

NPS injecting and severe infection: A public health led response

Scottish Drugs Forum Conference
Tuesday 26th April 2016

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Objectives

- To describe the outbreak
- To discuss the multi-agency response which was initiated to investigate this outbreak
- To describe and appraise the risk management activities carried out
- To discuss some of the challenges and lessons learnt in responding to this outbreak and highlight areas of ongoing work

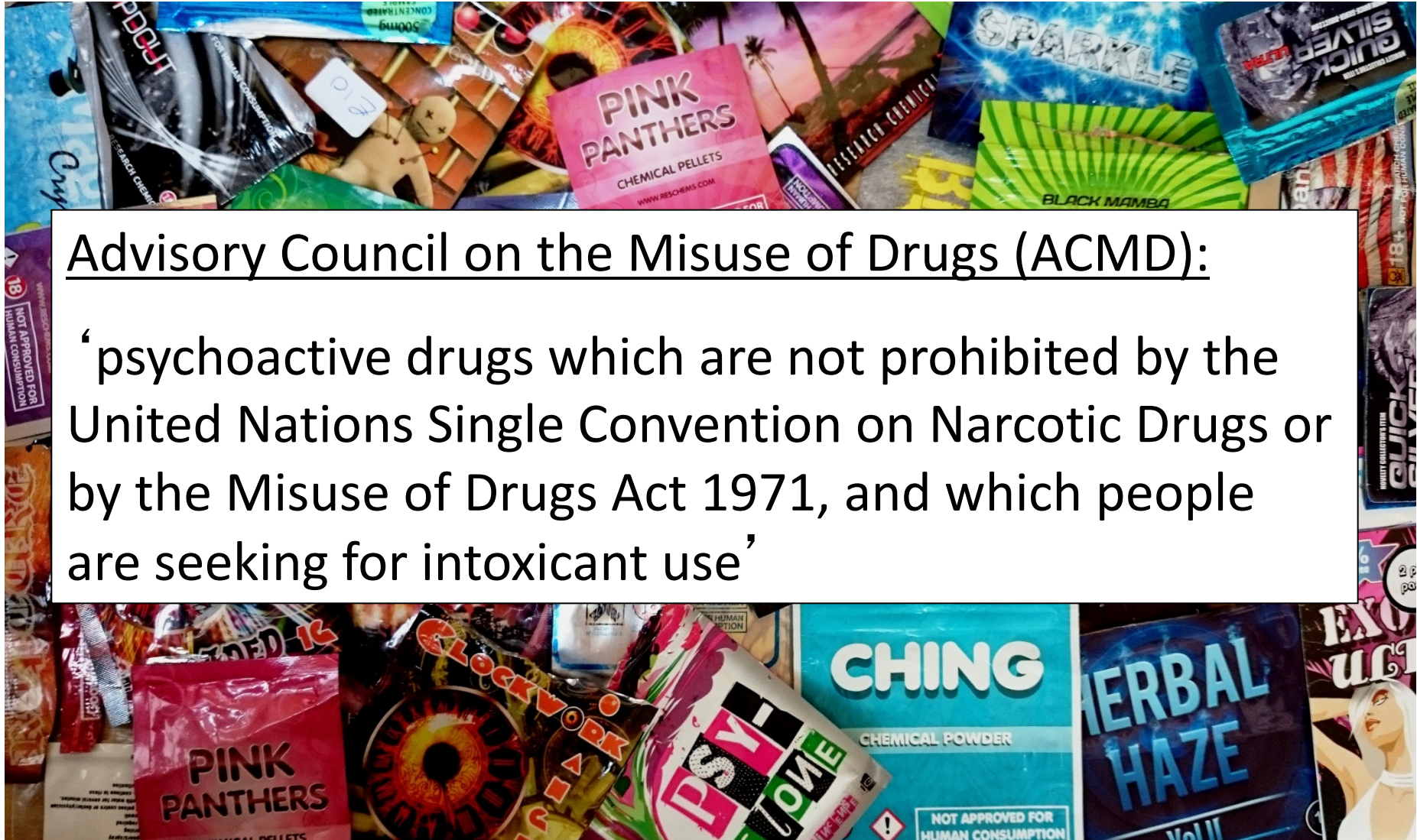
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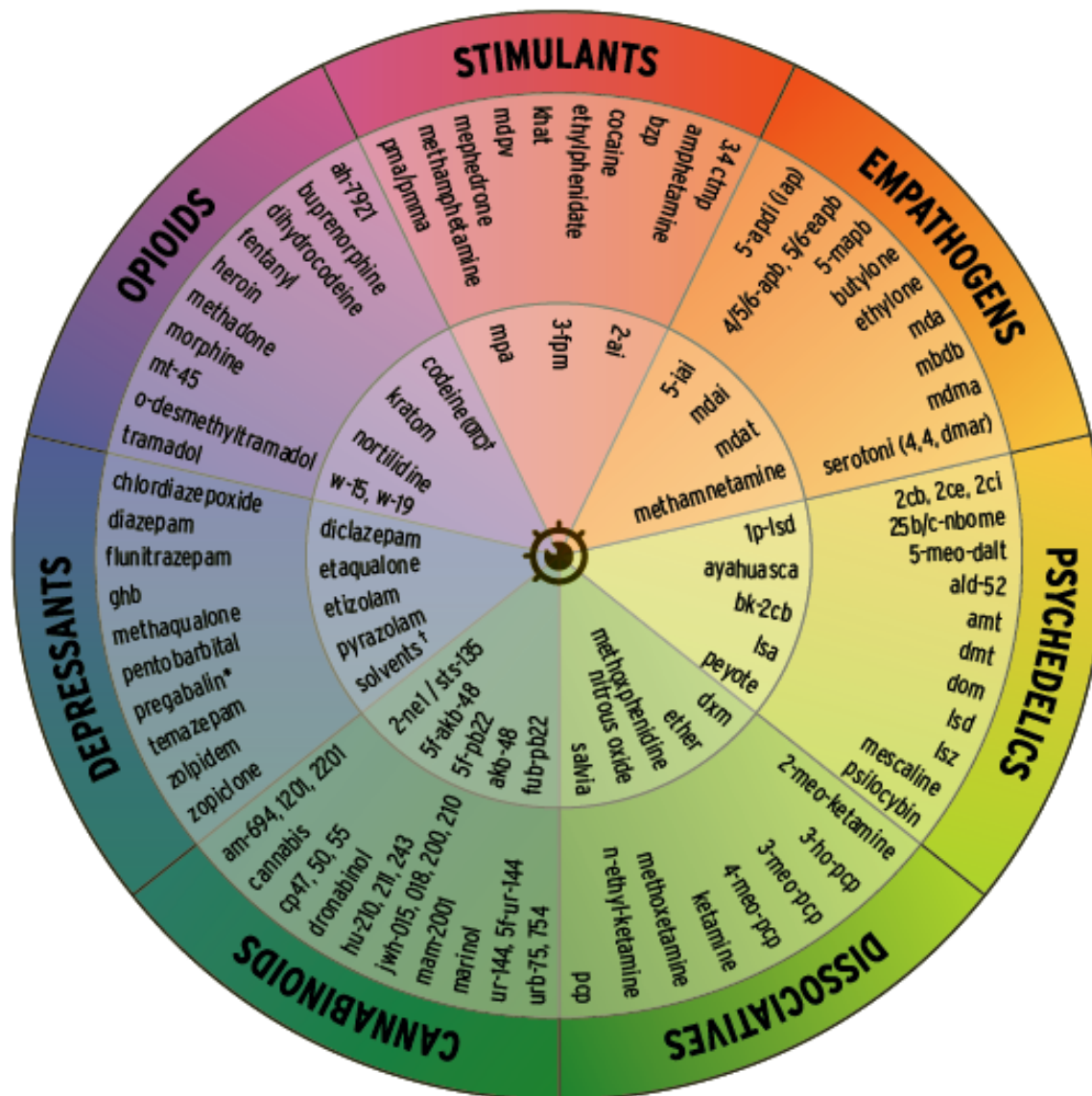


What are NPS?

