Supplementary material

Supplementary Table 1. Characteristics of patients with drug poisoning requiring hospitalization over a decade.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | | Total  (N = 10,017) | 2011  (N = 948) | 2012  (N = 934) | 2013  (N = 897) | 2014  (N = 952) | 2015  (N = 854) | 2016  (N = 865) | 2017  (N = 1040) | 2018  (N = 1144) | 2019  (N = 1208) | 2020  (N = 1175) | *p* value |
| Sex | | 4665 (46.6%) | 466 (49.2%) | 464 (49.7%) | 427 (47.6%) | 433 (45.5%) | 421 (49.3%) | 406 (46.9%) | 491  (47.2%) | 504 (44.1%) | 563 (46.6%) | 490 (41.7%) | 0.004 |
| Age, yr | | 49.6 ± 21.8 | 47.4 ± 21.1 | 49.2 ± 20.8 | 48.0 ± 21.1 | 48.9 ± 22.2 | 51.7 ± 21.9 | 50.9 ± 21.4 | 49.3 ± 22.7 | 49.5 ± 22.2 | 50.4 ± 22.0 | 50.4 ± 22.3 | <0.001 |
|  | <18 | 718 (7.2%) | 80 (8.4%) | 71 (7.6%) | 69 (7.7%) | 88 (9.2%) | 50 (5.9%) | 46 (5.3%) | 88 (8.5%) | 86 (7.5%) | 77 (6.4%) | 63 (5.4%) | <0.001 |
| 18≤ or <65 | 6476 (64.7%) | 628 (66.2%) | 621 (66.5%) | 602 (67.1%) | 610 (64.1%) | 524 (61.4%) | 562 (65.0%) | 652  (62.7%) | 742 (64.9%) | 778 (64.4%) | 757 (64.4%) |  |
| ≥65 | 2823 (28.2%) | 240 (25.3%) | 242 (25.9%) | 226 (25.2%) | 254 (26.7%) | 280 (32.8%) | 257 (29.7%) | 300  (28.8%) | 316 (27.6%) | 353 (29.2%) | 355 (30.2%) |  |
| Insurance type | | | | | | | | | | | | | |
|  | National health insurance | 8709 (86.9%) | 800 (84.4%) | 785 (84.0%) | 777 (86.6%) | 837 (87.9%) | 749 (87.7%) | 760 (87.9%) | 902 (86.7%) | 977 (85.4%) | 1075 (89.0%) | 1047 (89.1%) | <0.001 |
| Medicaid | 804 (8.0%) | 71 (7.5%) | 65 (7.0%) | 56 (6.2%) | 73 (7.7%) | 59 (6.9%) | 62 (7.2%) | 93 (8.9%) | 119 (10.4%) | 103 (8.5%) | 103 (8.8%) |
| Others | 504 (5.0%) | 77 (8.1%) | 84 (9.0%) | 64 (7.1%) | 42 (4.4%) | 46 (5.4%) | 43 (5.0%) | 45 (4.3%) | 48 (4.2%) | 30 (2.5%) | 25 (2.1%) |
| Poisoning occurrence at home | | 5657 (56.5%) | 514 (54.2%) | 479 (51.3%) | 459 (51.2%) | 486 (51.1%) | 423 (49.5%) | 481 (55.6%) | 629 (60.5%) | 696 (60.8%) | 735 (60.8%) | 755 (64.3%) | <0.001 |
| Intent | | 6080 (60.7%) | 567 (59.8%) | 536 (57.4%) | 502 (56.0%) | 497 (52.2%) | 497 (58.2%) | 510 (59.0%) | 630 (60.6%) | 706 (61.7%) | 805 (66.6%) | 830 (70.6%) | <0.001 |
| Poisoning agent | | | | | | | | | | | | | |
| Group 1 | | | | | | | | | | | | | |
|  | Non-opioid analgesics and antipyretics | 590 (5.9%) | 71 (7.5%) | 43 (4.6%) | 58 (6.5%) | 54 (5.7%) | 27 (3.2%) | 47 (5.4%) | 57 (5.5%) | 77 (6.7%) | 68 (5.6%) | 88 (7.5%) |  |
| Antiepileptics, sedative-hypnotics, anti-Parkinsonism and psychotropic drugs | 3024 (30.2%) | 202 (21.3%) | 240 (25.7%) | 232 (25.9%) | 248 (26.1%) | 220 (25.8%) | 264 (30.5%) | 330 (31.7%) | 402 (35.1%) | 434 (35.9%) | 452 (38.5%) |  |
