NEW PSYCHOACTIVE SUBSTANCES-
THE CANADIAN APPROACH
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New Psychoactive Substances-
The Canadian Approach

55th Regular Session of CICAD
May 1, 2014
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Objective

• To review Canada’s approach in addressing the new psychoactive substance (NPS) phenomenon
  • Definition
  • Incidence data
  • Control framework
  • Ongoing monitoring
  • Risk communication efforts
• To highlight ongoing challenges that Canada is facing due to the ongoing emergence of NPS
The United Nations Office of Drugs and Crime (UNODC) defines NPS as follows:

Substances of abuse, either in pure form or a preparation, that are not controlled by the 1961 United Nations Single Convention on Narcotic Drugs or the 1971 United Nations Convention on Psychotropic Substances, but which may pose a public health threat.”

NPS are also referred to as ‘designer drugs’, ‘legal highs’ and sometimes ‘herbal highs’.

While Canada does not have a formal definition for NPS, at the working level, they are defined as:

Substances, either man-made (synthetic) or plant-based (natural form), that mimic the effects of a substance that is already controlled internationally or domestically.
Definition of NPS (2 of 2)

- Four main classes of NPS
  - Synthetic cannabinoids, e.g., JWH-018, XLR-11
  - Synthetic cathinones, e.g., mephedrone, methylone, MDPV
  - Phenethylamines, e.g., 2C family
  - Piperazines, e.g., BZP
- Others include the tryptamines, the aminooindanes, the phenylcyclidines and plant-based substances such as khat, salvia divinorum, etc.
- According to the UNODC, more than 315 NPS have been identified worldwide
- There are currently more unregulated NPS available around the world than there are substances currently under international control.
• Parties involved in identifying NPS as they appear in Canada include:
  • **Drug Analysis Service Laboratories (DAS)**; part of Health Canada responsible for identifying suspected drugs seized by Canadian law enforcement
  • **Canada Border Services Agency (CBSA)**; agency responsible for identifying goods that are detained at the border because of non-compliance with the Customs Act or other federal legislation
  • **Office of Research and Surveillance (ORS)**; part of Health Canada responsible for carrying out status confirmations and monitoring the drug situation in Canada
### Incidence of NPS in Canada (2 of 3)

<table>
<thead>
<tr>
<th>Compounds</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013*</th>
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</thead>
<tbody>
<tr>
<td>1. Synthetic Cannabinoids</td>
<td>4</td>
<td>9</td>
<td>16</td>
<td>30</td>
<td>31</td>
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<tr>
<td>2. Synthetic Cathinones</td>
<td>9</td>
<td>13</td>
<td>26</td>
<td>24</td>
<td>18</td>
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<tr>
<td>3. Phenethylamines</td>
<td>8</td>
<td>10</td>
<td>22</td>
<td>33</td>
<td>36</td>
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<tr>
<td>4. Piperazines</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>11</td>
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<tr>
<td>5. Plant-Based Substances</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>6. Miscellaneous</td>
<td>6</td>
<td>10</td>
<td>12</td>
<td>19</td>
<td>19</td>
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<tr>
<td>TOTAL</td>
<td>38</td>
<td>54</td>
<td>90</td>
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## Trends in Specific NPS’ in Canada (2005-2013)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013*</th>
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<tr>
<td><strong>2C family</strong></td>
<td>6</td>
<td>66</td>
<td>47</td>
<td>85</td>
<td>180</td>
<td>267</td>
<td>481</td>
<td>869</td>
<td>691</td>
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<tr>
<td><strong>Salvia</strong></td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>20</td>
<td>36</td>
<td>25</td>
<td>22</td>
<td>45</td>
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<tr>
<td><strong>Tryptamines</strong></td>
<td>14</td>
<td>8</td>
<td>127</td>
<td>249</td>
<td>161</td>
<td>74</td>
<td>1024</td>
<td>698</td>
<td>311</td>
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<tr>
<td><strong>BZP/TFMPP</strong></td>
<td>8</td>
<td>151</td>
<td>1,161</td>
<td>2,366</td>
<td>1,921</td>
<td>2,680</td>
<td>3,775</td>
<td>2,208</td>
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<tr>
<td><strong>Alpha-PVP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
<td>512</td>
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<tr>
<td><strong>MDPV</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>268</td>
<td>1,358</td>
<td>620</td>
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<tr>
<td><strong>Mephedrone</strong></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>7</td>
<td>18</td>
<td>11</td>
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<tr>
<td><strong>Methyline</strong></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>54</td>
<td>470</td>
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<tr>
<td><strong>Synthetic Cannabinoids</strong></td>
<td>2</td>
<td>88</td>
<td>59</td>
<td>70</td>
<td>343</td>
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</table>

Data extracted February 2014
Two key pieces of drug legislation in Canada

- *Food and Drugs Act (FDA)*
- *Controlled Drugs and Substances Act (CDSA)*

Both Acts have different purposes but serve to form a legislative framework that captures most NPS

Under the FDA, the definition for the term “drug” is very broad; it essentially captures anything that modifies an organic function

Under the FDA, it is illegal to sell or import for sale a drug without prior authorization from Health Canada

- Unauthorized sale and distribution activities may be subject to compliance and enforcement action in accordance with the FDA.
- The penalties for offences in the FDA are quite low however, e.g., maximum fine is $5000
Control of NPS in Canada (2 of 3)

• The CDSA provides for the control of substances that can alter mental processes and that may produce harm to health and to society when diverted or misused.

• Except as authorized under its related regulations or via an exemption issued under Section 56 to the CDSA, i.e., production, trafficking, importation, exportation and sometimes possession of controlled substances are prohibited under the CDSA.

• Unlike the FDA, the CDSA lists the substances regulated under it in a series of Schedules; Schedules I through V list controlled substances and Schedule VI lists precursor chemicals.

• Penalties under the CDSA are considerably higher than those applicable under the FDA, e.g., up to life imprisonment for trafficking of a substance in Schedule I or II.
• If a substance is not explicitly listed in one of the Schedules to the CDSA, it does not mean that it is not controlled

• This is because the text of many Schedule entries makes provision to include additional substances that are, for example, a salt, derivative, isomer, analogue, salt, preparation or similar synthetic preparation of the primary substance

• Health Canada determines whether a substance is included in a given Schedule entry via a scientific assessment that looks at chemical structure and/or pharmacological activity; this process is called a status confirmation

• Examples:
  • Mephedrone is considered to be an analog of amphetamine
  • JWH-018 is a similar synthetic preparation of cannabis
Several types of monitoring activity:
- Routine monitoring surveys
- Pilot high-risk population survey
- Internet Monitoring Pilot

Monitoring data is used in several ways:
- To determine presence and usage of different substances
- To provide information on potential harms associated with the use of different substance
- To support domestic policy development, e.g., scheduling decisions under the CDSA, national drug policy frameworks
Routine Monitoring Surveys

- **Canadian Alcohol & Drug Use Monitoring Survey (CADUMS)**
  - Annual general population survey that assesses use of alcohol and drugs in Canada; includes tobacco as of 2013
  - Similar questions from year to year but always add questions on one or more substances of interest, e.g., for 2009-2012 surveys, there were questions on salvia; for 2012 survey, there were questions on ketamine, GHB, Yagi cactus, frog poison, 2C-I, amyl nitrate (poppers)
Routine Monitoring Surveys

- **Youth Smoking Survey (YSS)**
  - Biannual survey of students in Grades 7-12 that assesses use of drugs and tobacco
  - Similar questions from year to year but always add questions on one or more substances of interest, e.g., in 2010/11, included questions on MDMA, GHB, ketamine, dextromethorphan, salvia and jimson weed; in 2012/13, survey included questions on “Spice”, BZP/TFMPP, “Bath Salts”, etc
Monitoring NPS (4 of 5)

Monitoring of Alcohol and Drug Use among High-Risk Populations (HRPS)

• Two year pilot study to obtain estimates of substance use and information about patterns of use, risk behaviours, market activity, prices and harms associated with drug use among three high-risk populations (street-entrenched adult drug users, street involved youth drug users, club, rave and bar scene attendees)

• Respondents must have used at least one drug (other than alcohol or tobacco) at least once every month in the past 6 months

• Survey carried out in 7 cities across Canada: Halifax, Montreal, Toronto, Winnipeg/ Regina (half sample each), Calgary and Vancouver

Key findings:

• NPS were mentioned frequently across all study populations and across all cities; mostly by recreational users
Monitoring NPS (5 of 5)

Pilot Internet Monitoring Study

- aimed at examining sale of NPS via the Internet in Canada; launched in Fall 2012
- Methods were adapted from existing internet monitoring protocols, e.g., Psychonaut Web Mapping Project in the US, EMCDDA Snapshot in the EU)

Key findings:

- Number of websites changes on a regular basis thus the search methods need to be updated frequently
- Limited number of websites actually hosted in Canada although many websites offer shipping to Canada
- Canadian websites offer tryptamines, phenylethylamines, synthetic cannabinoids and synthetic cathinones for sale
Risk Communication Efforts (1 of 3)

• As use of NPS increases, increasing numbers of adverse effects are being reported to provincial/territorial drug use networks and municipal/regional health authorities.

• The public and the media are looking to competent authorities for accurate information on the status and risks associated with drugs.

• On February 27, 2013, Health Canada issued a public advisory warning consumers about the risks associated with synthetic marihuana products containing synthetic cannabinoids such as JWH-073 and JWH-018.
On July 5, 2013, Health Canada issued a more general public advisory about the serious health risks associated with NPS.

Both advisories are available on the Healthy Canadians portal (www.healthycanadians.gc.ca).
Currently also working on new web content that will:

- Describe NPS (different categories, sources of NPS, etc.)
- Talk about how NPS are acquired and/or consumed (link to risks of purchasing drugs via the Internet)
- Clarify their legal status
- Describe short term health effects of different categories of NPS
- Describe long term health effects of different categories of NPS
- Include links to how to get help with addiction and/or overdose
- Highlight what the Government is doing to address NPS
- Provide contact information for public enquiries and reporting concerns related to NPS
Scope of industry

• We are dealing with a wide array of substances; fuelled by the Internet, the NPS industry is characterized by the great speed with which new substances appear and new markets are established.

• Creative “producers” in the illicit market continue to identify and market entirely new classes of compounds with psychoactive effects.

Lack of evidence to support scheduling

• In many cases, there is little or no information on the short or long-term health effects or toxicity of many NPS.

• Pharmacological activity is also not well-defined in many cases; this means that the potential for harm and dependence of many NPS cannot be easily evaluated.
Ongoing Challenges (2 of 3)

Scheduling process is slow

- 6 to 8 months to complete the federal regulatory process once scheduling assessment and recommendation are finalized
- Canada continues to explore options for accelerated scheduling

Risk communication efforts are still at a very high level

- No materials specifically directed to youth who form a significant part of the market worldwide because of perception that NPS are safe and/or legal
Additional Data Sources

• Need to develop tools and resources to leverage “first responders”, e.g., poison control centres, law enforcement, emergency room staff, paramedics, etc., who may be first to see a new NPS and who should thus be encouraged to report...
Conclusion

- The NPS phenomenon is a global one
- Multilateral efforts to collect and share information are vital to continued success in combating NPS

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