Analysis of residues from used injecting drug paraphernalia in Hungary, 2015-16

Anna Péterfi
Hungarian NFP, Ministry of Human Capacities
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Context – NPS in Hungary (1)

- Spread of NPS in Hungary since 2009
- Relatively low life time prevalence in GPS
- Heroin shortage since 2009
- Increasing number of NPS seizures
Context – NPS in Hungary (2)

- NPS dominates in PWID according to needle and syringe programmes’ and HIV/HBV/HCV seroprevalence survey data

Breakdown of needle and syringe programmes’ clients by primarily injected drug 2009-2015
Organisational background

• „Breaking the Drug Cycle”
• project of the Hungarian Interchurch Aid
• Funded by EU (JUST/2013/ISEC/DRUGS/AG)
Method (1)

- Collection of used injecting paraphernalia (needles, syringes, filters, stericup, spoon)
- Between March 2015 and July 2016
- At 7 locations in 6 cities via low threshold programmes, syringe vending machine and collection from the streets
Method (2)

- Objects grouped into composite samples
- Analysis of substance residues by GC-MS
- Following a screening method: based on analytical standards and mass spectral libraries
- Focus on the main component of each analytical sample
Method (3)

Challenges, limitations:

• Multiple objects in each analytical sample
• Multiple injection with the same object: between 2.15 and 2.44 (in HIV/HBV/HCV seroprevalence data)
• Content of blood in syringes (when registering)
Results (1)

Identified main components (N=4109)
Results (1)

Identified main components (N=4109)
Results (2)

Synthetic cathinones in injecting paraphernalia

- 57% of samples held a synthetic cathinone as main component
- 40< different synthetic cathinones identified
- different life span at the market
Results (2)

The 10 most frequently identified substances in monthly breakdown

[Graph showing the percentage of identified substances over time, with peaks and troughs for mephedrone, pentedrone, and N-Etilhexedrone.]
Results (3)

Synthetic cathinones in the study

Synthetic cathinones in police seizures data

(BSZKI)
Results (4)

Identified main components (N=4109)
Results (5)

Methadone

- In 28% of the analytical samples methadone was the main component
- In 3 study locations it was identified in remarkably high proportion (37%<=) – OST is available at these locations
- At other locations it was identified between 2-17%
Results (6)

Geographical differences

- Budapest_07 (N=1574): 82% other substances, 0% caffeine, 0% amphetamine and other stimulants, 12% synthetic cathinones, 0% other opiates, 0% methadone, 0% heroin
- Szeged (N=1084): 9% other substances, 46% caffeine, 0% amphetamine and other stimulants, 37% synthetic cathinones, 0% other opiates, 0% methadone, 0% heroin
- Miskolc (N=938): 0% other substances, 0% caffeine, 0% amphetamine and other stimulants, 0% synthetic cathinones, 0% other opiates, 0% methadone, 0% heroin
- Debrecen (N=160): 8% other substances, 11% caffeine, 31% amphetamine and other stimulants, 13% synthetic cathinones, 0% other opiates, 0% methadone, 0% heroin
- Budapest_23 (N=131): 0% other substances, 0% caffeine, 86% amphetamine and other stimulants, 0% synthetic cathinones, 17% other opiates, 0% methadone, 0% heroin
- Bákkásbaj/Gyula (N=92): 0% other substances, 0% caffeine, 33% amphetamine and other stimulants, 18% synthetic cathinones, 0% other opiates, 13% methadone, 0% heroin
- Pécs (N=30): 0% other substances, 0% caffeine, 83% amphetamine and other stimulants, 0% synthetic cathinones, 13% other opiates, 0% methadone, 0% heroin
Conclusions

• Dominance of synthetic cathinones in injected substances – in line with self-reported data
• N-ethylhexedrone as the new pentedrone?
• Amphetamine and heroin identified sporadically
• Injecting misuse of methadone is remarkably high – secondary drug? former heroin users?
• Marked geographical differences
Thank you!

Anna Péterfi
anna.peterfi@emmi.gov.hu
Hungarian National Focal Point
www.drogfokuszpont.hu

The project’s final report: