Supplemental Table 1. Demographic characteristics of rural and urban people who died by suicide in Newfoundland and Labrador, 1997-2016 (utilizing a SAC definition of rurality)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | SAC definition\* | |  |  |
|  |  | Rural | Urban |  |  |
| N = 919 | Total | (n=600) | (n=319) |  |  |
| Variable | n (%) | n (%) | n (%) | χ2 | *p* |
| Mean age (range) |  | 42 (12-89) | 43 (16-93) | (t) -1.01 | 0.313 |
| Age group (years) |  |  |  | 27.0 | **<0.001** |
| 10-19 | 90 (9.8) | 73 (12.2) | 17 (5.3) | 11.0 | **0.001** |
| 20-29 | 148 (16.1) | 102 (17.0) | 46 (14.4) | 1.0 | 0.311 |
| 30-39 | 173 (18.8) | 98 (16.3) | 75 (23.5) | 7.0 | 0.008 |
| 40-49 | 180 (19.6) | 108 (18.0) | 72 (22.6) | 2.8 | 0.097 |
| 50-59 | 176 (19.2) | 107 (17.8) | 69 (21.6) | 1.9 | 0.164 |
| 60-69 | 99 (10.8) | 69 (11.5) | 30 (9.4) | 1.0 | 0.329 |
| 70+ | 53 (5.8) | 43 (7.2) | 10 (3.1) | 6.2 | 0.013 |
| Sex (% male) | 746 (81.2) | 503 (83.8) | 243 (76.2) | 8.0 | **0.005** |
| Marrieda | 282 (30.7) | 194 (32.3) | 88 (27.6) | 2.2 | 0.137 |
| Employment Status |  |  |  | 29.8 | **<0.001** |
| Student | 67 (7.3) | 54 (9.0) | 13 (4.1) | 7.5 | **0.006** |
| Employed | 277 (30.1) | 154 (25.7) | 123 (38.6) | 16.4 | **<0.001** |
| Unemployed | 290 (31.6) | 205 (34.2) | 85 (26.6) | 5.5 | 0.020 |
| Retired | 116 (12.6) | 87 (14.5) | 29 (9.1) | 5.5 | 0.019 |
| Not reported | 169 (18.4) | 100 (16.7) | 69 (21.6) | 3.4 | 0.064 |
| Living Arrangements |  |  |  | 7.7 | **0.021** |
| Living alone | 182 (19.8) | 103 (17.2) | 79 (24.8) | 7.6 | **0.006** |
| Living with someone | 609 (66.3) | 409 (68.2) | 200 (62.7) | 2.8 | 0.095 |
| Not reported | 128 (13.9) | 88 (14.7) | 40 (12.5) | 0.8 | 0.368 |
| Education Level |  |  |  | 15.5 | **<0.001** |
| < High school | 83 (9.0) | 64 (10.7) | 19 (6.0) | 5.6 | 0.018 |
| > High school | 93 (10.1) | 46 (7.7) | 47 (14.7) | 11.4 | **0.001** |
| Not reported | 743 (80.8) | 490 (81.7) | 253 (79.3) | 0.7 | 0.387 |

a Married at time of death compared to all other marital statuses (i.e., single, divorced, widowed, separated, unknown).

\*Urban areas comprise any Census Metropolitan Areas. In Newfoundland and Labrador, CMAs encompass the capital city and surrounding areas.

Note: Bolded *p* values represent tests that reached statistical significance.