Advisory Council on the Misuse of Drugs (ACMD):

‘psychoactive drugs which are not prohibited by the United Nations Single Convention on Narcotic Drugs or by the Misuse of Drugs Act 1971, and which people are seeking for intoxicant use’





Outer Ring: Controlled or regulated in the UK

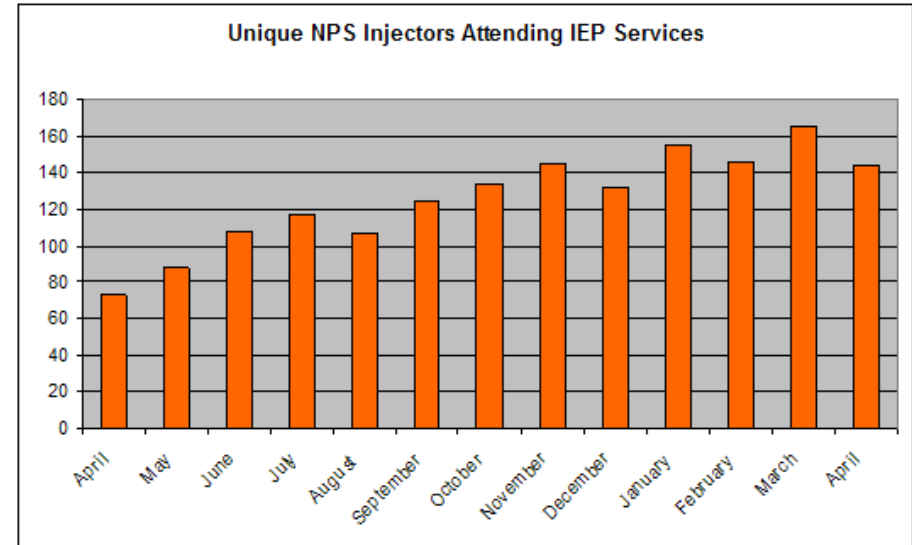
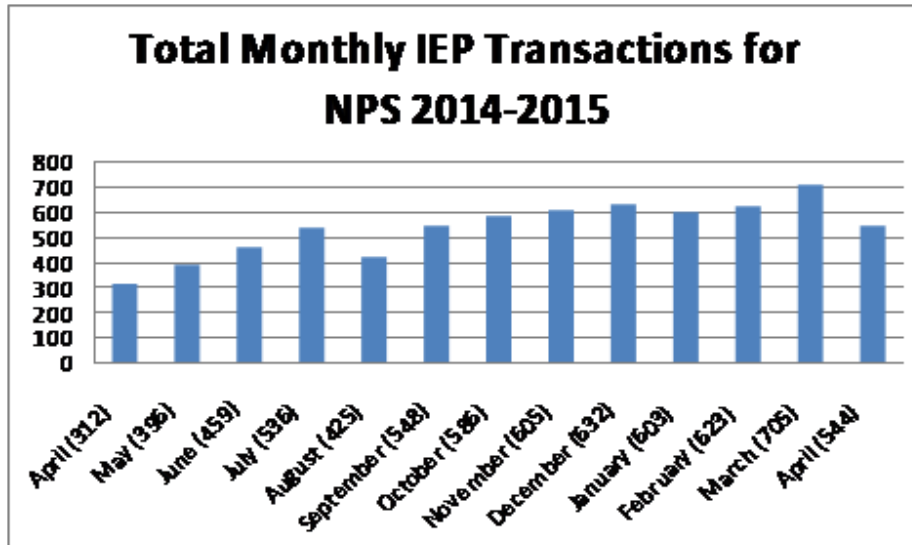
Inner Ring: Legal in the UK

Injecting of NPS

- Injecting behaviours
 - Frequency
 - Technique / injection sites
 - Sharing of injecting equipment
- Wounds
- Infections
 - Skin and Soft Tissue Infections
 - Blood Borne Virus Infections

