Challenges and Innovative Approaches for Tackling the Non-Medical Use of Opioids

5th WHO-UNODC Expert Consultation on New Psychoactive Substance
Geneva, Switzerland
24 September 2018

Terrence L. Boos, PhD
Drug & Chemical Evaluation Section
Diversion Control Division
U.S. Drug Enforcement Administration

James Hunter, RPh, MPH
Controlled Substances Staff
Center for Drug Evaluation and Research
U.S. Food & Drug Administration
Opioid Epidemic

- Declared a public health emergency in 2017
- More than 2 million in the U.S. are dependent on opioids (2015 data)

Source: Center for Disease Control (CDC)
Mortality Data
CDC Provisional Drug Overdose Deaths by Drug Class

- Documented harm as a result of drug trafficking and diversion
Law Enforcement Response to the Harm

• Realigning Resources
  – Investigational priority
  – Operational initiatives
  – Increased coordinating with domestic and international partners

• Regulatory
  – Drug Scheduling and Chemical Controls
    • Domestic
    • International
  – Improving data collection tools
  – Legislative proposals
## Temporary Scheduling Actions
### Responding to NPS Trafficking (2011 to Current)

<table>
<thead>
<tr>
<th>Date</th>
<th>Drug Class</th>
<th>Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 Oct 2017</td>
<td>Opioids</td>
<td>methoxyacetyl fentanyl, tetrahydrofuranyl fentanyl, ortho-fluorofentanyl</td>
</tr>
<tr>
<td>3 Nov 2017</td>
<td>Cannabinoid</td>
<td>FUB-AMB</td>
</tr>
<tr>
<td>4 Jan 2018</td>
<td>Opioids</td>
<td>cyclopropyl fentanyl</td>
</tr>
<tr>
<td>1 Feb 2018</td>
<td>Opioids</td>
<td>valeryl fentanyl, para-methoxybutyryl fentanyl, para-chloroisobutyryl fentanyl, ocfentanil, para-flurobutyryl fentanyl, cyclopentyl fentanyl, and isobutyryl fentanyl</td>
</tr>
<tr>
<td>9 Mar 2018</td>
<td>Opioids</td>
<td><strong>Fentanyl-related substances</strong></td>
</tr>
<tr>
<td>10 Jul 2018</td>
<td>Cannabinoids</td>
<td>NM2201, 5F-AB-PINACA, 4-CN-CUMYL-BUTINACA, MMB-CHMICA and 5F-CUMYL-P7AICA</td>
</tr>
<tr>
<td>31 Aug 2018</td>
<td>Cathinone</td>
<td>N-Ethylpentylone</td>
</tr>
<tr>
<td>In-process</td>
<td>Cathinones</td>
<td>Notified HHS: : N-ethylhexedrone, alpha-pyrrolidinohexanophenone (α-PHP), 4-methyl-alpha-ethylaminopentiophenone (4-MEAP), 4'-methyl-alpha-pyrrolidinohexiophenone (MPHP), alpha-pyrrolidinoheptaphenone (PV8), and 4-chloro-alpha-pyrrolidinovalerophenone (4-chloro-α-PVP)</td>
</tr>
<tr>
<td>In-process</td>
<td>Cannabinoids</td>
<td>5F-EDMB-PINACA, 5F-AEB, 5F-MDMB-PICA, EMB-FUBINACA, FUB-AKB-48, 5F-CUMYL-PINACA, FUB-144</td>
</tr>
</tbody>
</table>
Fentanyl-related substance means any substance that is structurally related to fentanyl by one or more of the following modifications:

(A) replacement of the phenyl portion of the phenethyl group by any monocycle, whether or not further substituted in or on the monocycle;

(B) substitution in or on the phenethyl group with alkyl, alkenyl, alkoxy, hydroxyl, halo, haloalkyl, amino or nitro groups;

(C) substitution in or on the piperidine ring with alkyl, alkenyl, alkoxy, ester, ether, hydroxyl, halo, haloalkyl, amino or nitro groups;

(D) replacement of the aniline ring with any aromatic monocycle whether or not further substituted in or on the aromatic monocycle; and/or

(E) replacement of the N-propionyl group by another acyl group.
Identified Post Temp Class Control Meeting Definition

- DEA is evaluating possible effect
- If active, will make public notification

crotonyl fentanyl  
cyclohexyl fentanyl  
phenyl fentanyl  
thiofuranyl fentanyl  
*ortho*-methyl methoxyacetyl fentanyl  
*ortho*-methyl acetyl fentanyl
Encountered Post Class Control
Not Meeting Definition

- Not pharmacologically active
- Possible synthetic precursors?