| Narcotics and hallucinogens | 31 (0.3%) | 2 (0.2%) | 2 (0.2%) | 3 (0.3%) | 1 (0.1%) | 1 (0.1%) | 1 (0.1%) | 3 (0.3%) | 8 (0.7%) | 6 (0.5%) | 4 (0.3%) |  |
| Other drugs acting on the autonomic nervous system | 81 (0.8%) | 7 (0.7%) | 5 (0.5%) | 5 (0.6%) | 9 (0.9%) | 7 (0.8%) | 9 (1.0%) | 8 (0.8%) | 3 (0.3%) | 10 (0.8%) | 18 (1.5%) |  |
| Other and unspecified drugs, medicaments, and biological substances | 1006 (10.0%) | 91 (9.6%) | 81 (8.7%) | 81 (9.0%) | 99 (10.4%) | 98 (11.5%) | 89 (10.3%) | 120 (11.5%) | 115 (10.1%) | 129 (10.7%) | 103 (8.8%) |  |
| Group 2 | | | | | | | | | | | | | |
|  | Other gases and vapors | 922 (9.2%) | 74 (7.8%) | 69 (7.4%) | 91 (10.1%) | 103 (10.8%) | 97 (11.4%) | 78 (9.0%) | 89 (8.6%) | 126 (11.0%) | 111 (9.2%) | 84 (7.1%) |  |
| Group 3 | | | | | | | | | | | | | |
|  | Pesticides | 1933 (19.3%) | 268 (28.3%) | 241 (25.8%) | 180 (20.1%) | 178 (18.7%) | 180 (21.1%) | 156 (18.0%) | 194 (18.7%) | 152 (13.3%) | 202 (16.7%) | 182 (15.5%) |  |
| Group 4 | | | | | | | | | | | | | |
|  | Organic solvents and halogenated hydrocarbons and their vapors | 109 (1.1%) | 9 (0.9%) | 14 (1.5%) | 16 (1.8%) | 8 (0.8%) | 6 (0.7%) | 5 (0.6%) | 11 (1.1%) | 11 (1.0%) | 14 (1.2%) | 15 (1.3%) |  |
| Alcohols | 91 (0.9%) | 8 (0.8%) | 8 (0.9%) | 9 (1.0%) | 7 (0.7%) | 10 (1.2%) | 17 (2.0%) | 4 (0.4%) | 10 (0.9%) | 8 (0.7%) | 10 (0.9%) |  |
| Group 5 | | | | | | | | | | | | | |
|  | Other and unspecified chemicals and noxious substances | 2230 (22.3%) | 216 (22.8%) | 231 (24.7%) | 222 (24.7%) | 245 (25.7%) | 208 (24.4%) | 199 (23.0%) | 224  (21.5%) | 240 (21.0%) | 226 (18.7%) | 219 (18.6%) |  |
| Size of hospital | | | | | | | | | | | | | |
|  | 100–299 beds | 2084 (20.8%) | 253 (26.7%) | 265 (28.4%) | 262 (29.2%) | 258 (27.1%) | 227 (26.6%) | 220 (25.4%) | 159 (15.3%) | 136 (11.9%) | 150 (12.4%) | 154 (13.1%) | <0.001 |
| 300–499 beds | 1219 (12.2%) | 104 (11.0%) | 118 (12.6%) | 101 (11.3%) | 120 (12.6%) | 92 (10.8%) | 70 (8.1%) | 112 (10.8%) | 119 (10.4%) | 190 (15.7%) | 193 (16.4%) |
| 500–999 beds | 5220 (52.1%) | 492 (51.9%) | 469 (50.2%) | 428 (47.7%) | 453 (47.6%) | 452 (52.9%) | 457 (52.8%) | 579 (55.7%) | 646 (56.5%) | 624 (51.7%) | 620 (52.8%) |
| ≥1000 beds | 1494 (14.9%) | 99 (10.4%) | 82 (8.8%) | 106 (11.8%) | 121 (12.7%) | 83 (9.7%) | 118 (13.6%) | 190 (18.3%) | 243 (21.2%) | 244 (20.2%) | 208 (17.7%) |
| Length of hospital stay | | 6.4 ± 11.8 | 7.1 ± 11.9 | 6.7 ± 13.1 | 7.1 ± 14.3 | 6.3 ± 14.5 | 6.1 ± 10.3 | 6.5 ± 11.6 | 5.9 ± 9.3 | 6.3 ± 10.0 | 6.3 ± 12.8 | 5.8 ± 10.1 | 0.188 |
| Death | | 375 (3.7%) | 73 (7.7%) | 63 (6.7%) | 31 (3.5%) | 29 (3.0%) | 35 (4.1%) | 30 (3.5%) | 24 (2.3%) | 30 (2.6%) | 30 (2.5%) | 30 (2.6%) | <0.001 |

