



Report on EU good practices of generic health emergency preparedness protocols

Deliverable D3.1

Inari Viskari and Tuukka Tammi

Recommended citation: Viskari, I; Tammi, T. Report on EU Good Practices on generic health emergency preparedness protocols. SO-PREP, 2021. ISBN: 978-952-343-017-4

SO-PREP is a project funded by the EU and composed of the following partners: Trimbos Institute (The Netherlands), Frankfurt University of Applied Science (FRA-UAS, Germany), Finnish Institute for Health and Welfare (THL, Finland), The National Institute for Health Development (TAI, Estonia), University Ghent (Belgium) and Correlation-European Harm Reduction Network (C-EHRN, The Netherlands).

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This report is part of the project SO-PREP, which has received funding from the European Union's Justice Programme. The content of this report represents the views of the authors only and is their sole responsibility; and does not reflect the views of the European Commission. The European Commission does not accept any responsibility for use that may be made of the information it contains.



Funded by the Justice Programme
of the European Union

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Abbreviations

ECDC	European Centre for Disease Prevention and Control
EMCDDA	European Monitoring Center for Drugs and Drug Addiction
EWS	Early Warning System
NPS	New Psychoactive Substances
PHEP	Public health emergency preparedness
RCCE	Risk Communication and Community Engagement
SHARP	Joint Action Strengthened International HeAlth Regulations and Preparedness in the EU
SO	Synthetic Opioids
WHO	World Health Organization

1. Introduction

The opioid epidemic has been going on for years in the United States and Canada. The misuse of prescription pain relievers, heroin, and synthetic opioids is a serious national crisis that affects public health and social and economic welfare. More than 70 000 Americans died from a drug overdose in 2017, and synthetic opioids, mainly fentanyl and its analogues, were responsible for the majority of these deaths. In Canada, the number of drug-related deaths is similarly high. Synthetic opioids are also becoming a significant public health threat in Europe, and there is a growing concern that similar development might occur in Europe. The use of synthetic opioids and the number of drug-related deaths have been increasing in many European countries. In 2015, fentanyl and its analogues became the deadliest drug in Sweden. In addition to Sweden, the most recent data shows an increase in synthetic opioid (SO) prevalence and incidents in a number of countries across Europe.

This report aims to provide an overview of generic national health emergency responses to public health threats and identify mechanisms that may be applicable to enhance national SO preparedness. The underlying question is: what can we learn from the range of approaches and models of preparedness from other fields, and the measures that have been developed to reduce the effects of pandemics and other public health threats? How could these methods be adopted and tailored to prevent or address a possible SO crisis in European countries?

The report is based on a review of available literature, research reports, and various publications related to preparedness, as well as discussions with staff from the project SHARP (Joint Action Strengthened International HeAlth Regulations and Preparedness in the EU).

2. What is Preparedness?

The United Nations and WHO define preparedness as *“the ability of governments, professional response organizations, communities and individuals to anticipate, detect and respond effectively to, and recover from, the impact of likely, imminent or current health emergencies, hazards, events or conditions. It means putting in place mechanisms that will allow national authorities, multilateral organizations and relief organizations to be aware of risks and deploy staff and resources quickly once a crisis strikes.”* (OCHA, 2019).

At a more general level than in relation to public health, the term preparedness refers to activities that ensure the completion of all tasks with minimum interruptions as well as measures that might deviate from normal action in disturbances that occur under normal conditions, and in exceptional conditions, and during emergencies. Preparation measures include contingency planning, continuity management, advance preparations, training, and preparedness exercises (Finnish Security Strategy for Society, 2017).



Figure 1: General Preparedness Process (Finnish Security Strategy for Society, 2017, p.9)

Preparedness aims to anticipate rather than to react. The planning of anticipation requires the ability to recognize weak signals, utilize methods of anticipation and researched data, innovative culture of experimentation, and the analysis of information and local knowledge. Following up on changing the operating environment trends and going through scenarios in exercises enhances preparedness in unexpected situations.

Another critical part of developing preparedness is the utilization of feedback, audits, accident investigations, and other experts' evaluations. The quality and effectiveness of preparation need to be reliably evaluated. Consequently, the evaluation processes also need to be part of preparation planning. By improving the speed and quality of assistance provided, preparedness can make a significant difference in saving lives and reducing suffering. An appropriate level of preparedness can also increase the value for money of relief action and ensure that scarce resources are directed to where they will have the greatest impact (OCHA, 2019).

