Global Toxicosurveillance Network (GTNet): Characterizing Prescription Opioid Exposures Reported to European Poison Centres


1Rocky Mountain Poison & Drug Center, Denver Health, Denver, CO, US
2GIZ-Nord Poisons Centre, University Medical Center, Göttingen, Germany
3Milan Poison Centre, Azienda Ospedaliera Ospedale Niguarda Ca’ Granda, Milano, Italy
4National Poisons Information Centre, Utrecht, The Netherlands
5Swiss Toxicological Information Centre, Associated Institute of the University of Zurich, Switzerland
6National Poisons Information Service (Newcastle Unit), Newcastle upon Tyne, UK
7National Poisons Information Service (Cardiff), Cardiff, UK

This study describes patient and exposure characteristics for prescription opioids reported to poison centres (PC) in Göttingen, Germany; Milan, Italy; The Netherlands; Switzerland; and the United Kingdom (UK).

Introduction

• Analyses include case characteristics by country for exposures reported in 2012 for buprenorphine, methadone, and oxycodone.
• Comparisons include age, gender, exposure reason, route, and drug.
• The analysis for exposure reason excludes The Netherlands as they began reporting exposure reason in 2013.
• Exposure reasons consisted of Intentional Suicide, Intentional Misuse, Abuse, or Diversion, and Unintentional.
• Routes are categorized by oral or non-oral.
• Significant p-values indicate country differences in the distribution of the variable.

Methods

• There was no difference in gender (p=.7740) or age (p=.1225) across countries.
• There was a significant difference across countries for exposure reason (p<0.0001), route (p<0.0001), and drug (p<0.0001).
• Mean age for all PCs was 39.8 years (SD=18.9), 58% male.
• In all countries, there were more calls for exposures in males and the mean age was approximately 40 years old.
• Buprenorphine had the lowest percent of calls in all countries however drug availability may also vary across countries.
• The route (oral v. non-oral) was significantly different across countries.

Table 1. GTNet data by Country

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Germany n=183</th>
<th>Italy n=122</th>
<th>Netherlands n=208</th>
<th>Switzerland n=282</th>
<th>United Kingdom n=233</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Mean (SD)</td>
<td>41.6 (17.50)</td>
<td>40.2 (17.84)</td>
<td>37.3 (18.54)</td>
<td>38.8 (19.24)</td>
<td>41.5 (20.03)</td>
<td>0.1225</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>110 (60.8%)</td>
<td>72 (59.5%)</td>
<td>99 (54.4%)</td>
<td>160 (56.7%)</td>
<td>134 (58.0%)</td>
<td>0.7740</td>
</tr>
<tr>
<td>Exposure Route</td>
<td>Oral</td>
<td>161 (88.0%)</td>
<td>111 (93.3%)</td>
<td>206 (99.5%)</td>
<td>237 (87.1%)</td>
<td>210 (92.5%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Drug</td>
<td>Buprenorphine</td>
<td>32 (17.5%)</td>
<td>18 (14.8%)</td>
<td>7 (3.4%)</td>
<td>39 (13.8%)</td>
<td>68 (29.2%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td></td>
<td>Methadone</td>
<td>86 (47.0%)</td>
<td>61 (50.0%)</td>
<td>74 (35.6%)</td>
<td>162 (57.4%)</td>
<td>73 (31.3%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oxycodone</td>
<td>65 (35.5%)</td>
<td>43 (35.2%)</td>
<td>127 (61.1%)</td>
<td>81 (28.7%)</td>
<td>92 (39.5%)</td>
<td></td>
</tr>
</tbody>
</table>

Results

• While the PC methods vary between countries, the case characteristics of exposures to oxycodone, buprenorphine and methadone as reported to poison centres within European countries are not different.
• However, the drug the patient was exposed to, the route, and the reason were statistically significantly different by country.

Conclusions