the user's perspective. The tables 'Main results' and 'Identified substances' show the chemical analyses carried out by each drug checking service[13] (EUDA 2025c). To be able to make assumptions regarding the unintentional poly-substance consumption of consumers, it would be useful to present the results at case level, so that it is clear what each substance was declared as when acquired and what was actually found in the chemical analysis. Besides information on the substance (e. g. purity, composition), which are shown routinely in the three tables ('Summary', 'Main results', 'Identified substances'), drug checking could be a good opportunity to gather more information on context and qualitative data (settings of use, combinations of substances, place and type of purchase, price etc.). It would make sense to implement a common EUDA and TEDI-working group to decide which kind of context data should be implemented in routine data collection and for which purposes special qualitative research projects are necessary.

In general, drug checking services should be expanded. Against the backdrop of new (emerging) drug trends such as synthetic opioids, it would also be necessary to expand into other settings (e.g. low-threshold areas such as drug consumption rooms). Poly-substance use should always be documented as well.

6.14 Poison Centers

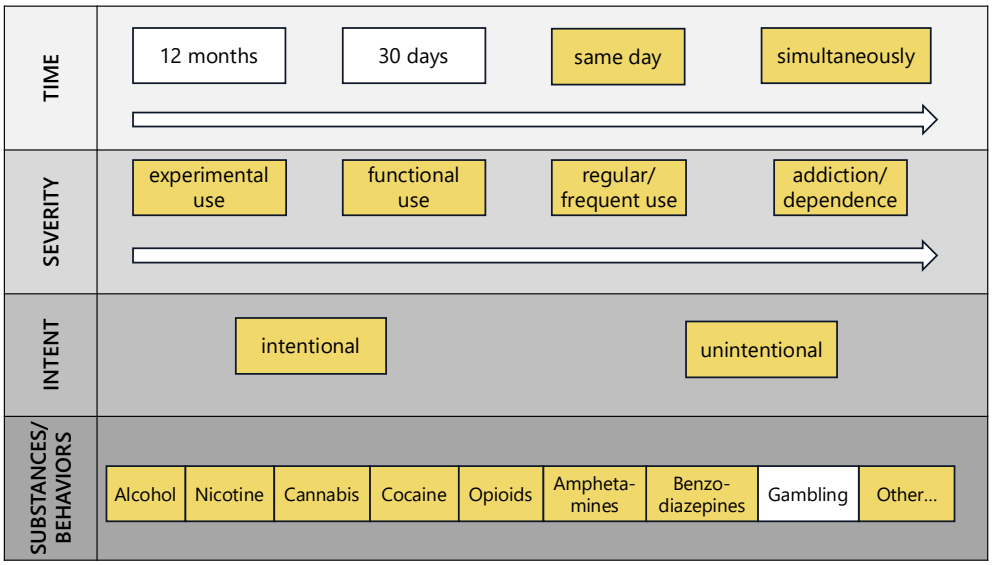
Short description: National services which can be contacted (e.g. telephone hotline) in cases of poisoning by medical staff or by general population.

Definition of poly-substance use: None, at the moment.

Operationalization: Normally, the question is asked which substances were taken at the same time.

[13] Methods and definitions of the drug checking data in the Statistical Bulletin of the EUDA regarding the tables 'Main results', 'Substances identified' and 'Summary results' are available here : https://www.euda.europa.eu/data/stats2025/methods/drug-checking_en [accessed: 30.06.2025]

Figure 16: Dynamic definition model of data from Poison Centers



Reference: GÖG

Stakeholders: National poison centers.

Usefulness to answer (some aspects) of question: 1, 2, 30

Usefulness for topics related to poly-substance / behaviors with addictive potential use: None.

Recommendations: Although many poison centers are networked with national EWS and, in principle, collect data on which substances were taken together. Unfortunately, there is no systematic data collection at central level in this regard. A working group should address this issue in close cooperation with the EWS and EDAS.

6.15 European Questionnaire on Drug Use among People living in prison

Short description: The European Questionnaire on Drug Use among People living in prison (EQDP) is a standardized questionnaire developed by the EUDA to assess drug use patterns, risk behaviors, health status, and service access among people in prison. It includes both lifetime and recent (e.g. 30-day) substance use, covering a wide spectrum of licit and illicit substances, with data collected both for use inside and outside prison settings.

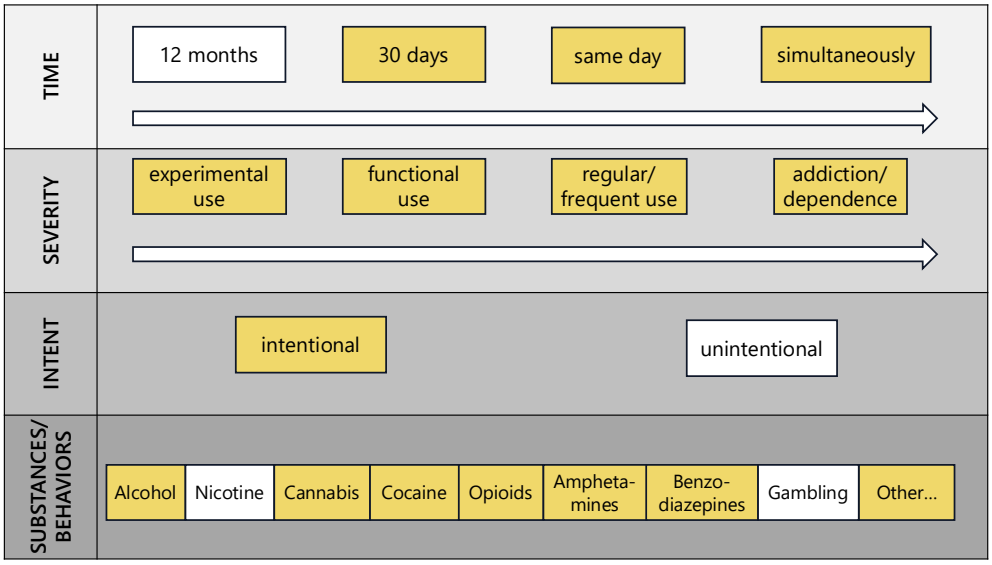
Definition of poly-substance use: None, at the moment.

Operationalization: Poly-substance use can be operationalized through the EQDP using responses to questions on:

- Recent use (30 days) of 20+ specific substances outside prison (Section 2.3).
- Use of the same 20+ substances during imprisonment (Section 2.5 and 2.9).

- Frequency and patterns of use of individual substances, which can be aggregated to construct indicators such as:
    - Any use of ≥2 substances within a given time window (e.g. past 30 days)
    - Specific combinations (e.g. opioids + benzodiazepines)
    - Co-use in and outside of prison

Figure 17: Dynamic definition model of EQDP data



Reference: GÖG

Stakeholders:

- EUDA – developer and coordinating institution
- National prison health authorities and research teams – implement data collection

Usefulness to answer (some aspects) of question: 1, 3, 5, 12, 36, 37, 42, 44, 45, 46, 47, 48, 61, 62, 82

Recommendations: The questionnaire already contains a lot of information on poly-substance use, which should also be analysed. It might also be possible to include questions on the motivation for poly-substance use. Efforts should be made to implement the EQSDP in as many prisons in European countries as possible.

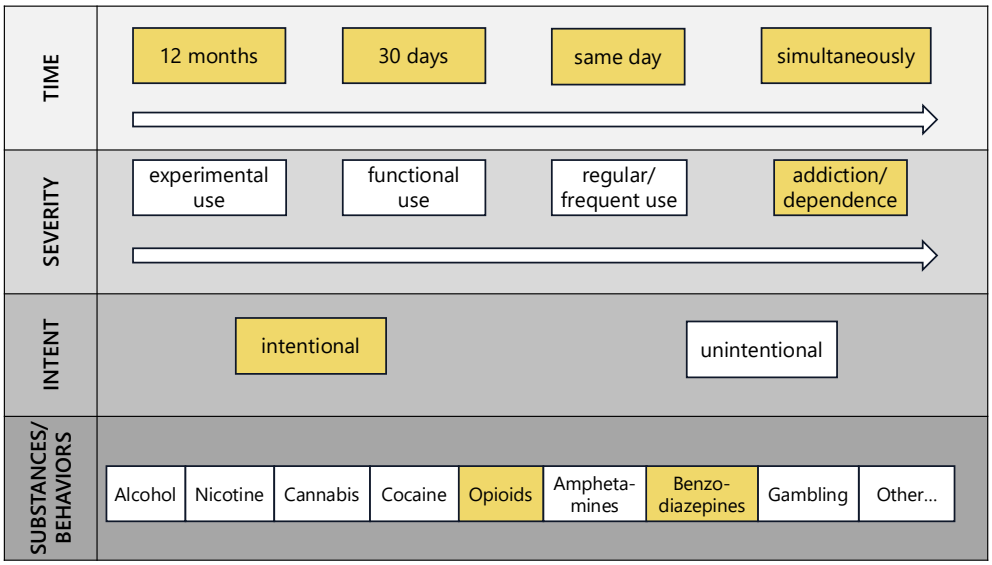
6.16 Prescription data of psychoactive medicines

Short description: Data on prescription of psychoactive medicines.

Definition of poly-substance use: None, at the moment.

Operationalization: Prescription of more than one psychoactive medicine for one person (e. g. OAT medication and Benzodiazepines).

Figure 18: Dynamic definition model on prescription data of psychoactive medicine



Reference: GÖG

Stakeholders: Health insurance, pharmacies, pharmaceutical industry.

Usefulness to answer (some aspects) of question: 3, 5, 62

Recommendations: In general, until now EUDA has no focus on prescription data, therefore a study on the availability of this data in European countries with a focus on prescribing more than one psychoactive medication to the same person (with a focus on OAT clients) would make sense (JWGPU).

7 Conclusions and proposal to move forward

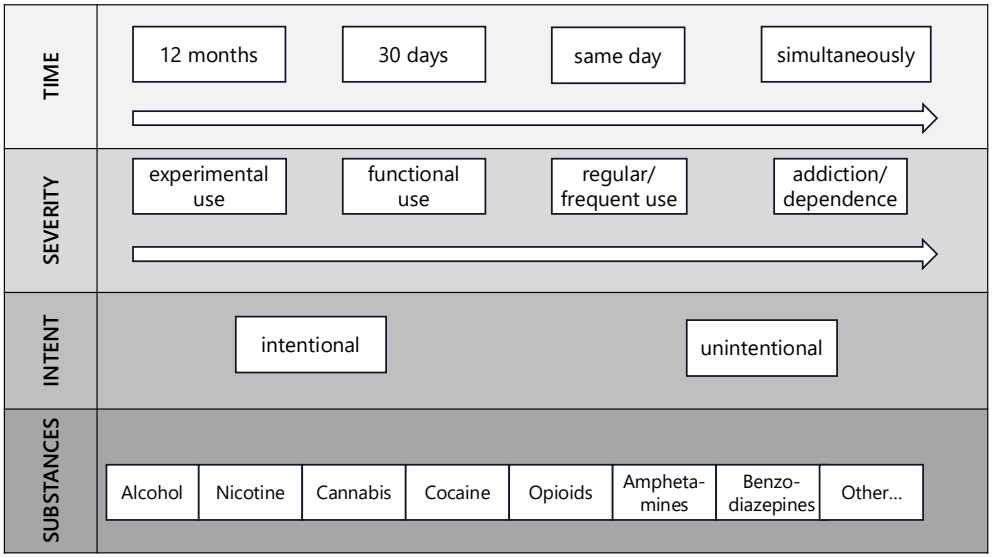
It should be noted that this report presents the results of a 'dimensioning' project with very limited resources. Some analyses therefore had to remain superficial and would need to be explored in greater depth. Nevertheless, we have succeeded in identifying key aspects and priorities which are presented below.

7.1 A dynamic definition of poly-substance use is needed

The concept of poly-substance use should encompass the key components outlined above: The **use of more than one psychoactive substance** in a **defined timespan**, whether **illicit** or **legal**, **intentional** or **unintentional**, **addictive** or **non-addictive**.

This very broad definition must be specified and narrowed down to answer specific questions. A so-called dynamic definition is therefore proposed, which varies depending on the question (research focus). It is important that all aspects of the broad definition are always considered in the respective definitions. To reach a definition that fits the respective (policy/research) question, the following scheme can be applied (see Figure 19).

Figure 19: Scheme for dynamic definitions of poly-substance use



Reference: GÖG

7.2 Broaden the scope to legal substances and addiction related behaviors (gambling, gaming)

In the JWGPU it was discussed that in a broader sense, also behaviors with addictive potential – such as gaming or gambling – should also be considered within the conceptual framework. Literature shows a clear relation between substance and behavior related addictions. In the expert consultation the importance of legal substances and especially psychoactive medicines was mentioned very often. For example, asked about the most important substance combinations, alcohol combined with other psychoactive substances ranges on place one. Unfortunately, this broadening goes beyond the mandate of the EUDA with a focus on illicit drugs. But changes in the data collection (e. g. TDI) to monitor cases with primary problems with legal drugs and secondary problems with illicit drugs would be a step in this direction. In addition, EUDA should support initiatives to widen well developed and implemented data sources like TDI and GPS to all relevant substances and behaviors to avoid that each country "invents the wheel new (in different ways)" which is a waste of resources and leads at the end to data with limited comparability.

7.3 Steps to move forward

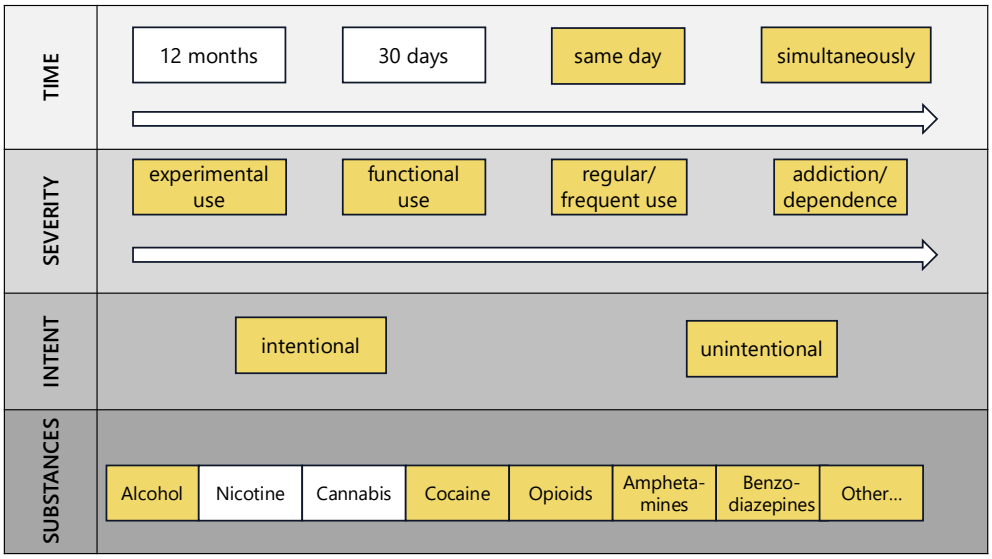
7.3.1 Further development of recommendations

Chapter 6 compiled many recommendations for specific data sources relevant to poly-substance use. As stated above, due to restricted resources within this project, it was not possible to elaborate these data sources in detail. They should be seen as a good starting point for discussing the proposals in working groups (e.g. working groups on key epidemiological indicators) to refine them and issue contracts for the development of an implementation concept.

7.3.2 Focus on poly-substance use among high-risk drug users with relation to overdoses

Since resources are limited, activities have to be prioritized. From the perspective of the experts surveyed, consumption patterns involving combinations of substances in the context of high-risk drug use are a top priority with regard to overdoses have a clear priority (see section 5.1.2). One reason behind this priority is the threat of (new) synthetic opioids as part of intended or unintended poly-substance use. The first step is to define poly-substance use in concrete terms for this research area (see Figure 20).

Figure 20: Dynamic definition in context of poly-substance use of high-risk drug users related to overdoses



Reference: GÖG

7.3.3 Data Sources

Since there is a strong link of this research area to threat analysis and warnings (EWS, EDAS) it is recommended that focus be placed on data sources that offer the possibility of observing these consumption patterns in real time to provide input for warnings also. Such data sources are:

- Drug related deaths
- European Drug Emergencies Network
- Syringe residues analysis
- Poison centers

In principle, drug checking could provide information in this area too. But many drug checking services focus on party settings and recreational drug use. However, this only covers a portion of drug users (and focuses not on high-risk drug users). Therefore, it would be necessary to expand into other settings (e.g. low-threshold areas such as drug consumption rooms).

Data sources that can be used to observe poly-substance use in individuals with high-risk drug use with a time delay are:

- European Web Survey on Drugs
- Key Indicator Problem Drug Use
- Key Indicator Treatment Demand Indicator
- European Questionnaire on Drug Use among People living in prison
- Prescription data of psychoactive medicines

Additional data sources focusing especially on unintended poly-substance use:

- Drug Checking
- Seizures (including chemical analysis)

A lot of the data sources mentioned above are already part of EWS (and EDAS). This can be used respectively all activities concerning this data sources should be done in co-operation with the EWS and EDAS network.

7.3.4 Gaps and information needs

In general, a lot of data is available already but not fully analyzed concerning poly-substance use. Another gap is that two of the most important data sources with potential real time data (EURO-DEN Plus, ESCAPE) have limited coverage (see chapter 6.10 and chapter 6.12). In addition, drug checking could provide important information on poly-substance use if it were extended to the target group of high-risk drug users (e.g. through low-threshold services and stationary at drop-in centers) (see chapter 6.13). Prescription data has hardly been utilized to date and could be an important source for poly-substance use of OAT clients, for example (see chapter 6.16).

There is still little research on the interactions of specific substances or specific substance combinations, particularly with regard to the underlying motives and consequences – including their relation to behavioral addictions and legal substances (alcohol, psychoactive medicines). Furthermore, there are no sufficient studies on the long-term consequences of poly-substance use on a physical, psychological and social level.

There is a need for more in-depth qualitative research and analysis of the socioeconomic, sociocultural, and sociodemographic conditions and life context as well as individual realities of life related to poly-substance use, to gain a deeper understanding of its underlying causes, motives and motivations (e. g. self-medication, weakening/reinforcement of effects).

7.3.5 Six concrete steps to move forward

- Initiate and financially support a research project on poly-substance use for countries where detailed information from **toxicological analyses of drug-related deaths** is available. Part of this project should also include surveys of the social environment or an investigation of the circumstances surrounding the death (social autopsy) and prescription of psychoactive medicines. The project should also be used to elaborate proposals to improve data collection.
- Initiate and financially support a research project on poly-substance use based on data from the **treatment demand indicator**. The project should also be used to elaborate proposals to improve data collection.
- Initiate and support **cross-indicator analysis** concerning poly-substance use (put data from different data sources (e. g. DRD, EURO-DEN and treatment) in comparison to get a validated picture of the situation concerning poly-substance use).
- Check possibilities to improve coverage of the **European Drug Emergencies Network** and Syringe residues analysis – e. g. financial support of activities to implement this data sources and to put a focus on poly-substance use.

- Check possibilities to support implementation of **drug checking** in low threshold settings including a (central) data collection which allows analysis of poly-substance use patterns.
- Initiate and financially support **qualitative more research** regarding underlying causes, motives and motivations on poly-substance use. Based on this, development of standardized qualitative research in this for Europe-wide implementation and exploration.

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Annex I

In the following all the answers are given in round one of the Expert Consultation are listed below. The first group of questions (About you) shows the participating country, area of expertise and/or memberships of the participants (see Table 9, Table 10, Table 11). Group of question two, three, four and five focuses on four different dimensions (see chapter 4.1.1). The last group of question lists additional recommendations of the participants (see Table 27, Table 28, Table 29).