A powerful epidemic of infectious diseases, for instance, can lower people's well-being, cause bottlenecks at hospitals, disturb schools' everyday operations, and even slow down international traffic. For that reason, different actors work together to prepare against the threats. Collaboration ensures that the required tasks are handled while also averting duplication and reducing the costs of the activities. The goal

is to make the resources of all actors available when the security and safety¹ of society is under threat. This action model is known as comprehensive security. Comprehensive security is used for maintaining the function of society, promoting citizens' security, safety and well-being, and securing the independence of the country (Finnish Security Strategy for Society, 2017, p.9).

Public health emergency preparedness aims to minimize the risks posed by communicable diseases and to mitigate their impact during a public health emergency, regardless of the scale of the event (local, regional, national, European). This requires capacities and capabilities for effective planning, coordination, early detection, assessment, investigation, response to, and communication in public health emergencies (ECDC Preparedness Factsheet, 2021).

The knowledge generated through well-designed, effectively executed research in anticipation of, in the midst of, and after an emergency is critical to our future capacity to achieve better the overarching goals of preparedness and response: preventing injury, illness, disability, and death and supporting recovery.

Preparedness activities at multiple levels have done much to improve our response to public health emergencies. Preparedness should be seen as a continuous quality improvement process, with the most important functional elements including planning, identifying and prioritizing risks, training, simulation exercises, evaluating lessons learned, and implementing the organizational change identified (ECDC Preparedness Factsheet, 2021).

In the past decade, public health emergencies have challenged the preparedness and response capacities of health systems. Most recently, the COVID-19 pandemic has yielded important information and data essential to improving global, national and regional preparedness and response planning.²

2.1 Key Elements of public health emergency preparedness

A wide range of emergencies, disasters, and hazards continuously threaten and impact public health.

Through better preparedness and more timely and effective responses, we can limit the human, economic and societal consequences. Despite the importance of preparedness, there is a persistent challenge for

¹ According to one definition, *safety* is the condition of being protected from harm or other non-desirable outcomes, caused by non-intentional failure, whereas *security* is the condition of being protected from harm or other non-desirable outcomes caused by intentional human actions or human behavior. (<https://www.coursera.org/lecture/security-safety-globalized-world/what-is-safetyand-security-VXD42>)

² We want to thank Anna Katz and Outi Karvonen from the European Joint Action SHARP (<https://www.sharpja.eu>) for their valuable expert help on this chapter. SHARP stands for "Strengthened International HeAlth Regulations and Preparedness in the EU".

public health practitioners to define what it means to be prepared. Existing frameworks lack consideration for the complexity relevant to health systems and the emergency context (Khan, O'Sullivan, Brown et al., 2018).

Nelson et al. (2007) define public health emergency preparedness (PHEP) as the capability of the public health and health care systems, communities and individuals to prevent, protect against, quickly respond to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities. Preparedness involves a coordinated and continuous process of planning and implementation that relies on measuring performance and taking corrective action.

PHEP should include a full range of prevention, mitigation, and recovery activities. It also involves operational capabilities—the ability to execute preparedness tasks quickly. Although possessing capabilities requires capacity (e.g. infrastructure, personnel, plans), capacity alone does not ensure readiness. PHEP is not a steady-state; it requires continuous improvement, including frequent testing of plans through drills and exercises and the formulation and execution of corrective action plans. PHEP also includes the practice of improving the health and resiliency of communities (Nelson et al., 2007).

To be prepared to respond to public health emergencies, the essential elements of PHEP, according to Khan et al. (2018) are:

1. Governance and leadership

- Vertically and horizontally integrated structures, partnerships, and accountabilities to support coordinated interoperable system functioning.
- Define roles, promote clarity, and enable flexibility across the system.

2. Planning process

- Dynamic processes anchored in the development of relationships and clear responsibilities.
- Support linkages across readiness priorities and activities.

3. Collaborative networks

- Effective partnerships share skillsets and support trust in a network system.
- Enable access to expertise for a range of hazards and impacts.

4. Community engagements

- Inclusivity supporting a proactive understanding of community priorities and values.
- Enables consideration of community risks, assets and values, and facilitates transparency and trust.

5. Risk analysis

- The process to understand risks for the community, and access and analyze information.
- Facilitates informed planning and decision-making.

6. Surveillance and monitoring

- Robust surveillance and information process to connect the system, key stakeholders and the community.
- Facilitates early awareness, as well as the analysis of impacts of public health actions to guide response.