Supplementary Table 2. Linear regression analysis of length of hospital stay for patients with drug poisoning hospitalization.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | | B | S.E. | β | *t* | *p* | VIF |
| Intercept | | 1.49 | 0.42 |  | 3.35 | <0.001 |  |
| Age | | 0.05 | 0.01 | 0.09 | 9.26 | <0.001 | 1.05 |
| Sex, male | | 0.69 | 0.25 | 0.06 | 2.77 | 0.006 | 1.06 |
| Insurance | | | | | | | |
|  | National health insurance | Ref |  |  |  |  | 1.01 |
| Medicaid | 0.63 | 0.43 | 0.05 | 1.46 | 0.144 |
| Others | 0.72 | 0.54 | 0.06 | 1.34 | 0.182 |
| Home | | 0.92 | 0.25 | 0.03 | 1.52 | 0.128 | 1.08 |
| Intent | | 0.92 | 0.29 | 0.08 | 3.16 | 0.002 | 1.22 |
| Poisoning agent | | | | | | | |
|  | Group 1 | Ref |  |  |  |  | 1.08 |
| Group 2 | 3.11 | 0.43 | 0.26 | 7.18 | <0.001 |
| Group 3 | 2.20 | 0.34 | 0.19 | 6.44 | <0.001 |
| Group 4 | 1.69 | 0.86 | 0.14 | 1.97 | 0.048 |
| Group 5 | 1.68 | 0.37 | 0.14 | 4.59 | <0.001 |

*R*2 = 0.024, adj*R*2 = 0.022, D-W = 2.02. VIF: variance inflation factor.

Supplementary Table 3. Logistic regression analysis of mortality for patients with drug poisoning hospitalization.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | | B | S.E. | Adjusted OR  (95% CI) | *p* |
| Intercept | | −7.26 | 0.31 |  |  |
| Age | | 0.04 | 0.04 | 1.04 (1.03–1.05) | <0.001 |
| Sex, male | | 0.52 | 0.12 | 1.68 (1.33–2.13) | <0.001 |
| Insurance | | | | | |
|  | National health insurance | Ref |  |  |  |
| Medicaid | −0.23 | 0.24 | 0.79 (0.50–1.26) | 0.792 |
| Others | 0.26 | 0.26 | 1.30 (0.78–2.15) | 1.296 |
| Home | | −0.07 | 0.12 | 0.93 (0.74–1.18) | 0.543 |
| Intent | | 0.82 | 0.17 | 2.27 (1.63–3.18) | <0.001 |
| Poisoning agent | | | | | |
|  | Group 1 | Ref |  |  |  |
| Group 2 | 0.37 | 0.31 | 1.44 (0.79–2.63) | 0.233 |
| Group 3 | 1.78 | 0.15 | 5.95 (4.40–8.04) | <0.001 |
| Group 4 | 1.45 | 0.38 | 4.26 (2.04–8.92) | <0.001 |
| Group 5 | 0.40 | 0.24 | 1.49 (0.92–2.40) | 0.104 |

Nagelkerke *R*2 = 0.228. OR: odds ratio, CI: confidence interval.