The development of rapid surveillance reports using Power BI as a novel tool to track AOD-related harms

Presenting Authors:
Alexander Burnett[1,2], Janette L Smith[1], Christine Harvey[1], Peter Chrisholm[1], Thanjira Jiranantakan[1], Jared Brown[1]

[1]Toxicity Response, Epidemiology and Surveillance, Centre for Alcohol and Other Drugs, NSW Ministry of Health, [2]NSW Biostatistics Training Program, Centre for Epidemiology and Evidence, NSW Ministry of Health

Introduction: The rise of new psychoactive substances (NPS) globally necessitates intensive surveillance. The "New South Wales Emerging Drug Surveillance System" (NEDSS) leverages methodologies from established early warning systems to enhance signal detection and investigation to support statewide public health responses. Case studies demonstrate how data triangulation via NEDSS improves our understanding of emerging drug trends and supports public health initiatives in NSW.

Method: NEDSS is a PowerBI application which integrates and analyses data from diverse sources across NSW to track the prevalence and emergence of NPS and other substances of concern. This includes data from acute drug toxicity notifications from NSW hospitals, forensic toxicology data from NSW Health Pathology Forensic and Analytical Science Service, drug seizure data from NSW Police, and drug-related ambulance attendances and emergency department presentations.

Key Findings: Insights from NEDSS highlight its effectiveness in identifying emerging substance trends, including drugs detected on toxicology analysis and changes in purity and adulterants in drug samples. Emerging NPS under recent public health consideration include novel synthetic opioids, ketamine and analogues, GHB and analogues.

Conclusions and Next Steps: NEDSS will support the ongoing monitoring of emerging drug trends in NSW. Results from NEDSS will enhance local awareness of substances contributing to toxicity through dedicated user groups (e.g. local health districts). Results will also feed into national and international monitoring systems including the Emerging Drugs Network of Australia surveillance system and the United National Office on Drugs and Crime Toxicology Portal. By facilitating the sharing of intelligence and breaking down data silos, NEDSS supports proactive policy and practice changes that address the evolving landscape of drug use and associated harms.

Implications for Practice or Policy: The establishment of surveillance systems, such as NEDSS, underscores the critical role of integrated surveillance systems in public health. Through ongoing cross-agency collaboration and continuous data updates, NEDSS equips stakeholders to respond to emerging drugs promptly and effectively.

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