The importance of laboratories on the detection and analysis of emerging drugs

João Rodrigues  
Scientific Affairs Officer  
Laboratory and Scientific Section

Martin Raithelhuber  
Illicit Synthetic Drugs Expert  
Laboratory and Scientific Section
What can or should be communicated?

- New substances identified for the first time in the country, region or laboratory.
- New, altered or harmful adulterants.
- Unusually high concentrations.
- Substances sold under the name of another drug.
- Particularly large seizures.
- Unusual or new presentation of substances.
- Fatal and non-fatal serious events, or events grouped by health complication.
- Changes or unusual forms of drug use, new modes of administration.
Stages of forensic laboratory data management for early warning systems

1. Substance detection and validation
2. Data analysis
3. Analysis-based prioritization by laboratory focal point
4. Evaluation and communication to the early warning system

Action in early warning systems, for example, notification to the network, request for more information to other members, alerts, etc.
Forensic laboratories:

- Sample
- Initial trace
- Unknown
- NPS identification
- EWS involvement
- Dissemination of information

SAP
Informal network power

- Efficient
- Fast and timely
- Helps
- Give and take
- Trust and respect
Example: Brasil (National)

• Incident: In July 2016 an unknown substance was submitted to the Forensic Chemistry Laboratory of the Federal Police of Brazil (SEPLAB / PF).

- Substance not identified by techniques available in the laboratory.

-SEPLAB/PF + Brasilia University (UnB)
  - The two organizations partnered.
  - The substance was identified by a structure clarification technique in UnB (25I-NBOH).

- SEPLAB/PF
  - A report was drafted with all the technical data and interpretation of the results.
  - The report was shared with partner organizations.

- Agencia Nacional de Vigilancia Sanitaria (Anvisa)
  - The substance was brought under national control in October 2016.
Ejemplo: USA Forensic Network (National and Global)

- Incident: In June 2017, the Drug Enforcement Administration (DEA) laboratory received an email from DEA Intelligence, reporting that the laboratory had just analyzed the second case of methoxyacetyl fentanyl in the United States, and that China was interested in bringing the substance under national control.

- A communication tool between DEA laboratories was created to share information about the occurrence of NSPs quickly and easily.

- DEA SE Lab

- DEA + Communication network in real time DEA
  - Created in August 2017 to address analytical challenges in forensic laboratories that work with NPS.

- DEA + other labs
  - The emergence of methoxyacetyl fentanyl, fentanyl tetrahydrofuran, and cyclopropylfentanyl has become widespread and the number of deaths associated with these substances has increased in the US.

- UE + China + DEA
  - OUTCOME:
    - Temporary substance control in the US
    - Bilateral discussions US - China
    - US information used in the EU for risk assessment
Concern for public health

General education of the population

Shares relevant information with other stakeholders

Substance identification

Controlled substance

Precursors

Legislative process
Early Warning System
Develop national capacity to detect and identify synthetic drugs

Beneficiary countries:

1. Antigua and Barbuda (2)
2. Bahamas (2)
3. Barbados (1)
4. Bolivia (2)
5. Chile (1)
6. Costa Rica (2)
7. Rep. Dominicana (2)
8. Ecuador (2)
9. El Salvador (2)
10. Guatemala (2)
11. Guyana (2)
12. Jamaica (2)
13. Mexico (2)
14. Panama (2)
15. Paraguay (2)
16. Peru (1)
17. Santa Lucía (2)
18. Suriname (2)
19. Trinidad and Tobago
UNODC Early Warning System on NPS

Toxicology Portal

UNODC-TIAFT collaboration
- NSP consumption data
- Substance combinations
- Toxicology data exchange
- Symptoms
- Damage information
- Threat assessments

www.unodc.org/tox
Thank you!

UNODC

Email
unodc-globalsmart@un.org

www.unodc.org/nps