7. Practice and experience

- Exercises, simulations and practice to promote agency and create feedback.
- Enables co-evolution and informs potential areas for adjustment.

8. Resources

- Scalable and sufficient infrastructure promotes adaptive capacity and supports decision-making.
- Ensures capability for mobilizing resources linked to plans and establishing priorities for the allocation of limited resources.

9. Workforce capacity

- Well-trained and knowledgeable people constitute crucial social infrastructure for the system.
- Supports business continuity, inter-operability and requires reciprocity.

10. Communication

- Understandable information for awareness and potential actions.
- Enables feedback and reach to diverse audiences when supported by sufficient capacity.

11. Learning and evaluation

- Assessments are key to recovery and make it more likely to be successful in one's recovery if timely and prioritized.
- Fosters change and improvement for better preparedness and response.

2.2 Preparedness assessment tools

Biological threats or other unpredictable circumstances can pose risks to global health, international security, and the worldwide economy. Because infectious diseases know no borders, all countries must prioritize and exercise the capabilities and prepare operation models required to prevent, detect, and rapidly respond to public health emergencies. Governments need to be transparent about their capabilities to assure neighbors they can stop an outbreak from becoming an international catastrophe. In turn, global leaders and international organizations bear collective responsibility for developing and maintaining the robust global capability to counter these threats. As described in the following, different international frameworks and joint assessment tools have been developed to help in ensuring the sufficient level of preparedness.

At EU-level, Decision 108/2013/EU on serious cross-border threats to health provides the framework to coordinate preparedness and response planning to strengthen the capacities for the monitoring, early warning and assessment and response to health emergencies. The decision:

- Supports sharing best practice and experience in preparedness and response planning
- Provides a backbone for developing national plans to address different types of health threats – e.g., pandemic influenza, or other events caused by biological or unknown agents, accidents caused by chemical agents, natural events of environmental origin, or deliberate acts
- Helps ensure the inter-operability of national plans – through coordination mechanisms, analysis and communication tools
- Supports the implementation of core capacity requirements for the WHO International Health Regulations (IHR) to detect, assess, report, and respond to public health emergencies (European Commission, Crisis preparedness and response, 2013).

2.2.1 HEPESA tool

The European Centre for Disease Prevention and Control (ECDC) has launched the HEPESA (Health Emergency Preparedness Self-Assessment) tool, to support countries in improving their level of public health emergency preparedness.³

The tool consists of seven domains that define the process of public health emergency preparedness and response. Relevant activities and indicators are highlighted to help EU/EEA Member States evaluate their level of preparedness, identify potential gaps, and set priorities for further development. The indicators have been formulated based on a literature review and consultations with ECDC's National Focal Points for Preparedness and Response.

The seven domains that define the process of public health emergency preparedness and response are: 1) Pre-event preparations and governance; 2) Resources: Trained workforce; 3) Support capacity: Surveillance; 4) Support capacity: Risk assessment; 5) Event response management; 6) Post-event review; 7) Implementation of lessons learned.

As shown in the figure 2 below, the seven steps are grouped into three phases: the pre-event phase spans all activities related to planning and anticipation, whereas the event phase focuses on the execution of existing preparedness plans in response to a (potential) public health threat. The post-event phase takes place after the recovery from a public health threat and emphasises the continuous improvement of all domains and elements represented in the PHEP process.

Each domain of the tool has several indicators. Indicators are divided into a baseline set of indicators (BSI) and a comprehensive set of indicators (CSI). The BSI define basic country preparedness, which should be achieved in every country, irrespective of how the country's health system is structured. The CSI is defined by additional preparedness indicators. The HEPESA tool also contains cross references to the WHO Joint

³ <https://www.ecdc.europa.eu/en/publications-data/hepsa-health-emergency-preparedness-self-assessment-tooluser-guide>

External Evaluation Tool (JEET)⁴ and the Strategic Framework for Emergency Preparedness⁵, which helps users calculate potential JEET scores and assess their preparedness level according to the WHO Framework. The HEPSA tool is available in all EU/EEA languages.