About you

Table 9: Participating Countries

Countries
Austria
Belgium
Bulgaria
Croatia
Czech Republik
Finland
France
Germany
Hungary
Italy
Luxembourg
Malta
Netherlands
Portugal
Slovenia
Spain
Sweden
United Kingdom

Reference: Expert Consultation Round one

Table 10: Area of expertise

Area of expertise	N
Prevalence and patterns of drug use	32
Drug-related deaths	21
Drug-related infectious diseases	16
Treatment	28
Harm-reduction	16
High-risk drug use	19
Drug policy	14
Law-enforcement	3
Other	Psychiatric comorbidity among SUD; National Focal Point data collection; Forensic Toxicology; Drug use in Prison

Reference: Expert Consultation Round one

Table 11: Membership (to EUDA)

Member	N
National Focal Point	33
EUDA's Scientific Committee	6
EUDA's network on key indicators (a national expert)	23
Joint Working Group on poly-drug use	4
Academic/research institution	18
Governmental body (other than NFP)	6
Other	NGO on substance use & mental health; TDI/treatment expert

Reference: Expert Consultation Round one

Dimension 1: Multiple substances used in combination or closed succession

Table 12: Answers to question one of Dimension 1

In your opinion, considering consequences of poly-substance use which questions are relevant for research and/or policy this dimension? (Example: How can we reduce overdose deaths due to poly-substance use?)
How can we manage the pharmacological treatment in poly-substance use? Most of the evidence (RCT) is based in persons that only have a SUD, and this is not usual in clinical.
What is the best management for people that came with polysubstance use but the demand of treatment is related to only one? (i.e. cocaine + alhol + cannabis....but the main demand of treatment is for cocaine)
What is the best management for people that came with polysubstance use but the demand of treatment is related to only one? (i.e. cocaine + alhol + cannabis....but the main demand of treatment is for cocaine)
How does poly-substance use impact the effectiveness of addiction treatment programs?
What are the long-term health consequences of combining specific substances, such as alcohol and opioids or stimulants and depressants?
How does poly-substance use relate to mental health disorders?
What are the prevalence and patterns of poly-substance use among different population groups (e.g., age, gender, socioeconomic status)?
Which combinations of substances are most frequently used together, and how do these patterns vary across regions and demographics?
What are the short- and long-term health consequences of poly-substance use, including both physical and mental health outcomes?
How does poly-substance use contribute to increased risks of overdose, accidents, and chronic diseases compared to single-substance use?
What are the key risk and protective factors associated with poly-substance use at the individual, family, and community levels?
How does early initiation of substance use influence the likelihood of poly-substance use in later stages of life?
What is the role of co-occurring mental health disorders in the development and maintenance of poly-substance use patterns?
How does poly-substance use affect healthcare utilization and what are the associated economic costs for health systems
What are the most effective prevention strategies to reduce the initiation and progression of poly-substance use among adolescents and young adults?
How can harm reduction policies be tailored to address the unique risks associated with poly-substance use?
What interventions are most effective in reducing overdose deaths linked to poly-substance use?
How does poly-substance use interact with prescription drug misuse, particularly opioids and benzodiazepines?
What role do digital environments (e.g., online markets, social media) play in promoting or facilitating poly-substance use?

In your opinion, considering consequences of poly-substance use which questions are relevant for research and/or policy this dimension? (Example: How can we reduce overdose deaths due to poly-substance use?)
How can surveillance systems be improved to better monitor trends in poly-substance use over time?
What is the impact of cultural and socioeconomic factors on poly-substance use patterns across different countries?
How do policy changes (e.g., legalization of certain substances) influence the prevalence and risks associated with poly-substance use?
What is the relationship between poly-substance use and engagement in other risky behaviors, such as unsafe sex or reckless driving?
How can educational programs be designed to increase awareness of the dangers of poly-substance use among vulnerable populations?
What are the barriers to treatment and recovery for individuals engaged in poly-substance use?
How can data linkage between health, social, and criminal justice systems be optimized to better understand and address poly-substance use?
How can we better analyse data related to drug related deaths in relation to polydrug use? What drugs are commonly used together?
Are there any particular characteristics of people who are polydrug users?
What drugs that are used concurrently are detected in cases of overdose hospital admissions?
What are the social, and health consequences of polydrug use?
Which drugs can be considered substitutes, and which can be considered antagonists?
To what extent is polydrug use responsible for overdose deaths?
What are the consequences of polydrug use for people who consume drugs?
Does polydrug use act as a gateway to using other drugs?
How can we reduce infectious due to poly-substance use? (HIV, HCV, Sexual Transmitted diseaes...)
How can we reduce driving deaths due to poly-substance use? (cannabis + alcohol +...)
How can we reduce violence due to poly-substance use?
How can we reduce the use of Laughing gas (NO) ?
How can we improve the analysis of drug-related deaths to better understand the role of polysubstance use?
Which substances are most frequently used together, and what are the patterns of their combined use?
Are there specific demographic or behavioural characteristics associated with individuals who engage in polysubstance use?
What substances are most commonly detected in hospital admissions due to overdose or other drug-related emergencies?
How does the concurrent use of multiple substances affect the likelihood and severity of overdose?
What role does alcohol play in exacerbating risks associated with polysubstance use, including overdose and violent behaviour?
How does polysubstance use impact adherence to and success in drug treatment programs?
What are the implications of polysubstance use for harm reduction strategies, including naloxone distribution and supervised consumption services?
How does polysubstance use vary across different population groups, including by age, gender, and socioeconomic status?
What are the long-term health and social consequences of chronic polysubstance use, and how can they be mitigated?
How do different substances interact pharmacologically (both at the pharmacokinetic and pharmacodynamic level)?
What are the most common combinations of substance use?
How can we increase knowledge on the behavioral effects of combined/simultaneous use of different substances?
What are motives for using substances simultaneously or in succession?
Which preventive interventions can effectively reduce poly substance use?
What is the impact of poly substance use on dependence risk, cessation of use or relapse? (e.g. cannabis and tobacco use)
How can we reduce overdose hospitalisations?

In your opinion, considering consequences of poly-substance use which questions are relevant for research and/or policy this dimension? (Example: How can we reduce overdose deaths due to poly-substance use?)
How we can reduce poly-drug usage in "normal" life (drivers, detected with more than one drug of abuse in the blood)?
How we can reduce poly-drug use in high schools (alcohol + stimulants, alcohol + SCs)?
What harm reduction strategies besides needle exchange and OST treatment are most effective in preventing negative health outcomes from poly-substance use?
What are the most common combinations of substances used in poly-substance use?
And how can interventions be tailored to those specific patterns?
How does poly-substance use impact the overall health system, and what resources are required to address it?
How can drug policy reform address the complexities of poly-substance use while balancing public safety and harm reduction?
How can research on poly-substance use better reflect diverse populations, including ethnic minorities, LGBTQ+ individuals, and rural communities?
What combination of substances/substance groups among (high risk) drug users are prevalent?
Which combinations cause the most harm in terms of patient health, public harm?
What does the prevalence of polydrug use mean for existing treatment programmes?
Should there be special programs for poly drug use or is there still a need, now or in the future, for programs that focus on one (dominant) drug?
When leaving the concept of primary drug/ secondary drug, is it possible to develop a conceptual framework, algorithm, or hierarchy?
How does the use of multiple substances affect the risk of overdose compared to one substance?
What are the most common used combination of substances?
How should treatment for poly-sustance use be approached?
How should we code poly-drug use deaths? If coded as F diagnosis, we do not get important data.
Why are users not afraid of using more substances at the time?
What is poly-drug use bringing in the terms of getting high - why the need of some many drugs at the time?
How is alcohol working in poly-drug use - sedative or stimulating?
What is the relation between polysubstance use and dependence?
What is the prevalence of polysubstancne use in the population?
What is the proportion of polysubstance use without health and social negative consequences) and polysubstance abuse with health and/or social negative consequences)?
Is the shift from use of one substance to polysubstance use increasing or decreasing individual and/or social problems associated with drug use?
In which combination of polysubstance use is the increase, where are the risks after transition to polysubstance use decreased (e.g. from fentanyl, or diacetylmorphine to methadone and benzodiazepines?)?
What are the most common substance combinations, and how do they impact health and behavior?
What harm reduction and treatment strategies are most effective for people who use multiple substances?
What treatment strategies are most effective for people who use multiple substances?
How does poly-substance use influence the risk of dependence, relapse, and mental health disorders?
How can we reduce psychiatric comorbidities due to poly-substance use?
How can we address poly-substance use linked to gaming/gambling disorder?
Which prevention approaches are the most efficient concerning poly-substance use, based on evidence?
Which are the best practices concerning poly-substance use including alcohol?
What are the most common combinations of poly-substance use?
What are primary motivations for polydrug use among different population?
Are certain personality traits or mental health conditions associated with higher risk of polydrug use?
What are the short- and long-term neurological effects of combining specific substances (e.g., alcohol and stimulants, opioids and benzodiazepines)?
How can we improve the identification of individuals at risk of developing a poly-substance use disorder in order to offer targeted prevention and treatment strategies?
What interventions are most effective in preventing behavioral risks such as drug-impaired driving or needle sharing in poly-drug users?

In your opinion, considering consequences of poly-substance use which questions are relevant for research and/or policy this dimension? (Example: How can we reduce overdose deaths due to poly-substance use?)
What role do social factors, such as trauma, homelessness, and mental health conditions, play in the initiation and progression of poly-substance use?
The approach to poly-substance use (simultaneous and sequential) based on General Population Surveys (GPS) is based on the collection of information on the use of each substance, considered individually. Considered from the user's point of view, this is a summative approach, where it is possible to know the characteristics of poly-substance use (which substances are used), but also the simultaneity, frequency and intensity of this poly-substance use, the circumstances (contexts and reasons) in which the use of each substance occurs and its consequences (symptoms). A complementary research strategy to GPS could consist of an intentional approach, which would start from the knowledge of the use occasions in which the user "builds" his range of use options of more than one substance with the perspective of achieving certain objectives. Possibly adding questions such as: "Have you ever used more than one illicit substance on the same occasion?" and seeking to deepen information on which substances, looking for witch effects, having what consequences on that same occasion. This approach should include both licit and illicit substances.
What are the most common substance combinations of polydrug use?
Are there differences in health and/or social consequences by different substance combinations used?
What are the exposing factors of polydrug use?
What are the conseguences of specific patterns of poly-drug use, in specific populations and specific contexts?
What is the dimension of the problem, concerning each type of consequences, in specific populations and contexts?
Which factors are involved concerning the probability of ocurring these consequences (in specific populations/contexts)?
Which factors are involved concerning the gravity of the consequences (in specific populations/contexts)?
How are these consequences being approached/managed (in specific populations/contexts)?
Are the responses in place adequate and sufficient (concerning specific consequences/populations/contexts)?
Why do users associate drugs (for specific associations, groups and contexts)?
What are the users beliefs about risks involved in specific associations?
What are the different motives or poly-substance use?
How these different motives contribute to different substance use patterns?
why are particularly drug deaths related to poly-drug use on the rise?
which other problems occur with regular multiple use of stimulants (particularly cocaine/crack) and sedatives (opioids, benzodiazepines etc.)?
which long-term effects of multiple use of 'party drugs' such as cocaine, ketamine, MDMA and amphetamine ca be identified?
which risks are associated with combined use of cannabis with other psychoactive substances?
which risks are associated with combined use of alcohol with other psychoactive substances?
Which drugs are used in combination and why specifically these?
What are the underlying reasons for using multiple drugs?
Are the drugs used simultaneously or one after another to, e.g., treat side effects?
Is poly-drug use something that is pursued all the time or is it something that occurs occasionally?
The approach to poly-substance use (simultaneous and sequential) based on General Population Surveys (GPS) is based on the collection of information on the use of each substance, considered individually. Considered from the user's point of view, this is a summative approach, where it is possible to know the characteristics of poly-substance use (which substances are used), but also the simultaneity, frequency and intensity of this poly-substance use, the circumstances (contexts and reasons) in which the use of each substance occurs and its consequences (symptoms). A complementary research strategy to GPS could consist of an intentional approach, which would start from the knowledge of the use occasions in which the user "builds" his range of use options of more than one substance with the perspective of achieving certain objectives. Possibly adding questions such as: "Have you ever used more than one illicit substance on the same occasion?" and seeking to deepen information on which substances, looking for witch effects, having what consequences on that same occasion. This approach should include both licit and illicit substances.
What role do prescribed drugs play in poly-substance use and deaths? Here prescribed means legitimately prescribed to the person

In your opinion, considering consequences of poly-substance use which questions are relevant for research and/or policy this dimension? (Example: How can we reduce overdose deaths due to poly-substance use?)
What role do diverted or street prescribed drugs play in poly-substance use and deaths? This does not ncluded fake drugs
Does poly-substance use negatively impact treatment outcomes?
Does poly-substance use need different treatment interventions compared to single substance problems?
What are the sources of the prescribed drugs involved in polysubstance user? Can this be better understood from prescription data
What is the role of alcohol in poly-substance treatment and drug related deaths?
What treatment modalities work best for people with poly-substance use?
What role does poor quality care play in the prevalence of misused prescribed drugs?
How can we reduce overdose deaths due to poly-substance use?
How can we reduce driving car accident ?
How can we reduce multi-substance addiction?
How can we evaluate drug impaired driving due to poly-substance use (e.g. alcohol-drug of abuse?
What are the main associations between psychoactive medicines and drugs of abuse? (in drug impaired driving and post-mortem samples
What is the extent of the phenomenon, what are the health risks and health impacts, is there a need for specific interventions in treatment and care, or need for specific prevention messages?
What are social, environmental and psychological/biological determinants of poly-substance use?
How could prevention offers better address polysubstance use, and how do they need to be tailored to different groups? Which interventions need to be developed and evaluated upon their (cost-)effectiveness?
How to protect the youth and prevent the onset of (risky) poly-substance use?
What are the health and social consequences specific to poly-substance use and how can these be reduced?
What are security aspects of poly-substance use (e.g. increased aggressiveness when using alcohol with cocaine)?
How to adapt both drug treatment and alcohol addiction treatment services to poly-substance use?
How to adapt other services, for instance harm reduction offers, to poly-substance use? (e.g. DCRs)
Which are the economic consequences of polysubstance use (and how can these be reduced)?
Understanding poly-substance use: What motivations lead to poly-substance use and what do people actually use? Are there discernable user groups (i.e. by age, gender, use motivation, used substances...)?
What use patterns are associated with those? And what harms are associated with those patterns?
How does poly-substance use influence the outcome of treatment? i.e. is it harder to stabilise a person with poly-substance use, is the retention rate better / worse, is it harder to reach abstinence, to keep up abstinence up etc.?
What is the impact of poly-substance use on established harm-reduction measures? Is naloxone as effective when a person has overdosed on opioids, benzodiazepines and alcohol? What safer use tips are still valid, what needs to be changed?
Does poly-substance use lead to other riskier behaviour, i.e. re-using or sharing use paraphernalia?
Obviously: how can we reduce overdose deaths due to poly-substance use?
How do we address poly-substance use in drug policy?
What social and structural factors contribute to poly-substance use, and what policy measures could help mitigate these influences?
How effective are current treatment approaches for individuals with poly-substance use, and what evidence-based interventions could be improved or newly developed?
How do interactions between different substances contribute to addiction development, and how can this be addressed in prevention and treatment strategies?
What are the short- and long-term health consequences of poly-substance use, and how do they differ from the effects of single-substance use?
Which are the most common combinations of substances, used together or in succession according to age and gender?
Is poly drug use of a recreational or dependence nature?
Which are the combinations of substances that are used on a recreational?
Which are the combinations of substances that are used on a dependency level?

In your opinion, considering consequences of poly-substance use which questions are relevant for research and/or policy this dimension? (Example: How can we reduce overdose deaths due to poly-substance use?)
Is poly drug use done on an individual level or a group level?
Which are the substances used first in cases where drugs are not mixed and used simultaneously?
Why is the second drug used? To enhance, to counter for side effects etc...
Does poly drug use lead to adverse affects which would not be observed if one single drug is used?
Which substance in a poly drug use scenario would you consider problematic and for which of them you would ask for support?
What are the impacts of detoxification from Poly drug use?
What types of polysubstance use is the most harmful
What type of polysubstance use is associated with which types of harm
What substances taken in which time frames cause harm
What is the extent of intentional and unintentional polysubstance use
What categories of poly-substance use are most common (what drugs are combined)? How can we gain more knowledge on use besides EWSD?
Alcohol is an important drug in combinations – to what extent does alcohol play a role in poly drug use? This is requested in ST-tables on for example deaths but difficult to obtain data.
Non-medical use of narcotics medicines needs to be highlighed more in general and in poly-substance use.
Are the symptoms of a specific overdose (e.g. opioids) less clear when serveral drugs are involved?
For those with problematic drug use (PDU) how does poly-substance use look like and what drugs are involved?
What forms of poly-drug use causes most harms and treatment needs?
How can we gain fast information on new drug combinations given the ever changing drug market?
Around halv of those with a diagnosis for dependence in Sweden has no specified primary substance which indicates poly substance use (problems) – how can we learn more about this group?
We need more knowledge and support to the health care service on the F19-code. When and how to use etc.
What is the most appopriate starting point for responses and treatment when it comes to poly-drug use – to adress the specific combination or to adress the most risky and addictive substance?

Reference: Expert Consultation Round one

Table 13: Answers to question two of Dimension 1

What forms of poly-drug use should be monitored in this context?
All forms of polydrug use must be monitored: main drug of demand of treatment, of course, but all the other also .
Simultaneous Use of Alcohol and Illicit Drugs:
Combination of alcohol with cannabis, cocaine, MDMA, or amphetamines, which increases risks of overdose, accidents, and impaired judgment.
Alcohol and Prescription Drug Use:
Concurrent use of alcohol with benzodiazepines, opioids, or other sedatives, which can significantly depress the central nervous system.
Stimulant and Depressant Combinations:
Use of substances like cocaine or amphetamines with depressants (e.g., alcohol, benzodiazepines), which can mask intoxication and increase overdose risks.
Opioid and Benzodiazepine Use:
This combination is particularly lethal and should be closely monitored due to its role in overdose deaths.
Polydrug Use Involving New Psychoactive Substances (NPS):
Monitoring the use of synthetic cannabinoids, cathinones, and other emerging substances often consumed with traditional drugs.
Prescription Stimulants and Alcohol/Illicit Drugs:
Use of ADHD medications (e.g., methylphenidate) with alcohol or illicit stimulants for recreational purposes.
Combination of Multiple Illicit Substances:
Use of Performance-Enhancing Drugs with Recreational Substances:

What forms of poly-drug use should be monitored in this context?
Monitoring trends where anabolic steroids or cognitive enhancers are used alongside recreational drugs.
Polydrug Use in Party/Club Settings (Chemsex):
Use of multiple substances (e.g., GHB, methamphetamine, MDMA) for prolonged sexual and social activities.
Poly-Substance Use Involving Over-the-Counter (OTC) Medications:
Misuse of OTC drugs (e.g., cough syrups with codeine) in combination with alcohol or illicit substances.
Combination of Hallucinogens with Other Drugs:
Use of LSD, psilocybin, or ketamine with stimulants or depressants, which can increase psychological risks.
Co-Use of Opioids with Stimulants (Speedballing):
Opiates together with stimulant substances
The presence of alcohol in incidents of hospital admissions due to intoxication
Alcohol together with psychotropic medications
NPS as adulterants in 'traditional' drugs such as heroin and cocaine
All illicit drugs, but more importantly, legal substances such as alcohol and tobacco.
Alcohol+any illicit drug+ cannabis (in those countries when the use of recreative cannabis is legal)+ sedatives (benzodiazepines...)
Always prescribed drugs must be monitorized, mainly sedatives and opioids,
The using of Laughing gas (NO) with more alcohol
Alcohol in hospital admissions due to intoxication
Alcohol and psychotropic medications
New Psychoactive Substances as adulterants in traditional drugs (i.e. heroin, cocaine)
Alcohol and stimulants (e.g., cocaine)
Alcohol and synthetic cannabinoids
Cocaine combined with opioids
Question is not clear. I would say combinations of different licit and illicit drugs, but as there are many possible combinations, the focus should be on common combinations (like cannabis and tobacco, or cocaine and alcohol, or depressant drugs and alcohol), which should appear from epidemiological studies or registration data.
Number of DRD
Number of hospitalisations due to poly-drug intoxication
Number of poly-drug drivers in the country
Alcohol, Opioid and Benzodiazepine Combination
Alcohol, Opioid and Benzodiazepine Combination
Stimulant and Opioid Combination
Cocaine and MDMA (Ecstasy) Combination
Heroin and Fentanyl Combination
Because these patterns differ over time and place, all kinds of existing forms of poly-drug use should be monitored.
All
Non fatal overdoses, fatal overdoses, combination of drugs with the same effect, presence of alcohol.
Is EUDA interested also in monitoring and research of polysubstance use of llicit substances (alcohol, nicotine, and/ or prescribed medications, which are used in recommended doses)? This part of polysubstance use is associated with the most frequently occurring negative health and social consequences for the individuals and society? It is the most frequent form of polysubstance use in the EU. Monitor and compare: - Polysubstance use of llicit substances (typically alcohol and sedatives and others). - Polysubstance use of the combination of illicit and licit substances. - Polysubstance use of illicit substances.
Opioid and benzodiazepine co-use,
Stimulant and depressant combinations,
Alcohol and other depressants,
Polysubstance use in nightlife settings,
Synthetic drugs with other substances.
poly-substance use including alcohol

What forms of poly-drug use should be monitored in this context?
injectable drugs
NPS
Stimulants and depressants/prescription drugs combinations (e.g. cocaine + benzodiazepines)
stimulants and alcohol
gambling and polydrug use
syntetich cannabinoids/NPS/stimulants
The most common combinations (based on GPS data) have been cannabis with cocaine or ecstasy or hallucinogenic mushrooms. It is also worth highlighting those who used three substances: cannabis, ecstasy and cocaine. Include the use of any substance together with the (excessive) use of alcohol and/or tobacco.
Different combinations of licit and illicit drugs.
The different possible associations between alcohol, tobacco, cannabis and cocaine would be important, and also alcohol and energy drinks, for their prevalence, than alcohol and psychoactive medicines. For exploratory purposes, other types of associations, with different drug groups.
Both concurrent use and when different substances are used for replacement.
Use of any kind of psychoactive substance in combination with another psychoactive substance (incl. alcohol)
The most common combinations (based on GPS data) have been cannabis with cocaine or ecstasy or hallucinogenic mushrooms. It is also worth highlighting those who used three substances: cannabis, ecstasy and cocaine. Include the use of any substance together with the (excessive) use of alcohol and/or tobacco.
All combinations
Illicit drugs and licit prescribed drugs +/- alcohol
Illicit drugs and legitimately prescribed drugs +/- alcohol
Illicit drugs and diverted prescribed drugs +/- alcohol
Prescribed drug combinations +/- alcohol
diverted prescribed drugs +/- alcohol
Opioids-alcohol-psychotropic drugs-THC
Opioids-psychotropic drugs with CNS depressant action
Alcohol and drugs of abuse
Opiates and psychoactive medicines
Cannabis and any other drug of abuse
Cannabis and benzodiazepines
Benzodiazepines and antidepressant
Drugs and alcohol, alcohol and psychoactive medicines (tranquillizers, opioid analgesics), drugs and medicines
Most common combinations (depending on population): - Heroin & Cocaine / Cannabis & Cocaine / Alcohol & Cannabis / Alcohol & Cocaine / prescription drugs misuse & alcohol / prescription drugs misuse & other drugs (heroin, cocaine, cannabis)
I'm not sure what the question means, sorry.
Simultaneous Poly-Drug Use – The consumption of multiple substances at the same time or within a short timeframe, leading to potential drug interactions (e.g., combining opioids with benzodiazepines, which increases the risk of respiratory depression).
Sequential Poly-Drug Use – The use of different substances over time to enhance or counteract effects (e.g., using stimulants like cocaine to offset the sedative effects of alcohol or opioids).
All poly drug use should be monitored.
Both when it is a mix of legal/prescribed and illegal substances.
Both when the substances are taken together (ex: snowballing) or when taken independently.
In Hungary, alcohol deserves special attention, as it is widespread due to its cultural acceptance. The general public is not aware of the related harms. Problematic use is often only discovered in the very advanced stages of alcoholism. Therefore, in the combination of alcohol and other substances, users may not necessarily consider alcohol as part of the "drugs" they consume. All forms of poly-substance use deserve attention, but due to the reasons mentioned above, the following seem particularly important: 1. Alcohol combined with other "party drugs" (recreational users) 2. Alcohol combined with any other substances (both problematic and not-yet-problematic users)
Ideally All forms e.g. across and within substance types and based on different patterns of use. Maybe more realistically the types causing the most harm or causing harm to the most people.

What forms of poly-drug use should be monitored in this context?
Poly-substance use with the most harmful modes; injecting and smoking.
Combinations that are extra harmful (such as opioids and alcohol)
Drug use (e.g. ketamine, cocaine, ...) in relation to alcohol use
Drug use in relation to medical drug misuse (e.g. benzodiazepine, artane, pregabaline, opioids, ...)

Reference: Expert Consultation Round one

Table 14: Answers to question three of Dimension 1

What type of data/information would be needed to answer the questions you formulated above?
Good practices based in real world of patients. Is very relevant to know the interactions and side effects between pharmacological treatment and the poly-drug use (i.e. alcohol + benzodizepines in case of insomnia for cannabis withdrawal...)
Prevalence and Usage Patterns: Population-based surveys on lifetime, past-year, and past-month use of various substances. Data on simultaneous versus sequential use of substances. Frequency and quantity of substance use, including preferred combinations.
Demographic and Socioeconomic Data: Age, gender, ethnicity, educational level, and socioeconomic status of users. Geographic location and urban/rural differences.
Health and Clinical Data: Hospital admission records related to poly-substance use (e.g., overdoses, accidents). Data on mental health comorbidities and co-occurring physical health conditions. Mortality data, especially overdose deaths linked to multiple substances.
Behavioral and Psychosocial Data: Information on risk-taking behaviors (e.g., unsafe sex, reckless driving) associated with poly-drug use. Data on motivations for poly-substance use (e.g., recreational, coping mechanisms, social influence). Levels of anxiety, depression, and other mental health indicators among poly-substance users.
Policy and Environmental Data: National and regional drug policies, including regulations on prescription medications and recreational drugs. Availability and accessibility of substances (both legal and illegal). Marketing and media influences, including exposure through digital platforms.
Healthcare Utilization and Treatment Data: Access to and utilization of treatment services for substance use disorders. Retention rates and outcomes of interventions targeting poly-substance users. Barriers to seeking help and treatment gaps.
Cultural and Contextual Information: Cultural norms and attitudes toward substance use and poly-drug consumption. Peer and family influences on initiation and maintenance of poly-substance use.
Economic Data: Economic costs associated with healthcare, criminal justice, and productivity losses due to poly-substance use. Data on individual spending patterns on substances.
Law Enforcement and Criminal Justice Data: Arrests and legal actions related to substance possession, use, or distribution. Data on drug-related crime and recidivism rates.
Longitudinal and Trend Data: Repeated cross-sectional surveys to assess changes over time. Cohort studies to examine causal relationships and long-term effects.
Qualitative Data: Interviews and focus groups with users to explore underlying reasons for poly-substance use. Perspectives of healthcare providers, policymakers, and law enforcement officials.
Digital Environment and Online Behavior Data: Patterns of purchasing substances through online markets. Social media influence and online communities promoting poly-substance use.
Educational and Prevention Program Data: Effectiveness and reach of existing prevention initiatives. Knowledge and attitudes toward poly-substance use among different population groups.

What type of data/information would be needed to answer the questions you formulated above?
Data on New and Emerging Substances: Surveillance of new psychoactive substances (NPS) and changing trends in usage. Early warning system data to detect emerging threats.
More rigourous data from toxicology reports for drug related deaths
More data related to adulterants in 'traditional' substances
More data related to demographics of polysubstance users
Data related to hospital admissions
TDI data related to polydrug use should be more specific
Surveys wiht users, toxicology data, etc
Pattern of drug use in last 30 days (way, amount and first or second...).
General population survey (GPS)
More rigorous data from toxicology reports for drug-related deaths
More data on adulterants in traditional substances, including NPS in heroin and cocaine
Data on hospital admissions related to alcohol and drug intoxication, including specific substance combinations
Improved monitoring of the concurrent use of stimulants and opioids, including data from forensic toxicology reports.
Better tracking of stimulant and opioid co-use, including forensic toxicology findings
data at many levels: experimental studies (animal and human), epidemiological studies (and survey data), clinical studies, registration data (e.f. treatment, emergencies), toxicological data, evaluative studies
Epidemiological data, Healthcare and Treatment data, Pharmacological data, Behavioral and Psychological data, Public health data, Policy and Legal data, Social and Economic data and Qualitative data (Users` stories, knowledge, way of living, etc.)
In order not to lose information about specific drugs, collect the information at the lowest possible level, i.e.: fentanyl in combination with 3-mmc instead of opioids in combination with stimulants.
We need information from the Mortality registry, The Treatment Demand Indicator and prevalence of consumption studies
Definition of most potent drugs, responsible for death. "Cocktails" that are usually used - why and how do they work? Are those combinations a standard, or randomly used?
Population studies.
Data minnig and analytical work on already existing historical data from the EMCDDA key indicators datasets.
E.g. comparisons between TDI and DRD data with respect to primary and secondary drug of use. Look at the trends with regard to changes of the increase of polysubstane use.
Harmonised ata from emergencies based on toxicological evidence.
Prevalence data – How common specific drug combinations are in different groups.
Health outcomes data – Short- and long-term health effects, including overdose and hospitalizations.
Behavioral data – Risky behaviors linked to poly-drug use, like impaired driving and needle sharing.
Treatment data – Effectiveness of harm reduction and treatment strategies for poly-substance users.
Drug surveillance data – Data on drug availability, use patterns, and incidents of overdose.
psychiatric comorbidities associated to poly-substance use (young people and adults)
Domestic violence associated to poly-substance use
Harmful driving associated to poly-substance use
Treatment demand for poly-substance use
Infectious diseases associated to poly-substance use
PWUID - type of substances used
epidemiological surveys, toxicology reports, treatment data
GPS data on the use of each illicit substance and adding a block of questions on poly-drug use.
Survey, interview and register data
Surveys in different populations and contexts; monitoring systems in place (urgencies, mortality, internal administration, police, treatment and harm reduction); meetings with key informants or qualitative questionnnaires.
Interviews and More qualitative data
clinical or epidemiological studies on particular risks

What type of data/information would be needed to answer the questions you formulated above?
elaborated yet simple designs of questionnaires dealing with multiple substance use (to date, it is hard to cover this in quantitative surveys)
In-dept survey data from people who drugs
GPS data on the use of each illicit substance and adding a block of questions on polydrug use.
Data on specific drugs (not just drug group) including alcohol and source of prescribed drugs.
Data on patient in treatment with substitutive therapy
Data on poli-drug use in young adult attending public services on addiction
Data on of number of IDU heroin addiction
Comprehensive toxicological analysis performed by routine (qualitative and quantitative results) and, if possible, updated medical records
1. definition on what we mean by poly-drug use
2. data on prevalence in general / school populations, data by gender and age groups, access to health statistics - dg. F19 stands for polysubstance use but it is not always clear what falls into this category, data on intoxications, cases of deaths - including the toxicology where available
Data from people with lived experience/people who use drugs (HRDU & recreational drug users)/people who enter treatment for drug use
Survey among staff members of relevant institutions on needs and challenges of poly-substance use
Data on attitudes, risk perceptions, beliefs of people towards poly-substance use & knowledge on interactions/risks/ changes in effects
Assessing social-cognitive / psycho-social determinants of polysubstance use among the general population and among PWUD
Data from economic evaluations with a broad societal perspective assessing social, healthcare, productivity, intangible costs; data from cost-of-illness studies may also be relevant to reveal the economic impact to decision makers (and reveal the necessity to develop & implement (cost-)effective interventions)
All sorts. Qualitative data to understand motivation, patterns and groups, quantiative data to test hypotheses based on this understanding. Clinical data for treatment and harm reduction related questions.
Epidemiological Data – Information on prevalence, patterns, and trends of poly-substance use in different populations, including demographic factors (e.g., age, gender, socioeconomic status).
Clinical and Toxicological Data – Studies on the physiological and psychological effects of poly-substance use, drug interactions, and health outcomes, including overdose rates and long-term consequences.
Social and Behavioral Data – Research on motivations for poly-substance use, risk factors, and social determinants (e.g., homelessness, mental health disorders, trauma history).
Policy and Intervention Data – Evaluations of existing harm reduction, treatment, and prevention programs, including their effectiveness in reducing health risks and substance-related harm.
Criminal Justice and Law Enforcement Data – Information on legal consequences, drug-related arrests, and the impact of policies (e.g., decriminalization, supervised consumption sites).
Qualitative Data – Insights from interviews, surveys, and focus groups with people who use multiple substances, healthcare providers, and policymakers to understand real-world experiences and barriers to care.
Information through substance users about their use
Purity of substances used
Toxicology information (from treatment services and hospitals (in cases of testing in Emergency departments))
1. Socio-demographic and bio-behavioral data: Information on vulnerable groups (e.g., PWID), including demographics, drug use patterns, and harm reduction behaviors (e.g., use of sterile equipment).
2. Access to treatment data: data on access to harm reduction services (e.g., NSP), treatment entry, and barriers to service use.
2.1 Socio-cultural context: public opinion surveys and social factors (e.g., stigma, support networks) that influence treatment-seeking behavior and harm reduction practices.
3. Psychological factors data: insights into motivations behind drug use, risk perceptions, and factors preventing the adoption of harm reduction strategies or treatment.
4. Prevalence and risk: data on substance use, particularly the combination of alcohol with other drugs
5. Economic and policy data: Information on the economic costs of drug use and policy analysis to draw the attention of decision makers to the economic consequences.
More knowledge on what combinations and reasons behind various combinations, survey data
Better data in general on poly-substance use (and use EWSD as valuable source)
On naloxone and other treatments to reverse overdose or save lifes when poly drug use is behind?

What type of data/information would be needed to answer the questions you formulated above?
What treamtent options are available for patients with poly-drug use as well as other psychiatric conditions?
The use of data on content in used syringes could be a valuable source.
In general, the phenomena with poly-substance use is best captured in more specified and direced surveys (not the general population), for example in night life/recreational settings, prisons, needle exchange programs.
Data from projects such as EURO-den could be a valuable source. Non-fatal overdoses could provide lots of information on specific substances.
Drug misuse could be monitored objectively and exhaustively through medico-administrative registries. However, its relation with drug use should be examined by linkage with survey data.
Regarding alcohol and tobacco, they have to be included in all GPS.

Reference: Expert Consultation Round one

Table 15: Answers to question four of Dimension 1

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
To ask systematically for the use of all substances at least in the last 30 days
Collect mental health and treatment data in addition to substance use data.
Include specific questions differentiating between simultaneous (same occasion) and sequential (within a short period) poly-substance use.
Collect detailed data on the types, quantities, and combinations of substances consumed.
Integration of Mental Health and Psychosocial Indicators:
Incorporate validated measures of anxiety, depression, and other mental health disorders linked to poly-substance use.
Assess the role of mental health as both a cause and consequence of poly-drug use.
Longitudinal and Cohort Studies:
Establish or strengthen longitudinal surveys to track behavioral changes and long-term health impacts of poly-substance use.
Follow-up on participants to understand usage trajectories and relapse risks.
Standardization of Data Across Member States:
Develop standardized definitions and methodologies to ensure comparable data collection across the EU.
Provide consistent guidelines for measuring frequency, intensity, and context of poly-substance use.
Improved Early Warning and Surveillance Systems:
Expand real-time monitoring of emerging substances and new consumption patterns.
Link early warning data with health outcomes, particularly hospital admissions and overdose rates.
Linkage of Multiple Data Sources:
Integrate health, law enforcement, education, and social service data for a comprehensive view of poly-substance use impacts.
Develop data-sharing agreements to access prescription drug monitoring programs (PDMPs) and emergency room data.
Use of Digital and Innovative Data Collection Methods:
Utilize mobile apps, online surveys, and social media analytics to capture data from hard-to-reach populations, including young people.
Monitor online drug markets and forums to track trends in substance availability and use.
Focused Monitoring of Vulnerable and High-Risk Groups:
Include oversampling of specific groups (e.g., adolescents, marginalized communities, individuals with mental health issues).
Address gender-specific patterns and differences in poly-substance use.
Enhanced Data on Health Consequences and Overdose Events:
Collect detailed information on hospital admissions, overdose incidents, and mortality related to poly-substance use.
Monitor co-occurring conditions (e.g., infectious diseases, mental health disorders) among poly-substance users.

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
Improved Data on Accessibility and Environmental Factors:
Track environmental and policy factors influencing substance availability, marketing, and use.
Assess the impact of legal changes (e.g., cannabis legalization) on poly-substance use patterns.
Monitoring of Prevention and Treatment Effectiveness:
Include indicators of access to, and effectiveness of, treatment programs for poly-substance use.
Evaluate prevention strategies and their impact on reducing risky behaviors.
Better Data on Motivation and Context of Use:
Collect qualitative and quantitative data on reasons for poly-substance use (e.g., self-medication, recreational, coping mechanisms).
Assess settings where poly-substance use occurs (e.g., nightlife, home, online spaces).
Strengthened Collaboration with Member States and Stakeholders:
Foster cooperation with national monitoring centers, research institutions, and community organizations to improve data quality and coverage.
Develop regular training for data collectors to ensure accuracy and consistency.
Use of Artificial Intelligence and Big Data Analytics:
Leverage advanced analytics to identify patterns, predict emerging trends, and inform policy decisions.
Expanded Data on Non-Medical Use of Prescription and OTC Drugs:
Monitor the increasing trend of prescription drug misuse in combination with illicit substances.
Enhanced Data Collection on Simultaneous and Sequential Use:
More interdisciplinary collaboration among practitioners at a national level would enhance the clarity of data received by the EUDA. This will provide a better framewrok for understanding the dynamics of poydrug use.
Surveys with users, toxicology data, and other relevant sources.
Alcohol, tobacco and any prescribed drug must be included
Enhancing interdisciplinary collaboration among healthcare providers, toxicologists, and law enforcement would improve data accuracy and consistency for EUDA. Standardised toxicology reporting and better integration of hospital admission data would provide a clearer picture of polysubstance use trends.
EWSD already includes questions on combined use and motives.
TDI might be expanded to include more substances (although it always remains difficult to say which substance is primary, secondary, tertiary etc.)
Emergencies data: reporting could include 'poly substances' (NB: it is always diffifult to specify the main drug accounting for an emergency or death, as often the combination.
GMR: differs between countries. Toxicological data are not routinely collected and used for coding in many countries. Many ICD-10 codes are also not very substance specific, which limits detailed analyses of different substances. There are also priority rules in the ICD-10 (or defined by Eurostat), which may limit insight into the specific substances consumed, as far as CoD statistics include the option of multiple coding.
In general most instruments include different (illicit) drugs, but there is no systematic data collection of - and/or reporting about - alcohol, tobacco or medicines.
In my opinion the data from drivers-testing (DUID) is an important marker for the trends of poly-drug usage.
Improve Data Collection on Poly-Substance Use Patterns (monitoring Poly-Substance use by qualitative studies), better integration of Healthcare Data (Emergency Room Visits, Hospitalizations), performing longitudinal and Cohort Studies on Poly-Substance Users, etc.
For the TDI this could mean that instead of collecting in terms of primary and secondary drugs, all drugs used entering treatment should be reported. As a consequence, reporting on the combinations of drugs could be considered. This will have a lot of impact and will make it much more complex.
Coding of deaths - ICD does not have enough possibilities. Non-fatal overdoses.
Not to expand, but regonfigurate KI data colection forms - questionaires (TDI, DRD, population surveys). Discuss with country representative,- KI experts during EUDA meeting (in person) during KI indicators sessions.
Behavioral and Sociodemographic Insights - collecting more detailed data on the behavioral and social factors associated with poly-substance use, such as risk-taking behaviors, co-occurring mental health issues, or the role of social and environmental influences.
Longitudinal and Cohort Studies - implementing long-term studies to track individuals over time, to monitor the impact of poly-drug use on health, social outcomes, and the effectiveness of different interventions.