Harm Reduction Service

- Injecting Equipment Provider (IEP) data
 - City centre site / NEON bus / pharmacies



- ‘Test for Change’
 - Survey of service users: questionnaires and focus groups
 - Additional harm reduction and outreach services
 - Targeted wound care services

Wounds associated with injecting of NPS

- Issues with number and severity of wounds
- Extensive damage to veins – injecting into risky sites
- Injecting into wounds
- Worsened by tactile hallucinations
- Impact of chaotic lifestyle on compliance with wound care
- Specialist services input:
 - Harm reduction services
 - Tissue viability services

Wound Infections associated with injecting of NPS

Staphylococcus aureus

- Natural bacterial flora
- Nose, throat, groin, skin
- Cause infection when bacteria get into a break in the skin e.g. injection site
 - Skin and soft tissue infection
 - Invasive infection (bacteraemia)

Strep pyogenes (group A strep)

- Vary in severity
- Nose, throat, groin, skin
- Person to person spread or spread on drug paraphernalia
 - Minor infection
 - Invasive infection e.g. necrotising fasciitis

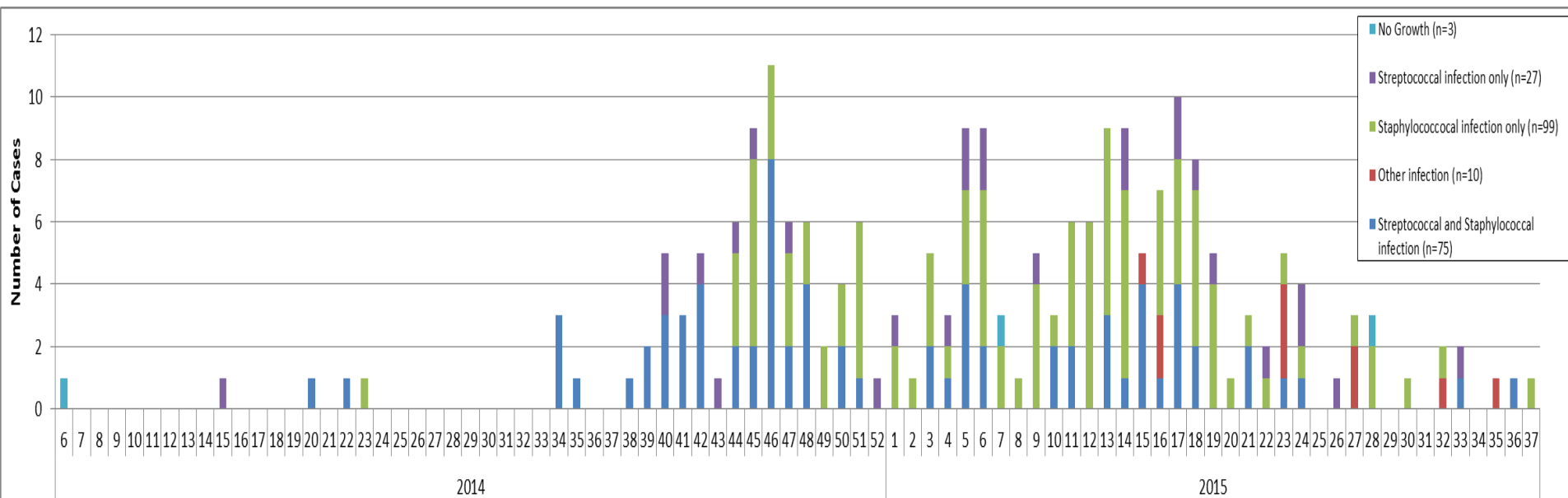
Infections in PWID: Epidemiology

‘Those who have acquired a GAS, staphylococcal aureus or other skin or soft tissue infection through injecting drug use or have a connection to injecting drug users.’