Benzylfuranylfentanyl
Benzylfentanyl
Norfentanyl N--methyl
Regulatory Response
Legislative Tools

• Authorities modified in response to past trafficking issues
  – Comprehensive Crime Control Act of 1984
    • Provided DEA authority to temporarily control a substance
    • Requirement to find the substance poses an imminent hazard to public safety
  – Controlled Substance Analogue Enforcement Act of 1986
    • Analogue prosecutions
    • Highly effective but labor intensive

• Recent issues have prompted new legislative proposals
Modifying Data Collecting Tools

Maximize effectiveness of data collection to prioritize response

Tox & ME Reporting

Drug Seizure Reporting

NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM

DRUG ENFORCEMENT ADMINISTRATION

DRUG

TOX

MEC

Diversion Control Division
Drug Enforcement Administration
Pharmacology Data Collection

• Collaboration with National Institute on Drug Abuse, 8-10 substances/year

• DEA added new contracts
  – *in vitro*, 75-80 substances/year
  – *in vivo*, 20-25 substances/year
  – Series of ad hoc *in vivo* contracts
    • Cannabinoids – tetrad; drug discrimination
    • Opioids – analgesia; drug discrimination
  – Toxicology testing lab contract - *advertised*
Unwanted Prescriptions

• Bi-Annual event funded by DEA with law enforcement counterparts

• October 2017 statistics
  – 4,274 Law Enforcement sites participated
  – 456 tons collected

• Since the fall of 2010, 9,015,668 pounds or 4,508 tons collected
Three prong approach:

1) Coordinated law enforcement actions;

2) Diversion Control enforcement actions against registrants operating outside the law;

3) Community outreach through local partnerships

Program is modified to meet the specific needs of the community
Safety Update

• U.S. Law Enforcement carries opioid overdose drug naloxone (Narcan®)

• Special procedures developed for evidence handling related to highly potent opioids

https://www.whitehouse.gov/ondcp/key-issues/fentanyl
COMBATING THE OPIOID CRISIS
US Public Health Response
Other indicators of opioid-related harm and consequences increasing

- Emergency department visits due to opioid misuse
- Hospitalizations due to opioid overdose
- Opioid-related substance abuse treatment admissions
- Injection drug use and transmission of infectious diseases such as HCV
- Neonatal abstinence syndrome
- Foster care placements
- >$500 billion in economic impacts
These statistics demand a strong public health response

• Expand prevention efforts to reduce opioid misuse in the first place
• Change opioid prescribing practices and expand access to and the provision of opioid alternatives for pain care
• Identify people with opioid misuse and opioid use disorder early and provide or connect them to medication-assisted treatment
• Implement recovery support services to support long-term recovery
• Expand access to naloxone
• Collaborate with law enforcement to ensure a coordinated demand and supply reduction response
Complete strategy

HHS Five-point strategy to combat the opioids crisis

1. Better addiction prevention, treatment, and recovery services
2. Better data
3. Better pain management
4. Better targeting of overdose reversing drugs
5. Better research
HHS Goals

Improving access to prevention, treatment, and recovery services

 Prevent the health, social, and economic consequences associated with opioid addiction and enable individuals to achieve long-term recovery.

- Supporting services
- Targeting populations
- Providing education
- Strengthening collaborations

HHS.GOV/OPIOIDS

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
HHS Goals

Strengthening timely public health data and reporting

Improve the timeliness and specificity of data to inform a real-time public health response as the epidemic evolves.

- Enhanced surveillance
- Data sharing
Enable access to high-quality, evidence-based pain care that reduces the burden of pain for individuals, families, and society while also reducing the inappropriate use of opioids and opioid-related harms.

- Developing policies
- Providing education and training
- Supporting the development of new pain treatments
HHS Goals

Making overdose-reversing drugs available

Ensure the broad provision of overdose-reversal drugs to people likely to experience or respond to an overdose, with a particular focus on targeting high-risk populations

• Building capacity
• Providing education
HHS Goals

Supporting cutting-edge research

Advance our understanding of pain and addiction, support the development of new treatments, and identify effective public health interventions to reduce opioid-related harms.

- Understanding pain
- Addiction and overdose
- Epidemiology and policy
Closing Thoughts

- Law enforcement and public health both have a significant and complementary roles in the response to the non-medical use of opioids
- Domestic and international information sharing and cooperation remains critical
- Innovations and emerging signs of progress should be highlighted and replicated
- Sharing of experiences, will better inform our responses and develop policy to protect our communities