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
To form a special set of questions specifying data indicators for poly-substance use/to create a working group to develop such data collection protocol.
In the first phase, collect national indicators on multiple simultaneous use in the last year and with what combinations of substances.
Introduction of these group of indicators when possible and appropriate.
More local monitoring of marginalised drug scenes as well as party scenes. Big European cities should be encouraged to install regular surveys and analyses of existing data
This would probably require a new kind of survey that could be conducted by, e.g., personnel at needle exchange services. This would require a lot of organizational work so probably a better way would be to conduct such surveys in context of a scientific study.
In the first phase, collect national indicators on multiple simultaneous use in the last year and with what combinations of substances.
Change how some of the data reporting to fonte to allow the above combinations to be better understood. Ask for more data on the additional problem drugs at treatment start
More information on treatment outcomes to look at poly-substance use treatment outcomes
Improve the reporting of drugs involved in drug related deaths. This would mean introducing codes besides ICD 10 to allow for better distinction between the different prescribed drugs. Report all drugs involved in drug related deaths
Increase the control
Establish annual prevalence indicators for the most frequent forms of polydrug use (including alcohol, drug of abues ans psychoactive medicines)
1. extend the scope towards alcohol and medicines (in combinations with illicit drugs, with overlap of alcohol+medicines in the sense that these includes dg. F11 opioids which are often hard to distinguish whether they are illicit opioids (heroin, ...) or opioid analgesics being misused (including fentanyl)
2. extend the scope to population 65+ as some combinations (especially with medicines) may affect the senior population much more than young adults
Additional question in general population surveys, school surveys, and targeted surveys (example: Have you ever used cannabis, any illicit substance or any NPS together with another licit/illicit substance (e.g., alcohol, prescription drugs) at the same time or within a few hours with the intention to overlap (e.g., enhance, modulate or reduce) their effects? --> If yes, please indicate among the list below which combinations of substances have you used in your lifetime, during the last 12 months, and during the last 30 days.)
Additional question in treatment demand data collection
Additional focus on most common patterns of use besides individual substances
Additional questions to assess social-cognitive / psycho-social determinants of polysubstance use
Assessing poly-substance use among drug-related deaths
Conduct economic evaluations / cost-of-illness studies
Assess polysubstance law offences (possession, use, traffic)
We need case-based data for many of my questions. If we want to discern patterns, all statistical methods that come to my mind require cases to analyse (and a huge number of cases as well, as there are so many possible substance combinations). This would be a radical and probably impossible change to implement on the EUDA level. It seems preferable to do a number of studies to find answers to some of these questions and then shape reporting accordingly so that relevant categories can be reported.
1. Expanding Data Collection on Poly-Substance Use Routine Monitoring of Multiple Substances: Ensure drug surveys and toxicological reports systematically track poly-substance use rather than focusing on single substances. Real-Time Data from Emergency Rooms and Poison Centers: Improve real-time surveillance of overdose cases to detect emerging drug combinations. Incorporating Self-Reported Use Data: Gather detailed self-reported data on patterns of use (e.g., simultaneous vs. sequential consumption).
2. Enhancing Toxicological and Forensic Data Improved Post-Mortem Analyses: Strengthen toxicological screening in overdose deaths to identify substance combinations. Standardized Drug Testing Protocols: Ensure forensic and hospital drug tests include a wide range of substances and their metabolites.
3. Strengthening Social and Behavioral Monitoring Linking Drug Use to Socioeconomic and Mental Health Factors: Integrate drug use data with health and social services data to understand underlying drivers.

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
Expanding Qualitative Research: Conduct interviews and ethnographic studies with people who use multiple substances to gain deeper insights into motivations and risks.
4. Improving Cross-Sectoral and Cross-Border Collaboration Data Sharing Between Health, Law Enforcement, and Social Services: Enable better coordination between different agencies collecting drug-related data. Enhanced European-Wide Early Warning System (EWS): Strengthen collaboration across EU member states to detect new drug trends and poly-substance risks.
5. Evaluating Policy and Intervention Effectiveness Tracking the Impact of Harm Reduction and Treatment Programs: Monitor how well existing interventions (e.g., supervised consumption sites, medication-assisted treatments) address poly-substance use. Comparing Policy Outcomes Across Countries: Analyze differences in drug policies and their effectiveness in reducing harms from poly-substance use. These improvements would allow for a more comprehensive, real-time, and evidence-based approach to understanding and addressing poly-substance use across Europe.
The inclusion of Alcohol as a Substance looked into when this is the primary substance of use.
Do not know enough about the monitoring systems to recommend change. Unintentional polysubstance use may also require biological testing
The first mission of the EUDA should be to provide a standardized definition of polysubstance use across european union.
This definition should include the methodology to build this indicator depending on the heterogeneity of national data sources.

Reference: Expert Consultation Round one

Dimension 2: Co-production, co-marketing, and co-trafficking

Table 16: Answers to question one of Dimension 2:

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: What are the consequences of cannabis adulterated with synthetic cannabinoids and how can these consequences be reduced?)
To know the pattern of drug use, Its is important to ask to the patients, what they think that they use and if they are some "changes" or unexpected symptoms/signs after using.
What are the health consequences of consuming substances that are adulterated or sold in mixtures, either knowingly or unknowingly? How do changes in drug markets (e.g., banning one substance) lead to the displacement of use toward more harmful alternatives? What role do synthetic cannabinoids and other new psychoactive substances (NPS) play as substitutes for traditional substances like cannabis or opioids? How can policies prevent unintended consequences, such as the rise in synthetic drug use following restrictions on natural substances? What are the long-term social and economic impacts of poly-substance use involving substances marketed or sold together? How does the availability of multiple substances from the same producers or markets influence poly-substance use patterns? What are the implications of using similar precursor chemicals to produce different substances on public health and law enforcement? How can we improve public awareness regarding the risks of unknowingly consuming mixed or adulterated substances? What monitoring systems are most effective in detecting and responding to rapid changes in substance availability and combinations? How does poly-substance use, driven by market adaptations, affect overdose rates and emergency medical interventions? What prevention strategies can mitigate the risks of poly-substance use in high-risk settings, such as prisons or nightlife environments? How do consumer behaviors change when certain substances become less accessible, and how can policies address these shifts?

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: What are the consequences of cannabis adulterated with synthetic cannabinoids and how can these consequences be reduced?)
What role does price, purity, and availability play in consumers' decisions to use multiple substances together?
How does the co-marketing of substances (e.g., selling cocaine and alcohol together) influence consumption patterns and related harms?
What policies can effectively disrupt the production and distribution networks that promote poly-substance use?
How can early warning systems be strengthened to detect emerging trends in substance mixtures and adulteration?
What are the mental health consequences of chronic poly-substance use involving market-driven substitutes?
How do legal substances (e.g., alcohol, tobacco) interact with illicit substances in patterns of poly-substance use?
What interventions can prevent the rise of poly-substance use in response to shifts in drug market supply chains?
How can healthcare systems be better prepared to address the complexities of poly-substance use related to market changes?
Which substances used in the context of polydrug use are most dangerous to the user?
What are the consequences of synthetic drugs used as adulterants in 'traditional drugs such as cannabis, cocaine and heroin?
What are the social and financial consequences of frequent polydrug use?
Are there any personal characteristics of people who use drugs that puts them at more risk of becoming frequent polydrug use?
What are the consequences on the mental health of individuals who engage in polydrug use?
"Where are different substances purchased? For instance, if a person uses both heroin and cocaine, do they buy them from the same supplier or from different ones? Understanding this could provide insight into how and why polydrug use occurs. Is it because people are offered multiple drugs from the same source, or does the supplier play a role in influencing their choices?
Additionally, following up on these questions, it would be valuable to gather more information on polydrug production and trafficking. Are there groups involved in producing only one drug, or are they more flexible and engaged in the production of multiple substances? For example, do we have cases of groups involved in both methamphetamine and synthetic opioids? Are these drugs trafficked together, and if so, why? What factors influence whether a group specializes in one or multiple drugs?
How the consequences of any drug adulteration can be reduced?
To analyse the drugs that are in the marked: in the material that they use for administration, when they provide some material before its administration (Energy Control), in the emergency rooms after intoxication (to facilitate to send blood sample for analysing to the lab...).
To inform to emergency rooms, harm reduction facilities, drug abuse centers of the risk of some combinations
In your opinion, will a total ban on the sale of Vape lead to stop the illegal sale of illegal vapes that contain (HHC) Hexahydrocannabinol ?
Which combinations of substances in the context of polysubstance use are most dangerous to users?
What are the health consequences of synthetic drugs used as adulterants in traditional drugs such as cannabis, cocaine, and heroin?
How can policies be adapted to address the displacement of substances in response to enforcement actions, such as cannabis suppression increasing synthetic cannabinoid use?
What are the social and financial consequences of frequent polysubstance use?
What are the long-term effects of using mixtures of substances (either knowingly or unknowingly) on mental and physical health?
How can public health responses better account for the displacement of one drug by another as a result of market regulation?
What is the role of synthetic drugs as replacements for traditional drugs, and how can this shift be mitigated in harm reduction strategies?
What are the consequences of cannabis adulterated with synthetic cannabinoids and how can these consequences be reduced?
What are the consequences of the (online) sale of fake medicines, e.g. oxycodone or benzodiazepines, which may contain highly potent (designer) synthetic opioids like nitazenes, and how can these consequences be reduced? " And how can we be prepared for this situation?
What are the consequences of prohibiting NPS (single or generic groups) with regard to the content/quality of drugs sold as these "NPS"?

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: What are the consequences of cannabis adulterated with synthetic cannabinoids and how can these consequences be reduced?)
Do changes in prescription practices of legal medicines (e.g. benzodiazepines or SO) result in substitution use of other (illicit) substances, like designer benzodiazepines? Do the restrictive policies with regard to availability of tobacco to youth result in an increased use of vapes, including cannabinoid using vapes ?
What are the specific health risks associated with common combinations of poly-substance use (e.g., opioids and benzodiazepines, alcohol and stimulants)? How do poly-substance use combinations increase the risk of overdose, and what substances pose the highest risk in combination? What are the long-term health consequences of chronic poly-substance use, especially on mental health, cardiovascular health, and liver function? How does poly-substance use contribute to homelessness and social exclusion, and what social services are most effective in addressing these issues? What are the most effective treatment approaches for individuals with poly-substance use disorders, and how do these differ from treatments for single-substance use?
Although we may have a personal opinion on this, this is not our area of expertise from our role as TDI experts.
What are the consequences of cannabis adulterated with synthetic cannabinoids and how can these consequences be reduced? What are the consequences of the use of synthetic cathinones instead of amphetmines or ecstasy? What are the consequences of heroin adulterated with synthetic opioids and how can these consequences be reduced?
Is poly-drug use intentional, or is it a consequence of fake substances and adulteration? Is information of possible danger important for users? Or is information a driver to try something?
Problem was and is studied in natural enviroments around the world. What could be show the fidings of transcultural comparisons and historical data and trends between and within the same country, regions, cultures, with respect to the changes in the availability and accessibility of substances in relation to polysubstance use?
How do specific combinations of substances affect the risk of overdose? What are the long-term effects on mental health when individuals use multiple substances together? How does poly-substance use contribute to the spread of infectious diseases and how can it be addressed? What strategies can reduce the harmful impact of poly-substance use in specific settings like prisons or nightlife?
How shared precursor chemicals influence polydrug use? How does the darknet and cryptocurrency financing facilitate polydrug use? How can forensic drug testing be improved to routinely detect multiple substances in street drugs? What impact do drug market disruptions (e.g., supply chain interruptions due to law enforcement actions) have on polysubstance use trends?
(outside the scope of GPS)
Does co-production, co-marketing or co-trafficing promote the use of different substances? Does this have a different impact in different populations groups?
Which associations of substances are being sold, to specific groups and contexts? What is the argument presented to the user for this association? What are the motivations to buy different substances in package? Which associations of substances are out of the knowledge of the user/buyer? What is the dimension of this specific market? Does it have more expression for specific groups or contexts?
how can we collect more information about adulterations and wrongly declared drugs? which consequences would arise when certain substances would be legally available?
(outside the scope of GPS)
Drug testing - are adulterated drugs responsible for more harms?
What are the consequences of heroin adulterated with xilazine?
Dimension out of my expertise area.
In case of heroin shortage, do people substitute with opioid analgesics, benzodiazepine-like medicines, other substances or alcohol? What can we do to reduce the health related risks caused by polydrug use? As regards production and trafficking, this is more a question for the Reference group.
What are the consequences of preventive and treatment interventions focusing solely on "classic" substances, and how to broaden the focus of these interventions? How to ensure that people are aware of the substance(s) they consume that may be altered with other

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: What are the consequences of cannabis adulterated with synthetic cannabinoids and how can these consequences be reduced?)
compounds? Which populations/target may be particularly affected by adulterated substances (e.g. prison populations or highly vulnerable populations) and how to minimise the risks by implementing (cost-)effective treatment, prevention and awareness-raising interventions for both user groups and professionals? How to raise awareness of adulterated substances among decision makers working in the field of drug coordination/health?
How important is the question of licit (i.e. medicine) vs. illicit drugs in a world in which both can be ordered online on the same platform? Do users who use these platforms really differentiate between the two? What is happening with the opioid market / adulterations? What are the consequences? How quickly do manufacturers change their product if a precursor becomes less available / unavailable due to changes in legality?
What are the legal implications of poly-substance use, particularly in cases of impaired driving and criminal offenses? How can law enforcement and public health agencies collaborate to reduce the harms of poly-substance use? What impact do drug control policies have on shifting patterns of poly-substance use (e.g., substitution effects when one substance becomes less available)?
Are the different substances used available from the same dealer?Is cross contamination from the use of the same paraphernalia an issue?Would economic factors play a role in choosing to use multiple substances?
No input
Are different substances taken at a similar point in time generally brough from the same establishment/person or from different ones Are there substances that are purchased legally and combined with other substances
Most NPS are bought online and the risk of being tempted to order various substances or other than intended is evident – how can this be prevented?How can we prevent pharmaceuticals being produced and sold illegally given the many risks with what they actually contain?
1. Considering the example, we are not sure that adulterants can be included in polysubstance use. 2. How alcohol and tobacco can increase the harms of other drug use ? 3. How the social context could influence the pattern of polysubstance use ? (e.g. choosing undetectable substances rather than alcohol when there is a risk of police driving control)4. How drug market plays a role in polysubstance use ? (e.g. price, discounts, goodies, ...)

Reference: Expert Consultation Round one

Table 17: Answers to question two of Dimension 2

What forms of poly-substance use should be monitored in this context?
Always alcohol, cannabis (in different forms), tobacco, opioids (prescribed or not), benzodiazepines (prescribed or not), stimulants (cocaine, metamphetamine, amfetamine), other drugs (always an open question about others: i.e recreative/raves: MDMA, ketamine, LSD,), special situations (i.e. raves)... ..and last question: "any new drug"?
And how they are used: oral, smoked, sniffing, intravenous...., In combination or not
Forms of Poly-Substance Use to Be Monitored in This Context:
Intentional vs. Unintentional Use of Substance Mixtures:
Substances sold as mixtures or adulterated without consumer knowledge.
Substitute and Displacement Use Patterns:
Use of synthetic cannabinoids or NPS as replacements for cannabis or other restricted substances.
Simultaneous Use of Legal and Illegal Substances:
Alcohol, tobacco, and prescription drugs combined with illicit substances.
Stimulant and Depressant Combinations:
Cocaine with alcohol, opioids with benzodiazepines, or “speedballing.”
Poly-Substance Use in High-Risk Settings:
Use in prisons, nightlife environments, or among vulnerable populations.
Use of New Psychoactive Substances (NPS) with Traditional Drugs:

What forms of poly-substance use should be monitored in this context?
Emerging combinations involving synthetic cathinones, cannabinoids, and established illicit substances.
Sequential Use Driven by Market Availability:
Shifts in consumption patterns due to supply restrictions or price changes.
All illicit drugs
synthetic opioids
Cannabinoids
Metamphetamine
Benzodiazepines
Cocaine, cannabis, and/or heroin adulterated with synthetic substances
Alcohol combined with stimulants
Alcohol and synthetic cannabinoids
MDMA combined with alcohol or cannabis
Cocaine mixed with synthetic cathinones
Prescription medications used together with illicit substances like cocaine
NPS combined with traditional drugs like cannabis or heroin
Heroin used with cocaine
usage of SCs instead THC
usage of synthetic opioids
usage of synthetic stimulants
prescription drugs usage (tamadol, gabapentin/pregabalin)
The focus of poly-substance use monitoring should be on combinations that pose the greatest risk of overdose, addiction, or long-term health damage. High-priority areas include combinations of opioids with depressants (like benzodiazepines and alcohol), opioids with stimulants, synthetic drugs with other substances, and polydrug use in vulnerable populations. Monitoring these combinations allows for targeted prevention strategies, better treatment interventions, and more effective public health responses.
Although we may have a personal opinion on this, this is not our area of expertise from our role as TDI experts.
The use of NPS with classical drugs
Intentionality
All and combination with licit drugs and prescription medicines, so as it was subdivided into 3 forms before.
Alcohol and opioids,
Benzodiazepines and opioids,
Cannabis and synthetic cannabinoids,
Cocaine and alcohol,
Stimulants and alcohol,
Prescription drugs with recreational drugs,
Polydrug use in vulnerable populations,
Emerging combinations of new psychoactive substances.
Fentanyl/syntetic cannabinoids/methamphetamine/opioids/cathinones
Different combinations of licit and illicit drugs
Cannabis and cocaine; combinations of "uppers" and "downers"; syntetic compositions of different substances (stimulants and with hallucinogenic properties).
cannabis adulterated with synthetic compounds
cathinones and similar NPS (since they seem to be somewhat on the rise again) illegaly produced heroin
All - prescribed, street, diverted and illicit along with or without alcohol.
Opioids+ xilazine Cocaine + ketamine + MDMA
Same as before
Especially the combinations of substances which show risky/dangerous interactions with each other
Any substance with synthetic opioids/ NPS/ synthetic cannabinoids/synthetic stimulants
All types of adulterations, illicit sale of (both legally and illegaly manufactured) medicines

What forms of poly-substance use should be monitored in this context?
All
both legal and illegal
The poly-substance use that occurs mainly due to one drug being replaced with anothor due to various reasons (prices, classification, illegal, availability).
Non-medical use of narcotic medicines in cominatione with traditional drugs or other categories of narcotic medicines
Alcohol and tobacco relationships to other drug use
NPS + "traditional drugs" consumption/trafficking relations (with a focus on specific consumption contexts, such as Chemsex, for example)
Synthetic drugs and their "natural" counterparts (e.g., synthetic cannabinoids + cannabis; synthetic opioids + heroin)
Is there any marketing pushing for the polyuse of stimulants, especially cocaine, amphetamines, and cathinones

Reference: Reference: Expert Consultation Round one

Table 18: Answers to question three of Dimension 2

What type of data/information would be needed to answer the questions you formulated above?
Easy questionary
Types of Data/Information Needed to Answer the Above Questions
Prevalence and Consumption Patterns:
Data on simultaneous and sequential poly-substance use, including substance combinations and usage frequency.
Market and Supply Information:
Data on drug availability, price fluctuations, and substitution patterns due to market changes.
Health Outcomes and Emergency Data:
Overdose incidents, hospital admissions, and mortality linked to poly-substance use.
Substance Composition and Adulteration Reports:
Laboratory analyses of seized substances to identify common mixtures and contaminants.
User Perception and Behavioral Data:
Motivations for poly-substance use and awareness of substance contents.
Policy Impact Assessments:
Data on consumption shifts following policy changes or substance bans.
Demographic and Socioeconomic Indicators:
Information on age, gender, location, and social factors influencing poly-substance use.
More data related to polydrug use as primary drug (meaning regular, daily use of polydrug use, including alcohol)
Continued montiroring of newly emreging substances in the market
Qualitative studies with people engaging in polydrug use
More data on mental health of people who engage in polydrug use
Interviews with arrested members of criminal organizations involved in drug production and distribution
Interviews with people who use drugs
Information from laboratory seizures
More detailed data and metadata on arrests related to drug production and trafficking (e.g., which drugs were involved?)
Clinical presentation
More data on the mental health of individuals who engage in polysubstance use, including co-occurring disorders.
Increased data on polysubstance use as a primary drug, particularly the regular, daily use of multiple substances, including alcohol.
Continued monitoring of newly emerging substances in the market, including synthetic drugs and adulterants.
More research on the long-term cognitive and behavioral impacts of polysubstance use on individuals.