- 214 cases since October 2014
- Varying severity
- Association with injection of ethylphenidate-based NPS
- Demographics: Edinburgh/East Lothian; male predominance; older age groups

Epidemiology: Cases by type of infection

Infection	Number of Cases	Percentage of all cases (%)
Total number of cases streptococcal and/or staphylococcal infections	201	93.9
<i>Streptococcus pyogenes</i> Group A	27	13.4
<i>Staphylococcus aureus</i>	99	49.8
<i>Streptococcus pyogenes</i> Group A and <i>Staphylococcus aureus</i>	75	36.8
Number of cases with Other soft tissue infection	10	4.7
No growth but clinical signs of infection	3	1.4
Total	214	100



Epidemiology: Type of infection by drug use

Infection	NPS use (%)	IVDU (heroin) (%)	IVDU (unknown type) (%)	Ex-IVDU (%)	Other (%)	Total
<i>Streptococcus pyogenes</i>	15 (55.5)	4 (14.8)	4 (14.8)	0 (0)	4 (14.8)	27
<i>Staphylococcus aureus</i>	56 (56)	12 (12)	18 (18)	6 (6)	7 (7)	99
<i>Streptococcus pyogenes</i> and <i>Staphylococcus aureus</i>	54 (72.0)	6 (8.1)	6 (8.1)	4 (5.4)	5 (6.8)	75
Total	125 (62.2)	22 (10.9)	28 (13.9)	10 (5.0)	16 (8.0)	201

- In total 92.3% of cases (n=201) reported either currently injecting drugs or were known to have a history of injecting drug use
- NPS was reported in over 50% of cases across all infection categories
- NPS particularly linked to the risk of co-infection: 72% of cases where *S. pyogenes* and *S. aureus* were both isolated reported NPS use

Infections in PWID: Impact

- Clinical services:

Total length of stay (days)	Number of cases	Percentage (%)
Not admitted to hospital	37	17.3
1	66	30.8
2-5	36	16.8
6-10	33	15.4
11-20	37	17.2
21-30	17	7.9
More than 31 days	31	14.4
Chronic	17	7.9
Total	214	100

- Wider health services; Harm Reduction Services; Police Scotland; Local authority; Third sector partners

Infections in PWID: Response

Risk Management

- Regular meetings of multiagency IMT
- Questionnaire to gather data
- Sampling of product
- Attempts at contact tracing
- Consideration of epidemiological studies
- Consideration of antibiotic prophylaxis

Risk Communication

- Updates to healthcare professionals
- Updates to LA colleagues
- Information produced for public / service users
- Letter from DPH to head shops
- Media coverage
- Partnership working

Legislative changes

- Across the UK:
 - ACMD issued a Temporary Class Drug Order which was enacted on 8th April 2015 criminalising the sale and distribution of ethylphenidate-based compounds
 - Psychoactive Substances Bill has been agreed by both House of Commons and House of Lords and is now an Act of Parliament
 - Further information:
 - <https://www.gov.uk/government/collections/psychoactive-substances-bill-2015>
- In Edinburgh:
 - Trading Standards submitted an application to the Procurator Fiscal to secure a General Product Safety Regulation Forfeiture Order against NPS in Edinburgh
 - This was obtained in October 2015
 - Upheld in respect to 2 head shops on 15th October. Thereafter all known retailers in Edinburgh voluntarily agreed to cease trading

Conclusions

- Large outbreak of localised and invasive infections in PWID in Lothian between October 2014 – October 2015
- Detailed surveillance identified injection of ethylphenidate containing NPS compounds as being common in nearly all cases
- Chaotic behaviours and frequency of injecting associated with NPS use contributed to the spread of infection in the at risk population
- Public health intervention to manage the outbreak was challenging: chaotic behaviour, poor treatment compliance, late presentation
- Introduction of legislative change led to a reduction in availability of ethylphenidate and appears to have contributed significantly to fall in case numbers

Lessons Learned

- Illustrates success of multi agency working on this scale to address a complex and evolving issue
- Several strands of work, not specific to outbreak management, which are continuing
 - HPS, NESI, Harm reduction service, Pan Lothian Work Group

Questions?

