Global overview on opioids in the field of health

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Training webinar on opioids in the Americas: How to identify and respond to emerging epidemics
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Introduction to Opioids

Common Opioids

- Generic term applied to a variety of substances from naturally-occurring opiates to synthetic opioids
- Widely used in medical practice because of their pain-relieving properties for treatment of mild/medium to severe pain
- Known to cause dependence used non-medically all around the world

Synthetic opioids used in medicine

- Fentanyl
- Tramadol
- Methadone
- Buprenorphine

Plant-based and semi-synthetic opioids

- Morphine
- Heroin
- Oxycodone
- Hydromorphone

NPS with opioid effects (no medical use)

- Acetylfentanyl
- Furanylfentanyl
- U-47700
- AH-7921
Introduction to Opioids

Interaction between Opioids and the Human Body

- Opioids interact with opioid receptors found throughout the human body (brain, intestines and spinal cord)
- Is responsible for triggering the brain reward system and producing pain relief by reducing pain transmission
- Chronic non-medical use of opioids can lead to tolerance, dependence and carries high risks of overdose
- Overdose occurs when use results in suppression or stopping of the breathing reflex (respiratory depression) resulting in decreased oxygen to the brain leading to coma and possibly death

Opioid overdose can be reversed by naloxone and naltrexone
Characterized by significant increase in non-medical use and overdose deaths associated with synthetic opioids globally in recent years.

What is the opioid crisis?

- Fentanyl and some of its analogues are extremely potent, increasing the risk of overdose death if used outside a medical context.
- Has led to significant increases in opioid overdose deaths in recent years with fentanyl emerging as the dominant opioid in these deaths.

North America

- Fentanyl and its analogues

West, Central & North Africa

- Tramadol

- Though far less potent as compared to fentanyls, it has been increasing used for non-medical purposes.
- Crisis seem to affect vulnerable groups and has been linked to crime.
- Increasing use of codeine-based cough syrup also reported.
Overview of the Opioid Crisis

**Fentanyl and its analogues**

- Driven by a complex set of factors including high prevailing rates of non-medical opioid use, increase in illicit manufacture of the substance due to simpler, effective methods of synthesis and the adulteration of illicit opioid supplies with fentanyl to lower cost.

- Seems to spreading to other regions including parts of Asia, Europe and Oceania where illicit supply and non-medical use of fentanyl are increasingly detected.

**Tramadol**

- Facilitated by under-developed or unregulated health systems, with barriers to affordable medical care and high availability of diverted, unlicensed or illicitly manufactured pharmaceutical opioids in the informal market.

- Non-medical use of tramadol is also reported all over Asia, Near and Middle East, and is also emerging in Europe where the substance is detected in a growing number of overdose deaths.
The number of non fentanyl-related synthetic opioids reported annually has increased steadily in recent years.

Recent analysis found that a proliferation of chemical classes of NPS opioids in recent years, some of which are not in the 1961 Convention.

Between 2015 and 2019, proportion of opioid NPS amongst all NPS quadrupled from 2% to 8%.

Almost 1/3 of NPS (17 out of 60) scheduled in the drug conventions between 2015-2020 were opioid NPS due to their increasing prevalence and substantial risks to health.

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Are still highly addictive, dangerous and toxic.

Though diversion of pharmaceutical fentanyl does occur, a large portion of illicit fentanyl in North America stems from clandestine manufacture.

According to US DEA, fentanyl in the US are primarily sourced from China (low quantities, high purity > 90%) and Mexico (high quantities, low purity < 10%).

Early signs following from China extension of national control over all fentanyl-related substances in 2019 indicate that fewer fentanyls are trafficked from China to North America.

Increasing attempts to manufacture fentanyls inside the region, especially Mexico, using increasingly sophisticated manufacturing and processing methods (e.g. lab-grade and industrial equipment), and a variety of (non)-controlled precursors.

Concomitant use of opioids and stimulants (particularly methamphetamine) seems to be on the rise.
Selected Challenges of Synthetic Opioids from an Early Warning Perspective

- Synthetic opioids vary in potency various orders of magnitude (e.g. fentanyl – carfentanyl), potency of emerging opioids in humans is often not known
- Determining what constitutes (unusually) high dosage or purity (wide range of individual tolerance!)
- Identification of newly emerging substances belonging to structurally different groups and their quantification in the laboratory
- How to reach users with alerts (often hard to reach populations with problematic drug use)
- Blurred line between licit products containing opioids but used non-medically, unlicensed products and falsified products containing illicitly manufactured opioids
- Messaging: “alerting without scaring” to ensure accessibility for medical use whilst informing about risks of non-medical use
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From an opioid strategy to a synthetic drug strategy

United Nations Toolkit on Synthetic Drugs

The role of drug analysis laboratories in Early Warning Systems

El papel de los laboratorios de análisis de drogas en los sistemas de alerta temprana
Thank you!

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