What type of data/information would be needed to answer the questions you formulated above?
Data on the impact of polysubstance use on social and economic outcomes, such as employment, family life, and criminal involvement.
Data from drug checking, toxiciological data, data from policy evaluation studies, survey data (targeted as well as probability samples), qualitative data (expert opinions, panels, interviews)
DRD and hospitals' data (acute intoxication)
data on prescription medicines (available on national level; IQVIA)
To answer the research and policy questions related to poly-substance use, a variety of data and information would be required. This data should come from diverse sources, ranging from clinical and epidemiological research to policy and harm reduction program evaluations. Here's a breakdown of the types of data and information needed to address the formulated questions:
We need information about NPS which it is very often difficult to detect
data from non-fatal overdoses about intentionality
Data based on toxicological evidence. Population surveys based on self-reports have high margin of error and ambiguity.
Data from special preselected populations such as young people at festivals, or drivers during road trafic testing coulkdbe collected butvery coutiously triangulated and interpreted.
Surveys and Interviews: Information on substance combinations and usage patterns, especially from treatment programs.
Toxicology Reports: Lab data identifying substances in overdoses and fatalities.
Law Enforcement Data: Data from drug seizures and forensic investigations.
Public Health Reports: Epidemiological trends on poly-drug use, emerging combinations, and harm reduction.
Policy & Intervention Effectiveness: Evaluations of the impact of current policies and treatment programs.
Health Data: Overdose and health issues from hospitals, including mental health impacts.
seizures, precursor chemical monitoring, drug production hubs, trafficking routes, supply chain disruptions, encyripted messaging analysis, darknet markets analysis
Monitoring system with drug checking services, surveys to users, meetings or qualitative questionnaires with key informants, police data.
enabling drug checking in all areas of illicit drug use, not only party sceness, but particularly marginalised users of 'hard drugs', and also cannabis
including monitoring of e.g. used packages in consumption rooms
starting pilot projects on prescription or even legal access to drugs that are illegal now
Qualitative data from drug users on why they might take drugs that are adulterated
Early warning
Data on drug testing - but this can be limited if a new drug and labs don't have the standards
Data on misuse of slimming drugs (simil-amphetamine) in female
Data from seizures & drug-checking services
Data from wastewater analysis to be able to identify the presence of synthetic substances/NPS
Data from professionals working in psycho-social services (providing treatment, social and/or psychological counselling)
Data from vulnerable user groups (e.g. people who live in prison or have lived in prison & marginalised HRDUs)
Data from recreational users about the presence of these type of new substances and their user experiences (i.e. experienced drug interactions and their effects)
Qualitative for users, lots of laboratory analyses for drug samples, combined with knowledge of where and when they were procured.
traffic Accident and Law Enforcement Data: Statistics on arrests for impaired driving involving multiple substances, crash reports, and toxicology results from roadside tests.
Forensic Toxicology Reports: Blood and urine analyses from individuals involved in DUI cases to identify common substance combinations.
Judicial and Sentencing Data: Records of court cases involving poly-substance use, including sentencing outcomes and legal precedents.
Legislation and Policy Reviews: Comparative analysis of how different jurisdictions define and penalize poly-substance impairment.
Users lived experience
type of substance from where purchased

What type of data/information would be needed to answer the questions you formulated above?
Medicoadministrative data could be used to describe different health trajectories according to alcohol and/or tobacco co-use.
Social context could be documented through qualitative studies.
Regarding especially police driving control (e.g. DUI), results from salivary tests done by law-enforcement laboratories should be collected for epidemiologic analyses.
Law enforcement data on substances found in dismantled drug laboratories, storage facilities, and points of sale, in order to better understand which drugs are produced, stored, and sold together.
Analysis of drug trafficking marketing/ menus on social media and the darknet.

Reference: Expert Consultation Round one

Table 19: Answers to question four of Dimension 2

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
We need to engage in qualitative research so that we may get richer data in relation to people who engage in polydrug use.
Better metadata on administrative data, such as seizures and arrests. Additionally—though this would be a significant step—it would be beneficial to have a survey comparable across all EU countries to improve cross-country comparisons. Currently, each country conducts its own survey using different methods and approaches, which affects comparability. A standardized survey across countries would allow for better comparisons, helping to identify where polydrug use is more prevalent and whether contextual factors explain these patterns.
Changes obtained in the material that used for administration (harm reduction facilities), when they provide some drug before administration, in the emergency rooms after intoxication
Engage in qualitative research to gather richer, more detailed data on the experiences, behaviours, and mental health of people who engage in polysubstance use.
Integrate qualitative data collection (e.g., interviews, focus groups) alongside quantitative surveys to capture nuanced insights into the patterns and impacts of polydrug use.
Enhance collaboration with local communities and healthcare providers to collect more personalised data about individuals' substance use habits and treatment outcomes.
Policy evaluation studies are not routonely conducted by the EUDA or in different countries. However, the available monitoring instruments in several countries may allow for an evaluation of the consequences of prohibition of substances in terns of markets shifts and changes in demand and consequences.
A multidisciplinary approach is needed, incorporating data from healthcare systems, law enforcement, public health monitoring, treatment centers, and community-based programs. These data types, when combined, will provide a comprehensive understanding of the causes, consequences, and effective interventions for poly-substance use. The use of longitudinal studies, real-time data collection, and collaborative multi-agency reporting will be critical in developing policies and strategies to mitigate the risks associated with poly-drug use.
Although we may have a personal opinion on this, this is not our area of expertise from our role as TDI experts.
Intentionality in non-fatal overdoses
Cooperation with other EU and international agencies (suich as EMA, UNODC,WHO).
Cross-sector Collaboration: Strengthen partnerships between health, law enforcement, and public health sectors.
developing special set of indicators targeting production, marketing, trafficking.
Implementing more drug checking services.
including more data from drug checking
Improve existing early warning mechanisms
increase the number of studies on women because slimming drugs are used mostly by them and the market works for them
Same as before
Increased drug checking services
Targeted wastewater analyses (e.g. at prison settings)
Qualitative & quantitative data from PWUD

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
Qualitative & quantitative data from prison staff and harm reduction services (including drug-checking services, DCRs)
Stronger cross-border collaborations
Most of these questions would need more qualitative data coming from users to be answered.
The first mission of the EUDA should be to provide a standardized definition of polysubstance use across european union.
This definition should include the methodology to build this indicator depending on the heterogeneity of national data sources.

Reference: Expert Consultation Round one

Dimension 3: Non-substance specific policies and responses

Table 20: Answers to question one of Dimension 3

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: How can we develop synergies in alcohol, nicotine and drug policies?)
To focus in the patient: personalized medicine
How can policies targeting alcohol, tobacco, and illicit drugs be better integrated to address poly-substance use? What are effective strategies to include behavioral addictions (e.g., gambling, gaming) in substance use prevention programs? How can youth-focused interventions address poly-substance use alongside broader health and social behaviors? What synergies can be developed between drug prevention, mental health, and youth criminality reduction programs? How can treatment services adopt a holistic approach that considers all substance and behavioral addictions? What role do school- and community-based interventions play in addressing multiple risk behaviors simultaneously? How can policies minimize unintended consequences, such as substance displacement when focusing on a single substance? What are best practices for integrating harm-reduction strategies across various substances and behaviors? How can national addiction strategies effectively combine efforts targeting both licit and illicit substance use? What monitoring systems can capture the interconnectedness of poly-substance use and other risky behaviors?
How can we include more data related to alcohol in the context of polydrug use? How can we link drug and alcohol policy efforts together? How can we ensure that data received is standardised and continuous? How can we help in supporting the mental health of people engaging in polydrug use? How can we improve our inputs to kbnow more about synthetic drugs used as adulterants in other drugs?
Do we actually need interventions that are not substance-specific? While I see the purpose in some cases—such as in the example above—in others, it may group together very different drugs that should be addressed separately. This approach might create the impression that substances like cannabis and synthetic opioids are being treated the same, despite their vastly different harms. While synergy in interventions can be beneficial, there are cases where a more substance-specific approach is necessary.
Focus on the dangerous (medical and social) effects of drug use, irrespective of their legal or illegal status. Focus in the increase of harm related if there is polydrug use Focus in the risk of developed more polydrug and use of illicit drugs after start with legal drugs (tobacco)
To benchmark which policies lead to the reduction in use! Whether those related to harder measures or those with softer measures (eg. the legalization of marijuana and others)
How can we include more data related to alcohol use in the context of polydrug use? How can we link drug and alcohol policy efforts to create a more integrated approach to substance use? How can we ensure that data received on polydrug use is standardised, continuous, and comparable across regions and countries? How can we better support the mental health needs of individuals engaging in polydrug use through holis-

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: How can we develop synergies in alcohol, nicotine and drug policies?)
tic treatment approaches? What strategies can be employed to increase collaboration between mental health services and substance use treatment providers? How can we design harm-reduction interventions that address multiple substance use behaviours simultaneously? What role can public health campaigns play in addressing the combined risks of alcohol, and illicit drug use? How can we identify and address the specific needs of vulnerable groups, such as adolescents or individuals with co-occurring mental health issues, in relation to polydrug use? How can we track the long-term outcomes of individuals who engage in polydrug use, including their mental, physical, and social well-being?
Is a policy targeting different substances more effective than policies addressing single (groups) of substances? Are interventions aimed to reduce (problem) use of multiple substances (integration) more effective that interventions focussing one substance or 'problem domain) at individual level)'? NB: this section focuses on different substances and non-behavioral addictions, but the co-occurrence of substance use (problems) and mental health (problems) is also very common and important... (both with regard to etiology as interventions).
How we can reduce vape usage?
WhaWhat are the most common and dangerous combinations of substances in poly-substance use? What are the long-term health consequences of poly-substance use? How does poly-substance use affect treatment outcomes for substance use disorders? How do different demographic groups (e.g., youth, the elderly, marginalized populations) engage in poly-substance use, and how does it affect them? What are the economic costs associated with poly-substance use for individuals, healthcare systems, and society?
In addition to polydrug use, it is increasingly becoming apparent in the Netherlands that not only different substance and behavioral addictions need to be treated holistically, but also the combination with highly prevalent psychiatric comorbidity. Which combinations of polydrug use and alcohol, nicotine, behavioral addictions (and psychiatric comorbidity) are common and which combinations are (extra) harmful.
What is addiction in psychological terms? Do the addictions spill over into each other? How to limit access to alcohol and tobacco for children? How to make law enforcement more effective?
How can we expand and implement functioning prevention of poly/substance use models (all substance use)? e.g. Islandic model
What are the best practices for treating simultaneous addiction to multiple substances? How can policies address poly-substance use in vulnerable populations, such as youth or those with mental health issues? What interventions can target risky behaviors associated with poly-substance use?
How can we develop synergies in alcohol and drug policies, concerning different target populations and intervention areas (prevention, treatment, harm reduction)?
What are best practices for holistic addiction treatment that consider both substance use and behavioral addictions? What are identified best practices in comprehensive approach tackling addictions? How can we leverage digital and social media interventions for broad-based prevention of polysubstance use and behavioral addictions? How can digital interventions (e.g., telemedicine, e-health apps) be used to support recovery? How can public health campaigns address multiple substance-related risks in a unified way?
How does poly-drug use occur in combination with alcohol and tobacco? And what is its relationship with gambling addiction? Aiming a specific research on poly-drug use.
I had no ideas for this.
What is the orientation of the national policies: towards the individual, the context, the substance...? How is polysubstance use adressed in national and local policies and interventions?
I don't have an idea on this apart from the example question given here
How does poly-drug use occur in combination with alcohol and tobacco? And what is its relationship with gambling addiction? Aiming a specific research on poly-drug use.
Look for new evidence based prevention strategies Improve school based resilience work Parenting classes to address intergenerational harm

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: How can we develop synergies in alcohol, nicotine and drug policies?)
How can we develop synergies in alcohol, nicotine and gambling addiction ? How can we reduce tobacco use in younger ?
Dimension out of my expertise area.
I think you raise an important issue in the introductory section of this dimensions and I agree with that. But I am not sure what is expected from me in this section. Always the same - what can we do to minimize the risks related to polysubstance use?
- How can we promote necessary personal & social skills, enhance resilience, and the knowledge, so that people can make informed choices about their use? - How to reinforce social support structures (individual, family, friends and structural)? - How to adapt risk perception, attitudes, and beliefs regarding substance use / addictive behaviour? - How to develop synergies in alcohol, nicotine and drug policies and existing services? How to reinforce cooperation between these services? - How to combine illicit substances and behaviours with licit substances and behaviours in policy making? (challenges due to different le- gal frameworks,...) - Which frameworks may be developed that prevent people engaging into addictive behaviours and how may they be adapted to national contexts (Icelandic model, community capacity building and community-engaged decision making)?
How effective are universal prevention programs (e.g., life skills training, youth mentorship programs) in reducing poly-substance use compared to substance-specific interventions? What role do family, school, and community-based interventions play in preventing poly-substance use among adolescents and young adults? How can digital and social media campaigns be leveraged to promote holistic substance use prevention strategies? How can treatment programs be designed to address poly-substance use holistically rather than focusing on a single substance? What integrated care models (e.g., combining substance use disorder treatment with mental health, housing, and employment support) show the best outcomes for people with poly-substance use? How can harm reduction programs (e.g., supervised consumption sites, naloxone distribution, drug checking services) be adapted to address the risks of poly-substance use? How effective are interventions that combine pharmacological and behavioral treatments for individuals using multiple substances?
How can we develop skill based prevention services based on known risk and protective factors for people engaging in poly drug use? How can we educate about the exponential risks of poly drug use as opposed to single substance abuse? How can we learn more about the mix of behaviour addictions and substances of abuse? (example abuse of cocaine whilst watching pornography or gambling) What can be done for users not to focus only on substance abuse and ignore behaviour addictions on to which they may transition? What are the common elements in substance and behaviour addictions for which we can adopt common policies? Do WHO's Best Buys work for behaviour addictions? What treatment modalities can be used for treatment with addictions for substances and cooccurring behavioural ones?
No input
What impact do policies and other actions have on the extent and nature of polysubstance use
What general measures are efficient to prevent deaths due to substance use in general (risk and protective factors) How can health promotive measures alongside preventive measures be developed further? How can local communities be supported in their broad preventive work towards many substances as well as criminality and mental health – all of which are often connected? Is it even possible to prevent poly-substance use by informing on the risks? How can risk messages be formulated without increasing interst and increase the risks?

Reference: Expert Consultation Round one

Table 21: Answers to question two of Dimension 3

What type of data/information would be needed to answer the questions you formulated above?
Integrated Substance Use Data: Prevalence, frequency, and patterns of poly-substance use (including licit and illicit substances and behavioral addictions).
Program and Policy Evaluation Data: Effectiveness of integrated prevention, treatment, and harm-reduction interventions targeting multiple substances and behaviors.
Demographic and Socioeconomic Information: Data on age, gender, socioeconomic status, and cultural factors influencing poly-substance use and related behaviors.
Health and Social Outcome Data: Information on mental and physical health impacts, educational outcomes, and criminal involvement related to poly-substance use.
Cross-Sectoral Data Linkage: Combined data from healthcare, education, criminal justice, and social services to assess holistic intervention impacts.
Behavioral and Motivational Data: Surveys and qualitative research on motivations behind substance use and engagement in other risky behaviors.
Economic and Cost-Effectiveness Data: Costs associated with integrated policies versus single-substance interventions, including healthcare and social costs.
Policy Landscape and Implementation Data: Information on national strategies covering multiple substances and their enforcement or coverage across sectors.
Environmental and Accessibility Data: Availability of substances, exposure to advertising, and environmental influences on poly-substance use.
More data related to incidents of mental health issues of people who engage in polydrug use
More collaboration with mental health professionals
More engagement with people who engage in poysubstance use
More data on patterns of problematic alcohol use
Review of relevant scientific literature and interviews with experts.
Age on onset in all drugs (legal or illegal), and combination
Comprehensive substance use data on the co-occurrence of alcohol and other drugs, including patterns of use, frequency, and combinations.
Standardised and continuous data collection systems for monitoring alcohol, drug, and behavioural addiction trends.
Mental health data on individuals engaging in polydrug use, including diagnoses, treatment histories, and outcomes related to co-occurring disorders.
Holistic treatment and intervention data showing the effectiveness of programmes targeting multiple substances and behaviours, such as outcomes from integrated drug and alcohol treatment services.
Public health campaign data on the reach and impact of initiatives targeting multiple substances.
Collaborative data across sectors (e.g., healthcare, mental health, housing, and service providers) to evaluate the integration of services for people with substance use and behavioural addictions.
Longitudinal data tracking the health, social, and economic outcomes of individuals engaging in polydrug use over extended periods.
specific studies targeting at these questions, literature review, expert opinions (answers are not readily available from routine data sources)
regulation on vape industry and market on national level
All questions mentioned above. This comprehensive approach will allow for a nuanced understanding of poly-drug use patterns, risks, and consequences, and help inform targeted interventions and policies aimed at reducing harm and improving public health outcomes.
not only drugs but also other addictions
Data of effective prevention programmes - what works.
Compatibility of clutural and legal regulations with existing effective country models of prevention and reduction of substane and polysubstance use and diffrences which might be critical for the intrudationm in different EU countries.

What type of data/information would be needed to answer the questions you formulated above?
Patterns of alcohol, tobacco, and illicit drug use combinations.
Information on physical and mental health issues related to poly-substance use
Insights on reasons and contexts for poly-substance use from users
Insights on the social and environmental factors influencing use
Information on at-risk populations (e.g., youth, marginalized groups).
Trends in emerging substances and new usage patterns.
Data from cross-sector partnerships to address poly-substance use.
alcohol data (prevalence, comorbidities, violence, best practices in prevention, treatment, harm reduction)
Data on policy, legal framework, treatment data, cohort studies, surveys data, general mental health data
Data on the use and frequency of use of gambling and internet addiction
Document analysis, questionnaries to key informants.
Reviewing the current policies would be beneficial.
evaluation of more holistic approaches such holistiv approaches should be encouraged also with regard to decriminalisation and part-legalisation of certain drugs
Data on the use and frequency of use of gambling and internet addiction
evaluation of new prevention strategies
evaluation of any new school based resilience work
Population based surveys on use of drugs and also attitudes to drug use
Prevention interventions in primary school
Data about psychosocial/social-cognitive determinants
Data about the long-term effectiveness & efficacy of prevention / health promotion programmes (e.g. resilience among youth, behaviour changes)
Economic evaluation regarding prevention interventions (see answers to questions from earlier section)
Data about cooperation strategies between national services / institutions
Clinical Outcome Data: Effectiveness of current treatment models (e.g., residential vs. outpatient treatment) in patients with poly-substance use.
Comparative Studies: Evaluations of single-substance-focused vs. holistic treatment programs to identify best practices.
Patient Needs Assessments: Surveys and interviews with individuals undergoing treatment to determine gaps in care.
Program Evaluation Data: Effectiveness of integrated approaches that include mental health, medical care, and social support.
Cost-Effectiveness Analysis: To determine the sustainability of holistic treatment models.
Treatment evaluations and Prevention Programme evaluations
A measure of different policies, actions etc and polysubstance use
More reasearch on preventive measures for any substance us
More research on risk and protective factors for any substance use

Reference: Expert Consultation Round one

Table 22: Answers to question three of Dimension 3

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the question?
For clinicians the most important is that they can provied the information in an easy system, not only "full-filling dates and dates and dates..." The content is relevant but how to provided the information is very relevant.
Integrated Data Collection:Combine data on alcohol, tobacco, illicit drugs, and behavioral addictions in a single monitoring framework.
Cross-Sectoral Data Linkage:Link health, education, criminal justice, and social services data to capture holistic outcomes.
Enhanced Behavioral Indicators:Include measures of poly-substance use, co-occurring risky behaviors, and mental health indicators.

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the question?
Longitudinal and Cohort Studies:Track long-term impacts of integrated policies and interventions on substance use and related behaviors.
Real-Time Surveillance Systems:Use early warning systems and digital tools to monitor emerging trends and rapid policy impacts.
Standardized Data Across Member States:Ensure comparable data collection methods for cross-country analysis and policy evaluation.
Include data related to alcohol
Better define polydrug use
Include workshops on how to integrate more data related to polydrug use
Include data related to alcohol in existing monitoring systems, particularly in the context of polydrug use, to better capture the full scope of substance use patterns.
Better define polydrug use in monitoring frameworks, distinguishing between occasional and regular polydrug use, and identifying the combinations of substances that pose the greatest risks.
Conduct workshops and training sessions for healthcare providers, policymakers, and researchers on how to collect, interpret, and integrate data related to polydrug use across various sectors.
Expand the use of longitudinal studies to track the long-term effects of polydrug use, including health outcomes, mental health conditions, and social impacts.
Develop specialised data analysis tools for qualitative data to identify emerging trends in polydrug use.
it is the question whether this is within the mandate of the EUDA (e.g. alcohol, gambling, tobacco policies)...
To enhance Data Integration Across Sectors (cross-section data sharing and cross_border data collection)
To improve Drug Surveillance Systems
To Strengthen Focus on Poly-Substance Use in Surveys
To develop Real-Time Overdose and Risk Monitoring Systems
broader focus, not only drugs.
Number of people (parents, teachers, children) educated or in programmes.
EUDA can review scientific evidence from available independent unbiased resources (suc as Cochran reviews, systematic reviews etc.) .
Integrate data from hospitals, law enforcement, and treatment programs for a comprehensive view.
Enhance cross-sector collaboration between health, law enforcement, and social services.
Focus on vulnerable groups like adolescents and marginalized populations.
Evaluate policy effectiveness to identify gaps and improve interventions
Intersect alcohol and drug monitoring systems
EUDA currently monitors relevant data, but it should expand its monitoring efforts to include data on the interconnections between various types of addictions, as well as data available online, such as drug market trends and for example cryptocurrency activity related to addictions.
Include these questions on GPS
Policies for different target groups need to be identified
Include these questions on GPS
Increase survey in primary school
Efficacy & Effectiveness & Economic evaluation of new and existing programmes / interventions
Integrate dimensions on psychosocial/social-cognitive determinants in surveys targeting different populations
Qualitative surveys to reinforce collaboration among different parties
Feasibility studies/implementation research
The first mission of the EUDA should be to provide a standardized definition of polysubstance use across european union.
This definition should include the methodology to build this indicator depending on the heterogeneity of national data sources.

Reference: Expert Consultation Round one

Dimension 4: Common etiology and common factors and causes

Table 23: Answers to question one of Dimension 4

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: How are sociodemographic as well as socioeconomic factors related to poly-substance use?)
Gender?Age?Availability /accesibility of different drugs?Availabity to treatment (they are countries with different network for tobacco and for alcohol...)
How do genetic and biological factors influence vulnerability to poly-substance use? What is the role of early-life trauma, abuse, or social exclusion in developing poly-substance use behaviors? How are socioeconomic and sociodemographic factors linked to poly-substance use patterns? What common psychological and neurological mechanisms underlie various substance-related problems? How can understanding shared aetiology inform more effective, cross-substance prevention and intervention strategies? What is the impact of mental health disorders on the risk of developing poly-substance use? How do environmental factors, like peer influence and community deprivation, contribute to poly-substance use? What role do resilience and protective factors play in preventing poly-substance use despite risk exposure? How can interventions address both biological predispositions and social determinants simultaneously? How do non-substance-specific factors contribute to risky behaviors beyond substance use?
What do we know about people who engage in polydrug use? What drugs are being commonly used in the context of polydrug use? What do we know about synthetic drugs used as adulterants in traditional substances What data do we have regarding drug producing laboratories?
To be honest, I doubt we can definitively speak about causes—i.e., factors that determine polydrug use. Instead, it would be more prudent to discuss risk and protective factors or, more generally, correlates. For example, what role do sex and age play? How does the availability of these drugs influence use? Exploring these factors could help us better understand common patterns, but not necessarily the root causes of polydrug use.
How are familiar background (mental, including drugs) related to poly-substance use? How are social relationships related to poly-sybstance use?
What do we know about the underlying biological and psychological factors that contribute to polydrug use? What are the most common drugs used in the context of polydrug use, and how do they interact? What is the prevalence of synthetic drugs being used as adulterants in traditional substances like heroin, cocaine, and cannabis? What data do we have regarding the production and distribution of drugs, especially synthetic substances and those used as adulterants? How can biomedical research contribute to identifying individuals at greater risk of developing substance-related problems due to polydrug use? How can we better understand the relationship between mental health issues and polydrug use, especially in terms of common aetiology?
There is a wealth of scientific literature on etiology, I would start collecting data on this issue and writing a clear review on this topic. And include mental health (both as determinant, outcome, or with regard to shared risk factors). I don't see this issue as specific for poly substance use. It is common knowledge (see f.e. the risk factors in figure 5 in the EUPC) that there are many factors that make individuals 'vulnerable' for may negative outcomes; and preventive interventions aim to address (a selection) of these risk factors.
How prevalent is poly-substance use across different age groups, genders, and socioeconomic backgrounds? How do different cultural contexts and environments influence poly-substance use patterns? How are sociodemographic factors (e.g., age, gender, ethnicity, education, employment) related to poly-substance use? How do socioeconomic factors (e.g., poverty, lack of access to healthcare, housing instability) contribute to poly-substance use? What are the socio-environmental risk factors that predispose individuals to engage in poly-substance use (e.g., exposure to trauma, violence, family history of substance abuse)? How does poly-substance use affect individuals' ability to engage in the workforce or education? What are the gender differences in poly-substance use patterns and their respective consequences (e.g., healthcare needs, treatment access, overdose risk)?

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: How are sociodemographic as well as socioeconomic factors related to poly-substance use?)
324 / 5.000 There should always be more insight into vulnerable groups, also among poly drug users. Research from different angles and disciplines is always of great value.
How are sociodemographic as well as socioeconomic factors related to poly-substance use? How are peer relationships related to poly-substance use? How are vulnerable groups (chemsex users, homeless...) afected to poly-substance use? How is mental health related to poly-substance use?
How can we recognize vulnerable children / families? Are parents poly-drug users?
Which are the factors associated with the resielence (not using) in persons, especially youngsters, who are living the subpopulations, families and the enviroment with high prevalence opf substance and polysubstance use.
How do genetic, biological, and mental health factors influence poly-substance use? What role do social factors (e.g., poverty, education, trauma) play in poly-substance use? How can interventions address both substance use and its underlying causes? What preventive measures can reduce poly-substance use, especially in vulnerable populations?
How do genetic predispositions influence the likelihood of developing poly-substance use disorders? What role do neuroplasticity and brain development play in the escalation of poly-substance use, particularly during adolescence? What role do social determinants of health (e.g., access to education, healthcare, social services) play in either increasing or mitigating poly-substance use? How do neighborhood environments (e.g., urban vs. rural, socioeconomic diversity) impact poly-substance use patterns? Can trauma-informed interventions that target multiple forms of abuse be more effective in reducing poly-substance use among high-risk populations? What role do dual diagnoses (mental health + substance use) play in the complexity of treatment for poly-substance users? What role does media exposure (e.g., social media, advertising) play in shaping attitudes toward poly-substance use?
What are the occasions on which poly-drug use occurs, what are its modalities, modes and circumstances of use and the socio-individual characteristics of users?
What are the exposing factors of polydrug use?
Already answered in the dimension 1. Groups to be considered according to age, gender, place of residence, socioeconomic status. Contexts to be considered: rural vs urban environment, community vs prison setting; presencial vs virtual environment (considering market issues).
To what extent tolerance and withdrwal symptoms has an impact on using substitution drugs? (i.e., rather biological or availability (market) factors play a more important role)
I can't add anything here that is not mentioned in the info text
What are the occasions on which poly-drug use occurs, what are its modalities, modes and circumstances of use and the socio-individual characteristics of users?
What role does self-medication play in poly-substance use to deal with trauma (psychological), mental health issues or social deprivation are there some groups who may be at more risk of poly-substance use? Are the harms of polysubstance use greater among those at more social disadvantage
How are sociodemographic as well as socioeconomic factors related to poly-substance use? How are drop out school is related to abnormal beahviour ? How are parents addiction related to polydrug use in youngest ?
Dimension out of my expertise area.
What are the risk and protective factors, what type of interventions may be offered?
What are the main determinants of initiation of poly-substance use? How are predisposing factors related to poly-substance use (behavioural factors, psychological factors, biological factors)? How are environmental factors related to polysubstance use (social-cultural factors, cues)? How are motivation and social-cognitive factors related to polysubstance use (attitudes, social influences including norms, risk perception)?
Very similar to the answers in the slide before.
Who are the people experiencing poly-drug use? What are their demographics and social status? Is there a difference between who is doing what? What is the motivation behind poly-drug use?

In your opinion, considering consequences of poly-substance use, which questions are relevant for research and/or policy this dimension? (Example: How are sociodemographic as well as socioeconomic factors related to poly-substance use?)
What are other social issues presented by people experiencing poly-drug use? What other social services are accessed?
1. Which socio-economic conditions are influencing the development of polysubstance use, and what comprehensive social policy measures can effectively mitigate these impacts? 2. What are the most effective tactics to motivate substance users to make responsible choices about their polydrug use? 3. What innovative harm reduction interventions (e.g., safe consumption sites, mobile healthcare services) can be applied in cases of polysubstance use most effectively across different adaptations (e.g., in various member states or locations)?
How is preventive action related to poly-substance use How do economic factors influence poly-substance use What is the attributable risk of actions to the use and prevention of polydrug use and its harms What are the pathways into polysubstance use and the pathways to the cessation of this behaviour How does age of onset influence poly-substance use
How can factors related to school achievments be highlighted better in prevention? Are there any specifik risk factors for certain poly drug use combinations? What protective factors has an effect on poly substance use? What forms of poly drug use are most connected to socio-economic factors?
How can we distinguish between the genetic/epigenetic vulnerability for all substance use and the specific role of the environment and social factors to consume a substance rather than another ? Are there specific patterns of polysubstance use depending on social groups ?

Reference: Expert Consultation Round one

Table 24: Answers to question two of Dimension 4

What forms of poly-drug use should be monitored in this context?
Always alcohol, tobacco, and cannabis. In older prescription drugs
Simultaneous Use of Multiple Substances:
Consumption of two or more substances at the same time (e.g., alcohol and cocaine, cannabis and tobacco).
Sequential Use Within a Short Timeframe:
Use of different substances in close succession to enhance or counteract effects (e.g., stimulants followed by depressants).
Use of Legal and Illegal Substance Combinations:
Mixing alcohol, tobacco, prescription drugs, and illicit substances.
Substitution and Displacement Use:
Shifting from one substance to another due to availability, price, or policy changes (e.g., cannabis to synthetic cannabinoids).
Use of Adulterated or Mixed Substances:
Consumption of drugs unknowingly combined with other substances (e.g., cocaine adulterated with fentanyl).
Polydrug Use Involving New Psychoactive Substances (NPS):
Combining NPS with traditional drugs, posing unknown health risks.
Poly-Substance Use in High-Risk Settings:
Use in contexts like nightlife, festivals, or prisons, where mixing substances is common.
Medical and Recreational Drug Combinations:
Misuse of prescription medications (e.g., opioids, benzodiazepines) alongside recreational substances.
Behavioral and Substance Use Overlap:
Co-occurrence of poly-substance use with behavioral addictions (e.g., gambling while using stimulants).
Alcohol together with illicit drugs
Involvement of psychotropic and other medications used with other drugs, including alcohol
Cocaine and other stimulants
Cocaine and heroin

What forms of poly-drug use should be monitored in this context?
Cocaine and alcohol
Heroin combined with cocaine
Cocaine and alcohol
Stimulants combined with depressants
Opioids combined with depressants
NPS used as adulterants in traditional drugs like heroin, cocaine, or cannabis
Use of inhalants (e.g., nitrous oxide) in combination with other substances like alcohol or cannabis
it is not clear what is meant by 'forms' of poly drug use....
How prevalent is poly-substance use across different age groups, genders, and socioeconomic backgrounds?
How do different cultural contexts and environments influence poly-substance use patterns?
How are sociodemographic factors (e.g., age, gender, ethnicity, education, employment) related to poly-substance use?
How do socioeconomic factors (e.g., poverty, lack of access to healthcare, housing instability) contribute to poly-substance use?
What are the socio-environmental risk factors that predispose individuals to engage in poly-substance use (e.g., exposure to trauma, violence, family history of substance abuse)?
Prescription drug misuse – especially when prescription medications like opioids or benzodiazepines are used alongside illicit drugs.
Use of synthetic drugs – such as synthetic cannabinoids or synthetic opioids combined with other substances.
Polydrug use in specific settings – e.g., use of multiple substances at festivals, nightclubs, or in high-risk environments.
Young people's use of poly-drugs – particularly where drugs are used in combination to intensify effects (e.g., alcohol and stimulants like ecstasy or cocaine).
Injecting drug users – when substances are used together via injection, potentially increasing the risk of bloodborne diseases or overdoses.
opioids/benzodiazepines/stimulants/prescription drugs/synthetic cannabinoids/alhocol/behavioural addictions/
The poly-drug use of cannabis and cocaine, cannabis and ecstasy, and cannabis, ecstasy and cocaine.
Different combinations of licit and illicit drugs.
Already answered in the dimension 1.
any forms
The poly-drug use of cannabis and cocaine, cannabis and ecstasy, and cannabis, ecstasy and cocaine.
All, including alcohol
Tobacco and alchol abuse in youngest
Cannabis+alchol + gambling
All
All, including behavioural addictions occurring concurrently with substance abuse.
Ideally, all forms of poly-drug use should be monitored. However, disadvantaged areas , particularly rural segregated regions, are especially affected due to the affordability of drugs (cheaper than alcohol in many cases) and the often unknown composition of substances. In these environments, harm reduction and users' responsible decision-making are hindered, and drug use is perpetuated by deprived living conditions. Monitoring is crucial, as new psychoactive substances often emerge here. Recreational drug users represent another key group where poly-drug use harms can be prevented with interventions, requiring proper monitoring. Additionally, many other groups – such as homeless individuals– are also highly vulnerable to poly-drug use. These groups may not form identifiable communities, but their exposure to poly-drug use remains significant due to their unstable living conditions and lack of access to support. Monitoring these at-risk populations is important.

Reference: Expert Consultation Round one

Table 25: Answers to question three of Dimension 4

What type of data/information would be needed to answer the questions you formulated above?
Trends in the production and preparation of drugs for user consumption
Trends in substance use in party settings, involving stimulants and alcohol
Dynamics of polydrug use (settings, user characteristics, geographical context)
Again, surveys and statistical analyses would be a first step toward better understanding the factors that help explain polydrug use.
How they start and they are using poly-substances
Trends in drug production and preparation methods.
Data on substance use in party or nightlife settings, focusing on stimulants and alcohol
Information on how substances are combined in polydrug use and the associated risks.
Data from drug testing services on adulterants in traditional drugs.
Longitudinal data tracking changes in polydrug use patterns.
Health outcomes linked to polydrug use, including overdoses and hospital admissions.
Demographic data to understand who engages in polydrug use.
literature reviews,
data from epidemiological studies.
In general, 'vulnerability factors'
Demographic Data, Substance Use Data, Socioeconomic Data, Cultural Context Data, Environmental Data, Social and Behavioral Data, Survey and Qualitative Data:
We need specific studies in vulnerable groups
Data on protective factors among non-users and vice versa.
Health Data – Information on overdoses, poisonings, and long-term health effects from hospitals and clinics.
User Surveys – Data on common drug combinations and usage patterns.
Toxicology Reports – Lab data identifying substances involved in overdoses and fatalities.
Law Enforcement Data – Information on drug seizures and related fatalities.
Policy Evaluations – Assessments of the effectiveness of drug policies and interventions.
general population surveys,
substance use statistics,
treatment data,
data on multiple addiction,
data on alcohol use,
data on behavioural addictions,
studies targeting neurodevelopment in children,
longitudinal studies,
developmental psychopathology,
neurodevelopmental disorder research
Information on characterization helps us to understand which profiles may be most associated with poly-drug. In this sense, within the scope of GPS, we always ask the following questions that help us to identify sociodemographic, socioeconomic and cultural characteristics of users: age, gender, level of education, profession and professional status, social origins (profession and professional status of father and mother), degree of urbanity, nationality (nationals vs. migrants).
More research on risk and protective factors for different substances and specific forms of poly drug use
Survey, interview and register data
more research in general
Information on characterization helps us to understand which profiles may be most associated with poly-drug. In this sense, within the scope of GPS, we always ask the following questions that help us to identify sociodemographic, socioeconomic and cultural characteristics of users: age, gender, level of education, profession and professional status, social origins (profession and professional status of father and mother), degree of urbanity, nationality (nationals vs. migrants).
More indepth specific research with various groups; more longitudinal studies
Survey in younger at primary school (separate questionnaires for age and sex)

What type of data/information would be needed to answer the questions you formulated above?
Data on all types of behavioural addictions (& relation towards poly-substance use) Data on biological determinants of addiction (genetic, neurological factors) Data on dimensions mentioned above (predisposing factors, environmental factors, motivation factors)
Demographic data
1. Identification of the geographical areas affected by polysubstance use (e. g., nighlife settings in cities, segregated areas, disadvantaged villages) 2. Identification of different groups of polydrug-users 2.1. pinpoint relevant variables – including demographic, psychosocial, and substance use-related variables – which can effectively differentiate polysubstance users into distinct groups that require tailored intervention strategies 2.2. identifiing methods (e.g., surveys, interviews, longitudinal studies) which can be used to accurately map out the profiles and needs of different poly-substance user groups 3. Describing strategies which can be adapted for the different groups in order to raise awareness about the risks of polysubstance use
order and time frames of initiation and use of various substances, age on onset
More research on risk and protective factors for different substances and specific forms of poly drug use
Identification of the geographical areas affected by polysubstance use (e. g., nighlife settings in cities, segregated areas, disadvantaged villages)
Identification of different groups of polydrug-users
pinpoint relevant variables – including demographic, psychosocial, and substance use-related variables – which can effectively differentiate polysubstance users into distinct groups that require tailored intervention strategies
identifiing methods (e.g., surveys, interviews, longitudinal studies) which can be used to accurately map out the profiles and needs of different poly-substance user groups
Describing strategies which can be adapted for the different groups in order to raise awareness about the risks of polysubstance use
Clinical and fondamental research, including mendelian randomization for genetic vulnerabilities.
GPS with large sample size.

Reference: Expert Consultation Round one

Table 26: Answers to question four to Dimension 4

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
Cross-sector data linkage (health, social, and criminal justice systems)
Enhanced monitoring of simultaneous and sequential substance use
Inclusion of biological, psychological, and social risk factor indicators
Real-time surveillance of emerging substance combinations and market trends.
More integration of alcohol use within the data collection exercise by the EUDA
Continuation of trends in new substance use through the EWS
Engagement with people who use drugs to get first hand insight into polydrug use
Monitoring of mental health of people who engage in polysubstance use
Integrate alcohol use within the data collection by EUDA.
Continue tracking trends in new substance use through the EWG.
Engage with people who use drugs for first-hand insights into polydrug use.
Monitor the mental health of individuals who engage in polydrug use.
Standardise data collection methods across EU member states.
Improve collaboration with healthcare providers for better health data.
Update harm-reduction strategies based on real-time data.
Longitudinal data, but this is not the core business of the EUDA.
Develop standardized questions in national and regional surveys that ask about combinations of substances, frequency of use, and contexts (e.g., recreational use, self-medication).
Include more granular sociodemographic questions in surveys and ensure that data are segmented by these factors to observe intersectional patterns.

