126. Age of misuse exposures reported by the Global Toxicosurveillance Network (GTNet)

Laura J. Fischer[a], Zachary R. Margolin[a], Jody L. Green[a], Bruno Mégarbane[b], Antoine Villa[b], Andreas Schaper[c], Martin Ebbecke[c], Fabrizio Sesana[d], Simon H. L. Thomas[e] and John P. Thompson[f]

[a]Rocky Mountain Poison & Drug Center, Denver Health, Denver, USA; [b]Centre Antipoison et de Toxicovigilance de Paris, Paris, France; [c]GIZ-Nord Poisons Centre, University Medical Center, Göttingen, Germany; [d]Poison Control Centre of Milan, Milan, Italy; [e]National Poisons Information Service, Newcastle, UK; [f]National Poisons Information Service, Cardiff, UK

Objective: To determine the age of misuse exposures with the top drugs of misuse reported by GTNet poison centres (PCs) in Italy, the UK, Germany, and France.
Methods: Data collected on prescription opioids, stimulants, sedatives, benzodiazepines, cannabinoids, and anticonvulsants from participating PCs in GTNet were obtained for 2013–2015. The five drugs with the highest misuse, defined as an exposure resulting from the intentional improper or incorrect use of a substance, were determined for Italy (Milan), the UK (Birmingham, Cardiff, Edinburgh, Newcastle), Germany (Göttingen), and France (Paris). The median age in years and interquartile range were calculated for each country's top five drugs excluding exposures reported with missing ages. A Kruskal–Wallis test was used to test for differences between the distribution of ages within the top 5 drugs of each country. The UK provides medical management advice to healthcare providers only, while the other PCs also offer services to the public.
Results: Italy reported median ages in the 30s and 40s. Within the top five reported drugs in the UK, four different drug classes (benzodiazepines, stimulants, opioids, and anticonvulsants) were represented. Benzodiazepines appear to be most commonly misused across all countries except France. The distribution in age was significantly different between the drugs for all countries except the UK, keeping in mind the UK only receives calls from healthcare providers.
Conclusion: Each country identified different top five prescription drugs of misuse as well as the associated age. While poison centre methods vary across countries, these data are indicative of diverse regional trends in prescription drug misuse and allow for better understanding of age groups at highest risk.

127. Using Swedish Poisons Information Centre data to identify chemical accident hazards at the workplace

Anita Annas[a], Karin Feychting[a], Mattias Öberg[b] and Linda Schenk[b]

[a]Swedish Poisons Information Centre, Stockholm, Sweden; [b]Institute of Environmental Medicine, Stockholm, Sweden

Objective: Official occupational accident statistics are often incomplete which reduces their value as a decision basis for risk management measures [1]. The present study aims to investigate whether calls made to the Swedish Poisons Information Centre (PIC) concerning occupational exposures can improve the knowledge about occupational accidents involving hazardous substances in Sweden.
Methods: A retrospective review of calls made to the PIC during the five year period 2010–2014 identified 8236 occupational incidents. Cross tabulations and descriptive statistics were employed to describe the occupational incidents found in the material. The findings were compared to accident statistics from the Swedish Work Environment Authority (SWEA). Ethical vetting was applied for and granted by the ethical review board in Stockholm, Sweden.
Results: A majority of the 8236 occupational incidents were considered as posing no to minor or moderate risk to the exposed individuals (76%). One third of the calls were made by healthcare staff and two thirds by the general public. For the latter group, more than half (62%) received advice on how to manage on site. The three most commonly reported chemical groups were alkali ($n = 1518$, excluding ammonia), hydrocarbons ($n = 1125$, including halogenated hydrocarbons) and acids ($n = 969$). Eye exposure was the most common exposure route recorded ($n = 3048$), followed by inhalation ($n = 2638$) and skin ($n = 1425$). Reviewing the SWEA database of occupational accidents during the study period we were able to identify 1234 accidents involving injuries caused by chemical exposures. However, these data are less detailed with regards to chemical identity, for instance only the source of the spill (e.g., "bucket"/"hose"), not the content of the specific product, was entered in 44% of the cases.
Conclusion: Although the Swedish PIC records are not collected for the purpose of occupational surveillance, they may complement official statistics on occupational accidents with chemicals. For instance PIC data are more precise regarding product and chemical identity and may thus help identify problematic occupational uses. Importantly, the PIC records also cover incidents leading to minor or no injuries. Such incidents are generally not reported to the SWEA as employers' reporting obligations mainly cover severe injuries.

Table 1. Top 5 prescription drugs of misuse per country with associated median age in years and interquartile range.

Italy ($n = 716$)			UK ($n = 574$)			Germany ($n = 648$)			France ($n = 98$)		
Top 5 Drugs	Median Age (IQR)	Wilcoxon *p*-value	Top 5 Drugs	Median Age (IQR)	Wilcoxon *p*-value	Top 5 Drugs	Median Age (IQR)	Wilcoxon *p*-value	Top 5 Drugs	Median Age (IQR)	Wilcoxon *p*-value
Lorazepam	43.5 (33.5–55.0)	<.0001	Diazepam	27.0 (21.0–36.0)	.0738	Amphetamine	27.0 (22.0–32.0)	<.0001	Codeine	27.5 (20.0–36.5)	.0105
Alprazolam	37.0 (24.0–46.0)		Amphetamine	27.0 (20.0–36.5)		Diazepam	36.5 (30.0–47.0)		Zolpidem	35.0 (26.0–61.0)	
Methadone	33.5 (27.5–41.5)		Codeine	33.0 (23.5–38.5)		Methadone	36.0 (31.0–44.0)		Tramadol	30.5 (24.0–32.0)	
Diazepam	40.0 (28.0–47.0)		Pregabalin	32.0 (24.0–38.0)		Lorazepam	38.0 (31.0–49.0)		Diazepam	30.0 (22.5–36.0)	
Zolpidem	46.0 (35.0–66.0)		Methadone	30.0 (25.0–39.0)		Buprenorphine	33.0 (30.0–42.0)		Methadone	46.5 (38.5–51.0)	