Figure 2. PHEP process

2.2.2 GHS tool

The Global Health Security (GHS) Index is another tool developed to assess the countries preparedness health security dimensions. Its six dimensions are: prevention, detection, response, health system, risk environment, and compliance with international standards. According to the GHS index, no country scores perfectly on all those six dimensions: *“National health security is fundamentally weak around the world. No country is fully prepared for epidemics or pandemics, and every country has important gaps to address.”* (...) *“On the Global Health Security Index, a report card that grades every country on its pandemic preparedness, the United States has a score of 83.5—the world’s highest. Rich, strong, developed, America is supposed to be the readiest of nations. That illusion has been shattered. Despite months of advance warning as the virus spread in other countries, when America was finally tested by COVID-19, it failed. The most prepared*

⁴ <https://www.who.int/ihr/procedures/joint-external-evaluations/en/>

⁵ <https://www.who.int/publications/i/item/a-strategic-framework-for-emergency-preparedness>

countries in Europe are the United Kingdom, The Netherlands, Austria, Sweden, Denmark, Finland, France, Slovenia, Switzerland and Germany” (GHS Index, 2019).



Figure 3: GHS Index Categories

3. How can generic health preparedness strategies be used to strengthen SO preparedness?

Drug markets have not been immune to global changes, and one of the challenges has been the emergence of New Psychoactive Substances (NPS). It is also assumed that repressive drug policies may increase the emergence of NPS as they are more difficult to identify and control than “traditional” drugs. NPS, including synthetic opioids (SO), synthetic cannabinoids, and synthetic cathinones, are associated with severe acute intoxications and deaths in Europe. Despite a range of new measures being introduced, NPS represents a challenge to current drug policy models. Although playing only a small role in Europe’s drug market, new SO pose a serious threat to individual and public health.

What are the implications for public health? Surveillance of emerging threats (through monitoring of overdoses, polysubstance use trends, and the illicit drug supply), enhanced linkage to treatment, and a multisectoral response are critical to reducing opioid-involved deaths (Wilson et al., 2020).

Few people who use drugs appear to be looking for fentanyl and other SO specifically, but people who use opioids often do not have access to other non-synthetic opioids. So the rise of SO is not consumer-driven but supply-driven. For that reason, fentanyl (and other SO) do not necessarily increase the number of users, but it increases the number of deaths among an existing pool of individuals who use drugs. The traditional

epidemic framework focusing on the number of opioid-using individuals fails to capture the dynamics of this problem (Pardo et al., 2019).

If the use of SO increases in Europe, rapid communication, early warning systems and exchange of information are a crucial part of preparedness planning. Also, responsible prescribing of opioid medications, prescription drug monitoring programs, and state-run electronic databases are important means to respond to the SO threat. The current state of SO preparedness in the EU member states is described in the SO-PREP report “Good practices of synthetic opioid preparedness, needs and challenges in EU Member States” (SO-PREP Project, 2021). According to the report the European countries are prepared to varying degrees but that there is room for improvement in all countries. In addition to those methods already recognized and applied, we should learn from the generic preparedness models presented above in this report.

Public health systems play a fundamental role in preparing communities to respond to and recover from threats and emergencies. The public health consequences of disasters and emergencies initially affect local jurisdictions. During the initial response, the people and communities that are impacted must rely on local community resources. As a result, all state, local, tribal, and territorial emergency response stakeholders must be prepared to coordinate, cooperate, and collaborate with cross-sector partners and organizations at all governmental levels when emergencies occur, regardless of the type, scale, or severity (CDC, 2018).

Preparing a health system for crises is no trivial task. Strengthening stewardship, implementing preparedness planning as a continuous process with a multi-hazard approach, and establishing sustainable crisis-management and health-related risk-reduction programs require a clear understanding of a country's situation (WHO, 2012).

To summarise, this report has presented a range of generic principles, models and guidelines which could be adopted also to SO preparedness. We need to prepare our health care system for public health emergencies, through information gathering, material preparations, giving out information and communicating with citizens, sharing responsibilities of different organizations and officials, strengthening resources and skills, the flow of information, international cooperation, using mobile apps, and more.

The epidemiological indicators for SO are developing but need also ongoing adjustments to be able to monitor new substances in the increasingly complex drug markets. Potent SO are on the rise in Europe. As they can cause serious harm, including nonfatal and fatal injuries, preparedness systems for SO need to be strengthened in order to anticipate a possible new epidemic.

There is a need for better preparedness at different levels: government, service-providers and individual levels. There is also need for, not only one, but parallel preparedness strategies and related elements as in the GHS index and PHEP model presented above.

Finally, it cannot be overemphasized that cooperation and collaboration between stakeholders at different levels and across different disciplines is necessary in order to (i) not miss any early signals of a worsening situation, and (ii) to respond to the threat effectively and in a well-coordinated way. No single stakeholder or strategy is able to tackle an epidemic alone.

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