What changes in the monitoring systems would enable EUDA to better understand this dimension/answer the questions?
Commission studies and reports that collect qualitative data on cultural attitudes, environmental pressures, and individual experiences related to poly-substance use.
Conduct targeted studies on the impact of emerging substances like synthetic cannabinoids or fentanyl on specific populations to better understand risks and provide targeted responses.
The question is whether and what role the EUDA should play in this. There are many figures and indicators available at the national or European level of the participating countries. As is already happening with the various epidemiological indicators of the EUDA, explaining the trends in conjunction with each other, this could also be extended to other available indicators. For TDI it is preferable not to do this via the data collection at the institution, but to use existing monitors and figures.
We need to introduce chemsex o mental health problems in our key indicators
Should be considered by EUDA scientific commitee and internal EUDA expertise with respect not to overload FP capacities by data collection tasks.
Integrate data from hospitals, law enforcement, and surveys for a comprehensive view.
Encourage cross-sector collaboration between health, law enforcement, and social services.
Focus on vulnerable populations to understand risk factors.
Track harm reduction programs to assess their effectiveness in reducing harm from poly-drug use.
I believe it would be challenging for EUDA to ask focal points to support NFP to conduct neurodevelopmental researches, as these studies are costly. Instead, EUDA should focus on utilizing existing data from national research and request this data from the National Focal Points (NFPs).
Inclusion and analysis of questions on respondents' characterization
When possible and appropriate, including specific sociodemographics (gender, age, region, socioeconomic status) and desaggregate information accordingly.
Inclusion and analysis of questions on respondents' characterization
Improve the data capture of polysubstance use which could assist with the answer - are there some groups who may be at more risk of poly-substance use?
Collect more data and include more tables but this may not be well received as fonte already asks a lot of questions
Increase survey in primary school
Broader focus on determinants of substance use and addictions and models from health psychology (behavioural change wheel, I-Change Model, Health Belief Model, Preceed-Proceed Model, Motivational Interviewing, etc.)
Nil
Promoting collaboration between various data providers (e.g., national statistical offices) and EUDA would significantly enhance the understanding of the situation in a more nuanced and comprehensive way. Currently, the monitoring system provides fragmented data (e.g., reports from harm reduction services or needle exchange programs), which is valuable, but despite the best efforts, it cannot replace a holistic approach. The establishment of formalized cooperation requirements would substantially improve the effectiveness of the system. As a part of this, the development of targeted guidelines and support materials would be highly beneficial in assisting diverse service providers in delivering high-quality data, as the processes involved are often unfamiliar and challenging for them to navigate.
The first mission of the EUDA should be to provide a standardized definition of polysubstance use across european union.
This definition should include the methodology to build this indicator depending on the heterogeneity of national data sources.

Reference: Expert Consultation Round one

Recommendations

Table 27: Question one of recommendations sector

Are there any relevant aspects of poly-substance use missing in the four dimensions listed above?
Yes, some relevant aspects may be missing, including: Impact of digital environments (e.g., online markets, social media influence) on poly-substance use. Role of cultural and regional differences in shaping use patterns. Environmental factors (e.g., urban vs. rural settings) influencing accessibility and consumption. Overlap with behavioral addictions and other risky behaviors. Protective factors and resilience that prevent poly-substance use despite risk exposure.
Alcohol, tobacco and prescribed drugs must be included always as possible patter of polysubstance use. Treatment according to polysubstance use must be developed Polysubstance use is more the rule than the exception and must be considered for monitoring and for develop adequate treatments
Social and Environmental Factors - The role of social environments, peer influence, and access to substances in shaping polydrug use patterns. Economic Factors: - The impact of economic pressures, such as poverty or lack of employment, on the likelihood of engaging in polydrug use.
I would focus on the first dimension (to start with).
In my opinion there is also trend for poly-drug misuse on prescription (Rx) medicines, mainly BZD + other psychoactive substances.
Poly-substance use often leads to complex medical conditions, higher healthcare utilization, and increased costs. Tracking the economic burden of poly-substance use on national healthcare systems can provide important insights into the overall public health impact. To better monitor healthcare costs related to emergency room visits, hospitalizations, and long-term care for poly-substance users and also track the burden on mental health services.
We need to give more importance in EUDA to alcohol consumption which is the most important drug in poly-substance use We need to focus on other addictions that are importan and are related to poly-substance use such as non-substance addictions
Yes, I am sure m,any aspects might be missing. Because the formulation of the propert goal and to the mission oriented questions and recommendations are the most comprehensive, responsible and difficult tasks. Researchers are familiar with it. Complex professional knowledge and expertise is needed and in this field also other processes, their organizatin as well as political orientation. So it is again on the EUDA and its staff to analyse and to sort out the responses to this questionnaire and probably to take the second round discussing its proposal.
No, I don't believe any relevant aspects of poly-substance use are missing in the four dimensions listed above
No, you allowed us to cover all important aspects of it.
In my opinion, these dimensions cover the phenomenon quite well.
I think the motivational mackground would be really important to reveal.
Personally, I see two main dimensions - monitoring of the phenomena, and interventions for the group polysubstance using people. Important issues to mention - the scope of polydrug use goes probably beyond the extended mandate of EUDA - in my view it should cover combination of all substances, not just illicit drugs+alcohol and illicit drugs+medicines, but also alcohol+medicines, alcohol+kratom etc. Similarly, some combinations may affect more population groups that are currently out of focus of EUDA monitoring, such as seniors 65+.
Consequences for mental & physical health specific to poly-substance use Economic consequences
Our main concern relates to the operational definition of polysubstance use. Please refer to our previous comments.

Reference: Expert Consultation Round one

Table 28: Question two of recommendations sector

In your area of work/expertise, what are the available data sources concerning the monitoring of poly-substance use?
European School Survey Project on Alcohol and Other Drugs (ESPAD): Provides comprehensive data on substance use patterns, including poly-substance use, among 16-year-olds across Europe. EUDA Databases: Offers extensive information on drug use prevalence, poly-drug trends, and related harms. National Epidemiological Surveys and Health Monitoring Systems: Collect country-specific data on alcohol, tobacco, illicit drug use, and behavioral addictions. Hospital and Emergency Department Records: Document poly-substance-related admissions, overdoses, and acute health events. Early Warning Systems (EWS) for New Psychoactive Substances (NPS): Track emerging trends in substance combinations and market availability. Treatment and Rehabilitation Service Data: Provide insights into the prevalence of poly-substance use among patients and treatment outcomes. Law Enforcement and Drug Seizure Reports: Offer information on market trends and substances commonly trafficked together. Qualitative Research and Focus Groups: Capture user experiences, motivations, and contextual factors influencing poly-substance use. Digital Surveillance Tools: Monitor online marketplaces, social media platforms, and forums for substance availability and usage trends. School and Community Prevention Program Data: Evaluate the effectiveness of interventions targeting poly-substance use among youth.
The current TDI protocol includes a component on polydrug use, but I feel that the definition should be clearer for data providers.
Asking always to the patient about different drug use and patterns. The polydrug use in the last 30 days must be always considered
Ad hoc information on certain cases caused public and media interest. General population survey (GPS) and other researches.
The TDI is an important data source, but it is not enough on its own to fully capture the complexity of poly-drug use. The TDI focuses mainly on individuals seeking treatment and does not provide a complete picture of the broader population engaging in polydrug use,
epidemiological data (GPS, online survey nightlife, ewsd), treatment data, emergencies data, drug checking data, special register (in development).
DUID clinical cases
The data on clients in needle exchange programs and users involved in treatment are available (druge use, socio-economc data, etc.)
In the NL or TDI data collection consists of already 3 substances/addictions, including alcohol, nicotine and behavioral addictions (mostly gambling). A new triage instrument in addiction care is in development. Here all substances and addictions are registered.
General population surveys, students surveys, prisons surveys, web surveys on consumers, indicators such as: TDI, DRD, emergency rooms indicators, non-substance addiction treatment demand indicator
General Mortality Register, toxicology reports, data from hospitals about non-fatal overdoses
Health facilities. Population surveys.
In my area of work, there are several data sources that help monitor poly-substance use. These include public health surveys, reports from treatment and harm reduction programs, and law enforcement data.
The legal framework, treatment data, general population surveys, and harm reduction data should be adapted to effectively report on poly-substance use. This adaptation is necessary to capture the complexities of poly-drug use and ensure accurate, comprehensive data collection across these areas. As NFP, we report on all relevant indicators, and further adaptations will help us provide more detailed and effective data on poly-substance use.
Survey data
Surveys
directly none
Regular social scientific surveys and clinical studie
GPS

In your area of work/expertise, what are the available data sources concerning the monitoring of poly-substance use?
Treatment data Drug-related deaths Some prevalence data Other studies
only treatment data and local studies
Comprehensive toxicological data for most of the cases. Wide range of drug of abuse and medicines analysed in routine analytical procedures
GPS - questions on polysubstance use (on same occasion/day) have been implemented in surveys; we cover population 15+, info on use of substances in last 30 days is available in trends. School surveys - ESPAD data may look at use of more than one substance in last 30 days. Data from health statistics - people in treatment in relation to dg. F19 of ICD-10. Data on intoxication related to polydrug use should be available as well, though we struggle with access to some data sources. DRD - information is available in specialized mortality register, however, not available at the moment, this would need direct access to the registry (we now only have aggregated info). People in contact with harm reduction services - exact data are not available but monitoring may be developed. We also run focus groups within the qualitative monitoring of drug scene, and some information can be accessed via focus groups.
GPS (general population survey) with a specific drug module Targeted survey among a semi-representative panel of cannabis-users and non-users Treatment demand indicator
In Germany, several data sources monitor poly-substance use, providing insights from different perspectives, including epidemiology, health outcomes, law enforcement, and social services. The main sources include: 1. Epidemiological and Public Health Data Deutsche Suchthilfestatistik (DSHS) (German Addiction Support Statistics) o Collects nationwide data on addiction treatment admissions, including poly-substance use. o Provides demographic, treatment, and outcome data for individuals in rehabilitation programs. Epidemiologischer Suchtsurvey (ESA) (Epidemiological Addiction Survey) o A representative national survey conducted by the Institut für Therapieforschung (IFT). o Covers the prevalence of alcohol, tobacco, illicit drug use, and poly-substance use among the general population. Monitoring System Drogentrends (MoSyD) (Drug Trend Monitoring System) o Conducted by the Centre for Interdisciplinary Addiction Research (ZIS) at the University of Hamburg. o Focuses on emerging trends in substance use among young people, including polydrug use. Deutsches Beobachtungssystem für Drogentrends (DBDD) (German Drug Trend Monitoring System) o Part of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) early warning system. o Provides data on drug-related emergencies, new psychoactive substances (NPS), and poly-drug use trends.
Data collected from our own clients
Party service data NSP data
treatment demand data but limitations exist. AD hoc studies but the measurement of polysubstance use is limited with the main variables that are collected
One data source is EWSD (2024 not 2021) but this is not a general population survey as you know In the school surveys there are questions on combined used of alcohol and narcotic medicines What substances are involved in deaths is available but in the reporting only what substances that are present and not at an indivudal level – this requires special analysis. The diagnosis F19 is an indication of the level of poly substance use but not any information on what substances that are involved.
Medico-administrative registries
GPS
Law-enforcement registries
Preclinical research
Qualitative
Toxicological analyses
The main challenge relies on the linkage between all these data sources.

Reference: Expert Consultation Round one

Table 29: Question three of recommendations sector

How do these available data sources operationalize poly-substance use?
ESPAD & National Surveys: Measure simultaneous and sequential use through self-reported lifetime, past-year, and past-month consumption of multiple substances. EMCDDA & EWS: Track prevalence, patterns, and emerging trends of combined substance use and market-driven mixtures. Hospital & Emergency Data: Record poly-substance-related admissions and overdose incidents. Treatment Data: Identify clients' use of multiple substances and related health outcomes. Law Enforcement & Seizure Reports: Monitor market availability and common substance combinations.
There are no formal definitions. Usually they concern simulataneous use (or in succession, within a limited time span). We may define poly substance use within a broader time frame, like any use of specific substances with the past 12 months, but interpretation of these data is difficult, as it may say more about characteristics of the individuals using these substances (or access to these drugs) rather than risks because of drug interactions).
DUID cases give us information about the type of drugs used and about the trends in poly-drug use. It is an early indicator about the significant events (cases of intoxication and/or DRD). the data from national poison centres is the second warning signal about the poly-drug usage, especially in the risk groups (population with mental diseases, specific groups pf population, etc.)
Poly-substance use is typically operationalized in these data sources through self-reports, urine testing, client intake assessments, harm reduction service utilization, and treatment monitoring, which help identify and track the use of multiple substances either simultaneously or in close proximity. These data sources, if well-integrated, can help paint a clear picture of poly-substance use patterns, enabling better-targeted interventions, treatment, and harm reduction strategies.
Because all individual substances are questioned, poly-substance use can be concluded.
We ask specifically for poly-substance use meaning several drugs have been used at the same time or the use of several drugs separately
We see combinations of drugs, mechanism of death, main drug
Using TDI protocol on country level, and in their case registers patients´ different ways in different health facilities.
These data help assess the impact of poly-substance use on health, treatment, and policy outcomes.
Available data sources partially operationalize poly-substance use, but to effectively track this data, some modifications will be necessary.
Simultanous use of illicit drugs, pharmaceuticals and/or alcohol.
Association of licit and/or illicit substances in the same occasion (in a specific time frame)
Prevalence of poly-drug use, from the analysis of each drug use
By collecting more than one drug and allowing analysis of same
minimal influence
Some ask use at the same occasion/day, some ask use in last 30 days. Health statistics according to ICD-10 coding should provide info on dg. F19.
GPS (general population survey): Have you ever used cannabis, any illicit substance or any NPS together with another licit/illicit substance (e.g., alcohol, prescription drugs) at the same time or within a few hours with the intention to overlap (e.g., enhance, modulate or reduce) their effects? By prescription drugs we mean drugs that are delivered in pharmacies with a doctor's prescription only. and with a psychoactive effect (e.g., benzodiazepines, opioids, psychostimulants, antiepileptics) ¨ Yes ¨ No If yes, please indicate among the list below which combinations of substances have you used in your lifetime, during the last 12 months, and during the last 30 days..... Targeted survey among a semi-representative panel of cannabis-users and non-users: When you used cannabis for recreational purposes did you use any other of the following substances at the same time or within a few hours? Yes in the past 30 days Yes in the past 12 months, but not the past 30 days Yes but longer than 12 months ago Never Don't know I prefer not to answer Alcohol, Tobacco and/or nicotine products, Cocaine, Ecstasy/MDMA, Amphetamines, Methamphetamines, Hallucinogens, Ketamine, Heroin, Nitrous oxide, Other volatile substances and inhalants, New Psychoactive Substances (NPS;legal highs, designer drugs, smart drugs, herbal highs, bath salts, research chemicals, Spice, mephedrone, 3-MMC, 3-CMC, synthetic cannabinoids, synthetic opioids,...)

How do these available data sources operationalize poly-substance use?
Treatment demand indicator: Does the person regularly use more than one illicit drug at the same time or consecutively (polydrug use)? YES / NO --> please specify which substances Is there regular simultaneous or consecutive use of an ILLICIT drug with ALCOHOL (polysubstance use)? YES / NO --> Please specify which substances
The available data sources in Germany operationalize poly-substance use in different ways, depending on their specific research focus, methodology, and the institutions collecting the data. Here's an overview of how poly-substance use is defined and measured across various monitoring systems:
We collect info about substance of in the past Year, but not necessarily considering these substances as poly drug use. Snowballing is operationalised as 1 of the substances of abuse.
Both in NSP and party service data, service providers have the possibility to report on poly-substance use. Howeber, in neither case is there a specific question on the measurement of polydrug use. Reagrding NSP, the expert meeting provides a platform to share NSP's local experience about the patterns of drug use (in the online survey, we only ask about primarily injected drug). Regarding party service data, services can fill in open-ended questions.
The use of different substances within the same (rather broad) time frame
From EWSD: The last time you used X, what other substances have you used on the same occasion?
In our opinion, none of these data sources include all drugs. That's why we consider that the main challenge is to link different data sources to examine polysubstance use.

Reference: Expert Consultation Round one

Annex II

In the following all the answers that are given in round two of the expert consultation are listed below. The first group of questions (About you) shows the participating country, area of expertise and/or memberships of the participants (see Table 30, Table 31, Table 32). Group of question two, three, four and five focuses on four different dimensions (see chapter 4.2). The last group of questions focuses on the three most important research areas and hypothetical future research projects (see Table 47 and following listings regarding titles of research projects and brief description).

About you

Table 30: Participating Countries

Countries
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Estonia
Finland
France
Germany
Ireland
Italy
Lithuania
Luxembourg
Malta
Netherlands
Portugal
Romania
Slovakia
Slovenia
Sweden
Switzerland

Reference: Expert Consultation Round two

Table 31: Area of expertise

Area of expertise	N
Prevalence and patterns of drug use	36
Drug-related deaths	27
Drug-related infectious diseases	16
Treatment	25
Harm-reduction	18
High-risk drug use	20
Prevention	11
Drug policy	17
Law-enforcement	2
Other	Education and training; Forensic toxicology; Social determinants of drug use

Reference: Expert Consultation Round two

Table 32: Membership (to EUDA)

Member	N
National Focal Point (NFP)	32
EUDA's Scientific Committee	4
EUDA's network on key indicators (a national expert)	16
Joint Working Group on poly-drug use	2
Academic/research institution	18
Governmental body (other than NFP)	10
Other	National Institute of Legal Medicine and Forensic Sciences

Reference: Expert Consultation Round two

Dimension 1: Consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are used in combination or in close succession

Table 33: Nature and extent of poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
1. What is the extent of intentional poly-substance use in different groups of the population?	0	2	5	15	26	2	9	3,35	3,46
2. What is the extent of unintentional poly-substance use in different groups of the population?	1	0	10	15	19	4	10	3,13	3,24
3. Which combinations of substances are prevalent among the group of high-risk drug users?	0	1	3	12	31	0	12	3,55	3,63
4. Which combinations of substances are prevalent among the group of recreational drug users?	1	0	6	18	23	0	11	3,29	3,39
5. Which role do prescribed medicines play in poly-substance use?	0	1	9	15	25	0	9	3,28	3,38
6. How do different substances interact pharmacologically (both at the pharmacokinetic and pharmacodynamic level)?	2	2	10	12	18	5	10	2,95	3,13
7. Which poly-substance use patterns exist relating to simultaneous or sequential use of drugs and what are the motivations behind these patterns?	1	3	7	20	13	3	12	2,93	3,06
8. To what extent does the early use of legal substances such as tobacco increase the risk of using additional illegal drugs later on and developing a pattern of multiple substance use?	4	6	16	13	10	1	9	2,39	2,45

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 34: Harms and Consequences of poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
9. Which role do poly-substance use play in the field of drug impaired driving?	1	2	7	16	22	3	8	3,17	3,32
10. What are the short- and long-term consequences of poly-substance use among high-risk drug users?	0	1	4	18	24	3	9	3,38	3,45
11. What are the short- and long-term consequences of poly-substance use among recreational drug users?	0	1	8	17	22	3	8	3,25	3,33
12. What is the relationship between poly-substance use and engagement in other risky behaviors (such as un-safe sex or reckless driving, re-using or sharing use paraphernalia; increased aggressiveness, violence, infec-tious [HIV, HCV, Sexual Transmitted dis-eases])?	1	5	10	14	18	2	9	2,90	3,06
13. How does poly-substance use affect (fatal) overdoses?	1	2	1	7	39	1	8	3,62	3,76
14. How to reliably identify the main lethal substance in cases of drug-re-lated deaths with multiple substance use?	0	3	10	10	24	3	9	3,17	3,32
15. How does poly-substance use influ-ence the risk of dependence and men-tal health disorders?	1	1	8	19	17	3	10	3,09	3,19
16. How does poly-substance use con-tribute to increased risks of accidents and chronic diseases compared to sin-gle-substance use?	0	2	7	21	17	4	8	3,13	3,21
17. What are the economic costs of poly-substance use for society?	2	3	14	16	14	2	8	2,76	2,83

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 35: Responses to poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
18. What are the most effective prevention strategies to reduce the initiation and progression of poly-substance use (among adolescents and young adults)?	1	2	8	12	26	0	10	3,22	3,39
19. What diagnostic, predictive and preventive approaches are needed to reliably identify people at increased risk of developing a poly-substance use disorder at an early stage?	1	3	7	15	21	1	11	3,11	3,28
20. How can we improve public awareness regarding the risks of unknowingly consuming mixed or adulterated substances?	1	0	6	19	23	0	10	3,29	3,38
21. What are appropriate treatment programs for poly-substance use?	0	1	6	20	20	3	9	3,26	3,33
22. What are effective harm-reduction measures for poly-substance use?	2	1	6	15	23	1	11	3,19	3,37
23. What is the impact of poly-substance use on established harm-reduction measures?	1	2	9	19	13	3	12	2,93	3,03
24. How do interactions between different substances contribute to addiction development, and how can this be addressed in prevention and treatment strategies?	0	4	5	20	12	6	12	2,98	3,09
25. How does poly-substance use influence treatment outcomes?	1	2	5	20	18	4	9	3,13	3,26
26. What are the barriers to treatment and recovery for individuals engaged in poly-substance use?	0	2	10	18	15	4	10	3,02	3,09