Supplemental Table 2. Circumstances and manner of death among rural and urban people who died by suicide in Newfoundland and Labrador, 1997-2016 (utilizing a SAC definition of rurality)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | SAC definition\* | |  |  |
|  |  | Rural | Urban |  |  |
| N = 919 | Total | (n=600) | (n=319) |  |  |
| Variable | n (%) | n (%) | n (%) | χ2 | *p* |
| Suicide note | 293 (31.9) | 178 (29.7) | 115 (36.1) | 3.9 | **0.048** |
| Method |  |  |  | 50.1 | **<0.001** |
| Self-poisoning | 161 (17.5) | 84 (14.0) | 77 (24.1) | 14.4 | **<0.001** |
| Firearms | 201 (21.9) | 164 (27.3) | 37 (11.6) | 30.3 | **<0.001** |
| Hanging, strangulation, suffocation | 450 (49.0) | 299 (49.8) | 151 (47.3) | 0.5 | 0.484 |
| Cutting and piercing | 23 (2.5) | 10 (1.7) | 13 (4.1) | 4.8 | 0.028 |
| Drowning | 41 (4.5) | 19 (3.2) | 22 (6.9) | 6.8 | 0.009 |
| Carbon monoxide poisoning | 12 (1.3) | 6 (1.0) | 6 (1.9) | 1.2 | 0.271 |
| Jumping from a high place | 14 (1.5) | 7 (1.2) | 7 (2.2) | 1.4 | 0.230 |
| Othera | 17 (1.8 | 11 (1.8) | 6 (1.9) | 0.1 | 0.920 |
| Any alcohol at time of death |  |  |  | 13.4 | **0.001** |
| Alcohol in system | 345 (37.5) | 240 (40.0) | 105 (32.9) | 4.4 | 0.356 |
| No alcohol in system | 389 (42.3) | 228 (38.0) | 161 (50.5) | 13.0 | **<0.001** |
| Not tested | 185 (20.1) | 132 (22.0) | 53 (16.6) | 3.6 | 0.057 |
| Legally Intoxicated at time of death |  |  |  | 4.4 | 0.109 |
| Legally intoxicated | 195 (21.2) | 129 (21.5) | 66 (20.7) | 0.1 | 0.775 |
| Not legally intoxicated | 539 (58.7) | 339 (56.5) | 200 (62.7) | 3.3 | 0.069 |
| Not tested | 185 (20.1) | 132 (22.0) | 53 (16.6) | 3.8 | 0.053 |

a Other methods include burns, smoke, fire, motor vehicle, electrocution and poisoning with a liquid substance.

\*Urban areas comprise any Census Metropolitan Areas. In Newfoundland and Labrador, CMAs encompass the capital city and surrounding areas.

Note: Bolded p values represent tests that reached statistical significance.

Supplementary Table 3. Social and clinical characteristics of rural and urban people who died by suicide in Newfoundland and Labrador, 1997-2016 (utilizing a SAC definition of rurality)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | SAC definition\* | |  |  |
|  |  | Rural | Urban |  |  |
| N = 919 | Total | (n=600) | (n=319) |  |  |
| Variable | n (%) | n (%) | n (%) | χ2 | *p* |
| Recent heavy drinking | 201 (21.9) | 142 (23.7) | 59 (18.5) | 3.3 | 0.071 |
| Financial problems | 86 (9.4) | 42 (7.0) | 44 (13.8) | 11.3 | **0.001** |
| Trouble with the law | 109 (11.9) | 69 (11.5) | 40 (12.5) | 0.2 | 0.643 |
| Marital/relationship problems | 250 (27.2) | 170 (28.3) | 80 (25.1) | 1.1 | 0.291 |
| Interpersonal conflict | 71 (7.7) | 42 (7.0) | 29 (9.1) | 1.3 | 0.258 |
| History of gambling | 20 (2.2) | 8 (1.3) | 12 (3.8) | 5.8 | **0.016** |
| Family history of suicide loss | 43 (4.7) | 28 (4.7) | 15 (4.7) | <0.1 | 0.981 |
| Suicidal thoughts/talk | 372 (40.5) | 246 (41.0) | 126 (39.5) | 0.2 | 0.659 |
| Past suicide attempt | 269 (29.3) | 153 (25.5) | 116 (36.4) | 11.9 | **0.001** |
| Psychiatric disorder | 545 (59.3) | 329 (54.8) | 216 (67.7) | 14.3 | **<0.001** |
| History of alcohol abuse | 39 (4.2) | 16 (2.7) | 23 (7.2) | 10.6 | **0.001** |
| History of substance abuse | 56 (10.4) | 47 (7.8) | 49 (15.4) | 12.6 | **<0.001** |
| Psychiatric drugs in chart  at time of death | 357 (38.8) | 203 (33.8) | 154 (48.3) | 18.3 | **<0.001** |
| Pain | 31 (3.4) | 14 (2.3) | 17 (5.3) | 5.7 | **0.017** |
| Chronic disease or condition | 207 (22.5) | 130 (21.7) | 77 (24.1) | 0.7 | 0.393 |

\*Urban areas comprise any Census Metropolitan Areas. In Newfoundland and Labrador, CMAs encompass the capital city and surrounding areas.