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 36: Monitoring of poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
27. Which monitoring systems are needed to gain more knowledge of poly-substance use?	1	3	4	14	28	0	9	3,30	3,48
28. How can monitoring systems be further developed to capture temporal trends in poly-substance use more precisely and comprehensively?	0	3	6	19	21	0	10	3,18	3,30
29. Which coding strategies within the framework of international classification systems (e.g. ICD) are required to map drug-related deaths as a result of poly-substance use in such a way that both the substances involved	1	7	5	15	17	3	11	2,89	3,13
30. How can it be ensured that data on poly-substance use is standardized, continuously collected and internationally comparable?	0	3	5	13	27	2	9	3,33	3,48
31. How can data linkage between health, social, and criminal justice systems be optimized to better understand and address poly-substance use?	0	7	10	17	12	4	9	2,74	2,81

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 37: Poly-substance use and health policy

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
32. How can drug policy reform address the complexities of poly-substance use while balancing public safety and harm reduction?	2	3	6	16	19	3	10	3,02	3,23
33. How do policy changes (e.g. legalization of certain substances) influence the prevalence of poly-substances use?	2	2	11	19	14	1	10	2,85	2,97
34. How can harm reduction policies be tailored to address the unique risks associated with poly-substance use?	2	3	9	14	20	0	11	2,98	3,18
35. What prevention strategies can mitigate the risk of poly-substance use in high-risk settings, such as prisons or nightlife environments?	0	3	5	18	21	1	11	3,21	3,33

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 38: Substance combinations

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
Cannabis with other psychoactive substances	0	7	6	13	24	0	9	3,08	3,30
Alcohol with other psychoactive substances	0	0	4	14	32	0	9	3,56	3,61
Cannabis and synthetic Cannabinoids	1	4	16	13	14	1	10	2,73	2,76
Opioids and Stimulants	0	0	4	14	30	1	10	3,54	3,59
Opioids and Nicotine (e.g. smoking cessation of clients in OAT)	2	11	20	8	5	1	12	2,07	2,00
Opioids and Benzodiazepines	0	0	4	13	30	2	10	3,55	3,60
Gambling and psychoactive substances	3	8	15	12	8	3	10	2,30	2,33
Gaming and psychoactive substances	4	12	12	11	6	4	10	2,07	2,04

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 39: Substance combinations (other categories)

Other 1: Which other combinations of substances should be focused on in general?	Other 2: Which other combinations of substances should be focused on in general?	Other 3: Which other combinations of substances should be focused on in general?
Alcohol	Alcohol with opioids/cocaine	Cannabis and Cocaine
alcohol and cocaine	Benzodiazepines with other psychoactive substances	Polyuse of various stimulants (cocaine and ecstasy/MDMA)
Benzodiazepine (BDZ) and alcohol+ nicotine	cannabinoids and stimulants	Cannabis and Cocaine
Benzodiazepines and all other substances	Cannabis and Alcohol	Polyuse of various stimulants (cocaine and ecstasy/MDMA)
Benzodiazepines with all the combinations combinations above	cannabis and tobacco	
Cocaine and Alcohol	combinations of synthetic substances	
Cocaine and other substances	combined use of different stimulants (e.g. methamphetamine and MDMA or a combination of new synthetic stimulants)	
Cocaine with other psychoactive substances	kratom and combinations	
combination of specific Psychoactive Substances	Opioids with antidepressants/antipshycotics	
Combined use of different types of stimulants at the same time - e.g. methamphetamine and MDMA	Opioids with psychoactive medication other than benzodiazepines or other opioids	

Reference: Reference: Expert Consultation Round two

Dimension 2: Consequences for policies and responses, and the implications for health and social problems, when psychoactive substances are produced, marketed or sold together

Table 40: The influence of production, market and availability on poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
1. How does the consumption of certain substance combinations change as a result of market changes?	0	2	10	17	12	4	14	2,95	3,00
2. Which substances are substituted in the event of a shortage of certain unavailable substances?	0	1	9	15	16	4	14	3,12	3,19
3. What are the implications of using similar precursor chemicals to produce different substances on law enforcement?	3	5	10	12	4	9	16	2,26	2,36
4. What role does price, purity, and availability play in consumers' decisions to use multiple substances together?	0	5	6	19	9	6	14	2,82	2,92
5. How does the co-marketing of substances (e.g., selling cocaine and alcohol together) influence consumption patterns and related harms?	0	4	12	15	7	6	15	2,66	2,67
6. How does the darknet and cryptocurrency financing facilitate poly-drug use?	1	7	12	8	8	8	15	2,42	2,40
7. What impact do drug market disruptions (e.g., supply chain interruptions due to law enforcement actions) have on poly-substance use trends?	0	2	9	17	9	6	16	2,89	2,92
8. How does the availability of multiple substances from the same producers or markets influence poly-substance use patterns?	0	4	12	13	6	9	15	2,60	2,60

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 41: The influence of new synthetic substances on poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
9. What are the consequences of synthetic drugs used as adulterants in 'traditional drugs' such as cannabis, cocaine and heroin?	0	1	4	18	21	2	13	3,34	3,41
10. What role do synthetic cannabinoids and other new psychoactive substances (NPS) play as substitutes for traditional substances like cannabis or opioids?	0	0	11	20	13	2	13	3,05	3,06
11. What are the consequences of cannabis adulterated with synthetic cannabinoids?	0	1	13	16	14	2	13	2,98	3,00
12. What are the consequences of the use of synthetic cathinones instead of amphetamines or ecstasy?	0	2	11	18	13	2	13	2,95	3,00
13. What are the consequences of heroin adulterated with synthetic opioids (e.g. nitazene or xylazine)?	0	1	6	10	27	2	13	3,43	3,54

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 42: Market monitoring

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
14. How can we gain more information about poly-substance production and trafficking?	1	5	12	10	9	8	14	2,57	2,59
15. What data must be used in the future to analyze changes in the drug market?	0	4	11	11	13	6	14	2,85	2,91
16. What monitoring systems are most effective in detecting and responding to rapid changes in substance combinations?	0	5	4	16	14	6	14	3,00	3,17
17. How can forensic drug testing methods be further developed to enable routine and reliable detection of multiple substances in drugs traded on the black market?	1	1	8	15	13	6	15	3,00	3,11
18.Which data can we use to monitor the rise of drug producing laboratories?	1	6	11	11	8	7	15	2,51	2,55

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 43: (Policy-) reactions to the changing drug market

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
19. How can early warning systems be strengthened to detect emerging trends in substance mixtures and adulteration?	0	1	3	16	19	4	16	3,36	3,43
20. What new drug and health policy strategies are needed to respond to changes in the availability of substances and their production?	0	2	4	19	13	5	16	3,13	3,22
21. What policies can effectively disrupt the production and distribution networks that promote poly-substance use?	2	4	7	10	12	8	16	2,74	2,94
22. Do new prevention measures have to be developed due to the availability of new substances?	1	2	8	14	11	5	18	2,89	3,00
23. What interventions can prevent the rise of poly-substance use in response to shifts in drug market supply chains?	1	3	7	14	9	8	17	2,79	2,90
24. To what extent does the prohibition of the use of a legal substance lead to the use of an illegal substance?	3	3	7	12	9	7	18	2,62	2,79
25. How can policies be adapted to address the displacement of substances in response to enforcement actions, such as cannabis suppression increasing synthetic cannabinoid use?	2	2	10	13	8	8	16	2,66	2,74
26. What are the consequences of prohibiting NPS (single or generic groups) with regard to the rise of new drugs sold as NPS?	0	6	7	15	8	6	17	2,69	2,77
27. Do changes in prescription practices of legal medicines (e.g. benzodiazepines) result in substitution use of other (illicit) substances, like designer benzodiazepines or synthetic opioids?	0	2	5	16	13	6	17	3,11	3,21
28. How can we be prepared of the consequences on online sales of illegal substances?	2	3	7	12	12	5	18	2,81	3,00
29. How can healthcare systems be better prepared to address the complexities of poly-substance use related to market changes?	2	0	5	16	14	5	17	3,08	3,23

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Dimension 3: Consideration of drug-related policies or interven-tions that target multiple substances or behaviors that are not specific to a single psychoactive substance.

Table 44: Cross addiction interventions

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
1. What role do school- and community-based interventions play in addressing multiple risk behaviors simultaneously (school-based resilience work, parenting classes to address intergenerational harm)?	1	0	9	14	17	0	18	3,12	3,23
2. How can we leverage digital and social media interventions for broad-based prevention of poly-substance use and behavioral addictions?	0	2	8	14	16	1	18	3,10	3,20
3. To what extent can digital interventions - such as telemedicine, e-health applications or digital self-help services - contribute effectively to supporting recovery processes for poly substance use?	2	1	12	17	9	1	17	2,73	2,79
4. How to adapt risk perception, attitudes, and beliefs regarding poly-substance use / addictive behavior?	1	3	9	15	12	1	18	2,85	2,96
5. What are best practices for integrating harm-reduction strategies across poly-substance use in combination with behavior addictions?	1	3	12	12	10	3	18	2,71	2,75
6. How effective are interventions that combine pharmacological and behavioral treatments for individuals using multiple substances?	3	4	8	15	9	2	18	2,59	2,74
7. What integrated care models show the best outcomes for people with poly-substance use?	1	3	4	13	18	2	18	3,13	3,32

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Table 45: Cross addiction policies

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
8. How can national and local addiction strategies effectively combine efforts targeting the use of legal and illegal substances and addiction related behavior?	0	2	7	15	14	2	19	3,08	3,17
9. Which target groups and aspects must cross-addictions prevention approaches include in the context of poly-substance use?	2	1	7	17	11	2	19	2,89	3,04
10. How can evidence-based prevention models for (poly-)substance use - such as the Icelandic model, community capacity building approaches or participatory decision-making - be implemented?	0	2	7	15	13	2	20	3,05	3,14
11. What targeted support strategies can be developed to strengthen local communities in their comprehensive prevention work against poly-substance use, crime and mental health problems, taking into account the frequent interactions between these factors?	1	2	6	16	12	3	19	2,97	3,11
12. What are the best strategies to implement cross-addiction (substance and behavioral) treatment approach with poly-substance use?	0	5	9	12	11	3	19	2,78	2,86
13. What synergies can be developed between drug prevention, mental health and youth crime reduction programs?	0	1	4	13	20	2	19	3,37	3,45
14. What role can public health campaigns play in addressing the combined risks of alcohol, and illicit drug use?	0	4	10	13	12	1	19	2,85	2,91
15. How can synergies between alcohol, nicotine and drug policies and existing services be developed?	0	3	7	13	16	1	19	3,08	3,17

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Dimension 4: Recognizing that substance-related problems often share a common etiology and that understanding the biological or other common causes of the behavior is important for inform-ing the development and assessment of responses.

Table 46: Etiology of poly-substance use

	No priority	1	2	3	High priority	I don't know	No Answer	M	Mdn
Question	N	N	N	N	N	N	N		
1. What mechanisms and interactions between socio-economic factors - such as poverty, inadequate access to healthcare and housing instability - promote the development and maintenance of poly-drug addiction?	0	2	10	12	17	2	16	3,07	3,17
2. How does the use of multiple substances affect the educational and labor market participation of affected individuals, particularly with regard to functional performance, social integration and long-term opportunities for participation?	1	5	11	16	7	3	16	2,58	2,63
3. What gender-specific differences are there in the patterns of multiple drug use and the corresponding consequences (e.g. need for medical care, access to treatment, risk of overdose)?	0	5	12	13	11	1	17	2,73	2,76
4. What is the role of early-life trauma, abuse, or social exclusion in developing poly-substance use behaviors?	1	6	9	12	13	2	16	2,73	2,86
5. How do genetic predispositions and biological factors influence vulnerability to and likelihood of poly-substance use?	2	11	11	9	5	4	17	2,11	2,05
6. How can interventions address both biological predispositions and social determinants of poly-substance use simultaneously?	2	10	11	8	8	3	17	2,26	2,21
7. What are the socio-environmental risk factors (peer influence, social relationships, familiar background, cultural context, neighborhood) that promote poly-substance use?	1	3	7	13	18	1	16	3,05	3,23
8.How are motivational and socio-cognitive factors - such as individual attitudes, social norms, the influence of the social environment and subjective risk perception - related to the occurrence and maintenance of poly-drug use?	2	3	10	18	9	1	16	2,69	2,79
9. How can understanding shared etiology provide more effective, cross-substance prevention and intervention strategies?	1	2	9	12	15	3	17	2,97	3,11

M = Mean, Mdn = Grouped Median

Reference: Expert Consultation Round two

Summary

Table 47: Most important research areas

Research areas	N
The influence of production, market and availability on poly-substance use	3
Market monitoring	4
(Policy-) reactions to the changing drug market	4
The influence of new synthetic substances on poly-substance use	6
Cross addiction policies	6
Etiology of poly-substance use	8
Cross addiction interventions	9
Poly-substance use and health policy	13
Responses to poly-substances use	18
Nature and extent of poly-substance use	21
Monitoring of poly-substance use	25
Harms and Consequences of poly-substance use	30

Reference: Expert Consultation Round two

Title 1 Project and short description

- How can synergies between alcohol, nicotine and drug policies and existing services be developed?
- Substance combinations among individuals involved in high-risk drug use. This research would focus on poly-drug use among PWUD identified in the problem drug use mapping exercise. It would give information on the different combinations and possible sub-groups in this population. It could also identify factors associated with specific drug combinations.
- Harms and Consequences of poly-substance use
- Testing harm reduction models in young adolescents
- Poly-substance use and Drug Related Deaths
- Use of opioids with other substances: what are the implications for established harm reduction programmes (i.e. Naloxone, NSP) and OST? How do they need to be adapted to fit people with polysubstance use? Starting off with qualitative work with practitioners and users, developing a study from there, testing different adaptations of known programmes and measuring the "classical" outcomes, such as use of services, treatment retention, morbidity/mortality reduction, social integreation etc.
- Understanding the Harms: Health, Social, and Economic Consequences of Poly-Substance Use in Malta
- What are the health and social consequences the dilution of 'traditional drugs' with synthetic substance
- Monitoring Drugs and Treatment demand are the concepts of primary and secundary drug outdated or still relevant?
- What is the prevalence of the most common patterns of poly-substance use in different populations & age groups?
- Etiological Pathways and Early Predictors of Poly-Substance Use Among Adolescents: A Mixed-Methods Approach. This research project aims to investigate the developmental, psychological, and environmental factors associated with the initiation and progression of poly-substance use among adolescents. By combining quantitative survey data with in-depth

qualitative interviews, the study seeks to identify early predictors and risk trajectories, with particular attention to patterns of cross-addiction and gender-specific influences. The findings will contribute to the design of targeted early intervention and prevention strategies.

- "Patterns, Harms, and Emerging Trends in Polysubstance Use". Using real-time data from treatment services, toxicology reports, and population surveys, this study will analyze the most common substance combinations, their health consequences, and evolving trends, including the role of new synthetic drugs. The aim is to inform research, health policy and early-warning systems.
- Monitoring poly-substance use: Assessing combinations of substances used in the general population
- ESPAD
- Analaysis of existing data on poly substance use to enhance insight into poly substance use patterns and health outcomes (and regional/national differences)
- Integrative Analysis of Social and Biological Determinants in Substance Use Disorders. // Investigate the combined impact of social factors and biological mechanisms on substance use disorders to develop holistic prevention and treatment approaches based on a biopsychosocial model.
- The consumption of legal and illegal psychoactive substances and the relationship with polyconsumption. Consumption of different nicotine-based products (traditional cigarettes, electronic cigarettes, heated tobacco devices) and alcohol in association with other illegal psychoactive substances in the minor population (11-17 years): size of the phenomenon, consumer profiles, associated risk factors and protective factors
- What targeted support strategies can be developed to strengthen local communities in their comprehensive prevention work against poly-substance use, crime and mental health problems, taking into account the frequent interactions between these factors?
- Intergenerational substance use among families and communities: Changing patterns and the need for new responses to interrupt the cycle
- Nature and extent of poly-substance use

Title 2 Project and short description

- How can evidence-based prevention models for (poly-)substance use - such as the Icelandic model, com-munity capacity building approaches or participatory decision-making - be implemented?
- Poly-substance use and fatal overdose. This research would utilize DRD data from 3-5 countries in order to identify differences and similarities in the used drug combinations.
- Responses to poly-substances use - best practices
- National level training of health personnel in the management of overdose in poly-addicted patients
- Poly-substance in Road Side Survey samples
- Effective Responses to Poly-Substance Use: Prevention, Treatment, and Harm Reduction Strategies for Malta
- What are the harm reduction measures that need to be in place to tackle polysubstance use?
- What other model or hierarchy of monitoring (poly)drug use can be developed
- What are the health consequences of polysubstance use compared to multiple substance use & single substance use?

- Cumulative Harms and Health Inequities: Assessing the Consequences of Poly-Substance Use in Marginalised Populations. This study will examine the health and social consequences of poly-substance use among marginalised and underserved populations, including individuals experiencing homelessness, social exclusion, or rural isolation. The project will assess the burden of comorbidities, overdose risks, and systemic barriers to care through a public health lens. Findings will inform the development of inclusive harm reduction policies and integrated service models tailored to complex needs.
- "Evaluating Integrated Responses and Policy Approaches to Polysubstance Use". This project will assess the effectiveness of current cross-addiction interventions and health policies in responding to polysubstance use, identifying best practices and policy gaps. It will also develop recommendations for scalable, evidence-based policy solutions.
- Cannabis policy: How does it influence use of other substances?
- Pharmacological and healt effects of common combinations of concurrent poly substance use
- Transnational Social Policy Interventions Targeting Structural Drivers of Substance Use and Related Social Harms // Examine how broad social reforms can address the root social causes of substance use and related issues like homelessness, using a transnational perspective to inform effective policy frameworks.
- HRDU indicator and privacy: how to reconcile information needs and current legislation. To effectively apply the calculation methodologies of the HRDU indicator, it would often be necessary to compare individual data from different databases (Ministry of Health, Justice, Interior). However, the current privacy legislation prevents such cross-referencing, forcing the use of estimates based on single sources, with consequent information limitations. It would be desirable to define specific guidelines or regulatory acts, limited and approved by the Privacy Authority, to allow methodologies based on the controlled integration of different information flows.
- How can understanding shared etiology provide more effective, cross-substance prevention and intervention strategies?
- Early prevention and education within a whole school community
- Monitoring of poly-substance use

Title 2 Project and short description

- How does poly-substance use affect (fatal) overdoses?
- Risk of accidents, chronic diseases, and death in individuals involved in poly-drug use compared to those involved in single-substance use. This study would utilize the data from the problem drug use mapping exercise (or a birth cohort, if available) of which a cohort of PWUD would be formed. This cohort could then provide information on whether those involved in poly-drug use are more at risk of accidents, chronic diseases, or death, than those using single drugs.
- Cross addiction interventions
- Poly-substance use. Illegal drug of abuse and antidepressant/antipsychotic medicines.
- Mapping the Landscape: Extent and Patterns of Poly-Substance Use in Malta
- What methods can be used to effectively educate the drug using communities on the harms related to polysubstance use?
- What are the consequences of monitoring and reporting on drugs when leaving the concept of primary drug

- Are current treatments adapted to polysubstance use?
- Policy Responsiveness and Market Dynamics in the Context of Emerging Poly-Substance Use Trends. This project explores the interplay between evolving drug markets — including the proliferation of new psychoactive substances — and policy responses at national and European levels. Drawing on market monitoring data, policy analysis, and expert consultations, the research will assess the extent to which current policy frameworks address the complexity of poly-substance use. The ultimate goal is to provide evidence-based recommendations for more adaptive and anticipatory drug policy design.
- Treatment of people with poly-substance use: Parallel or sequential treatment?
- Effects of legal bans on NPS on shifts in drug markets and consumption
- Optimizing Recovery Pathways: The Role of Institutional Systems, Peer Support, and Community Integration in Sustained Substance Use Recovery // Identify effective recovery strategies by evaluating the collaboration between formal treatment, peer networks, and community supports to improve long-term outcomes in substance use recovery.
- Addiction prevention in the school population. What methodologies are available for the active involvement of students, parents and reference adults in prevention programs? The literature indicates that the family and reference adults are the main protective factors, associated with experiential training courses for the development of skills as well as knowledge. What are the winning approaches for involving family members and reference adults in prevention programs?
- How can data linkage between health, social, and criminal justice systems be optimized to better understand and address poly-substance use?
- Best practice and new models for addiction policy and practice as we tackle emerging drug trends and potential new digital solutions.