Note: Bolded p values represent tests that reached statistical significance.

Supplementary Table 4. Regression model of demographic predictors of suicide death among rural and urban people in Newfoundland and Labrador, 1997-2016 (utilizing a SAC definition of rurality)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N = 919 |  | Census Metropolitan Area definition\* | |  |
|  |  | 95% CI | |  |
| Variable | OR | Lower | Upper | *p* |
| Age group (years) |  |  |  | 0.450 |
| 10-19 | 1.378 | 0.579 | 3.281 | 0.468 |
| 20-29 | 1.003 | 0.598 | 1.683 | 0.990 |
| 30-39 | 0.744 | 0.466 | 1.188 | 0.216 |
| 40-49 | ref | ref | ref | ref |
| 50-59 | 0.995 | 0.618 | 1.601 | 0.983 |
| 60-69 | 1.243 | 0.646 | 2.389 | 0.515 |
| 70+ | 1.903 | 0.756 | 4.790 | 0.172 |
| Male | 0.978 | 0.650 | 1.470 | 0.914 |
| Employment Status |  |  |  | **<0.001** |
| Employed | 0.391 | 0.263 | 0.580 | **<0.001** |
| Unemployed | ref | ref | ref | ref |
| Retired | 0.793 | 0.400 | 1.571 | 0.506 |
| Student | 0.954 | 0.386 | 2.354 | 0.918 |
| Unknown | 0.507 | 0.326 | 0.789 | **0.003** |
| Living Arrangements |  |  |  | 0.107 |
| Living alone | .760 | 0.516 | 1.120 | 0.166 |
| Living with someone | ref | ref | ref | ref |
| Unknown | 1.340 | 0.843 | 2.131 | 0.216 |
| Education Level |  |  |  | 0.212 |
| < High school | 1.610 | 0.703 | 3.686 | 0.260 |
| > High school | ref | ref | ref | ref |
| Unknown | 1.556 | .941 | 2.574 | 0.085 |
| Suicide note | 1.202 | .866 | 1.667 | 0.271 |
| Method |  |  |  | **<0.001** |
| Hanging, strangulation, suffocation | ref | ref | ref | ref |
| Firearms | 2.441 | 1.569 | 3.798 | **<0.001** |
| Self-poisoning | 0.771 | 0.497 | 1.196 | 0.246 |
| Cutting and piercing | 0.415 | .161 | 1.067 | 0.068 |
| Drowning | 0.474 | 0.231 | 0.971 | **0.041** |
| Carbon monoxide poisoning | 0.747 | 0.210 | 2.650 | 0.652 |
| Jumping from a high place | 0.534 | 0.168 | 1.697 | 0.288 |
| Othera | 0.852 | 0.291 | 2.491 | 0.770 |
| Any alcohol at time of deathb |  |  |  | **<0.001** |
| Alcohol in system | 1.813 | 1.287 | 2.554 | **0.001** |
| No alcohol in system | ref | ref | ref | ref |
| Not tested | 1.937 | 1.275 | 2.943 | **0.002** |
| Financial problems | 0.567 | 0.333 | 0.965 | **0.036** |
| History of gambling | 0.512 | 0.183 | 1.433 | 0.203 |
| Past suicide attempt | 0.719 | 0.511 | 1.012 | 0.059 |
| Psychiatric disorder | 1.103 | 0.766 | 1.589 | 0.597 |
| History of alcohol abuse | 0.517 | 0.228 | 1.175 | 0.115 |
| History of substance abuse | 0.692 | 0.406 | 1.179 | 0.175 |
| Psychiatric drugs in chart at time of death | 0.779 | 0.539 | 1.126 | 0.184 |
| Pain | 0.596 | 0.264 | 1.348 | 0.214 |

a Other methods include burns, smoke, fire, motor vehicle, electrocution and poisoning with a liquid substance.

b Only alcohol at time of death was used as an alcohol at death related predictor as it was significant in univariate analysis for both definitions. Blood alcohol level and intoxication were not included because as they were highly correlated with alcohol at time of death. Both alcohol at time of death and intoxication were derived from blood alcohol level.

\*Urban areas comprise any Census Metropolitan Areas. In Newfoundland and Labrador, CMAs encompass the capital city and surrounding areas.

Note: Bolded p values represent tests that reached statistical significance, p<.05.