**Supplementary File 1.** ICU characteristics and parameters by age classes after propensity score matching.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Age classes** | **<55 years** | **55-65 years** | **65-80 years** | **≥80 years** |
| **Characteristics** | **BD****n(w%)****n=45** | **Controls****n(w%)****n=721** | **BD****n(w%)****n=83** | **Controls****n(w%)****n=1,193** | **BD****n(w%)****n=187** | **Controls****n(w%)****n=2,468** | **BD****n(w%)****n=137** | **Controls****n(w%)****n=1,789** |
| **ICU admission** | 20 (44.4) | 222(30.8) | 36(43.4) | 475(39.8) | 56(29.9) | 839(34.0) | 13(9.5) | 150(8.4) |
| Direct admission to ICU | 15(75.0) | 13(62.2) | 22(61.1) | 257(57.5) | 26(46.4) | 484(61.3) | 9(69.2) | 85(65.0) |
| SAPS II score at ICU admission, median (IQR) | 26(17-42) | 24(15-34) | 30(21-42.5) | 30(19-38) | 33(23-45) | 37(26-50) | 26(24-33) | 29(24-38) |
| Recourse to invasive mechanical ventilation | 9(45.0) | 93(42.2) | 21(58.3) | 255(50.4) | 22(39.3) | 465(51.6) | 12(92.3) | 130(91.7) |
| Recourse to renal-replacement therapy | 1(5.0) | 5(8.0) | 4(11.1) | 48(10.9) | 5(8.9) | 117(12.3) | 0(0.0) | 6(2.2) |
| Length of ICU stay, median (IQR)— no. of days | 4.5(3-9) | 6(2-15) | 11.5(5.5-25) | 8(3-16) | 7(2-15.5) | 9(3-20) | 5(1-13) | 6(1-11) |

ICU: intensive care unit.

w%: weighted percentage

**Supplementary File 2.** Compared outcomes between the two matched groups (patients with BD, n=436 and matched controls, n=5,729).

|  |  |  |
| --- | --- | --- |
|  | In-hospital mortality | ICU admission |
|  | OR (95% CI) | p value | OR (95% CI) | p value |
| Model 1 | 1.30 (1.13-1.45) | **<0.0001** | 1.05 (0.94-1.18) | 0.4137 |
| Model 2 | 1.28 (1.14-1.44) | **<0.0001** | 1.01 (0.91-1.14) | 0.8600 |
| Model 3 | 1.29 (1.15-1.45) | **<0.0001** | **-** | **-** |
| Model 4 |  |  |  |  |
| Interaction term age x bipolar disorder |  | **<0.0001** |  | 0.0536 |
| <55 years | 2.24 (1.14-4.39) | **0.0182** | 1.60 (1.13-2.27) | **0.0077** |
| 55-65 years | 1.63 (1.10-2.41) | **0.0144** | 1.07 (0.83-1.36) | 0.6141 |
| 65-80 years | 1.59 (1.33-1.90) | **<0.0001** | 0.90 (0.76-1.07) | 0.2431 |
| ≥80 years | 0.96 (0.79-1.16) | 0.6494 | 0.84 (0.61-1.51) | 0.2776 |
| Interaction term gender x bipolar disorder |  | 0.1767 |  | 0.0800 |
| Male | 1.41 (1.18-1.70) | 0.0002 | 0.91 (0.76-1.08) | 0.2661 |
| Female | 1.20 (1.03-1.40) | 0.0218 | 1.12 (0.95-1.31) | 0.1686 |
| Interaction term social deprivation x bipolar disorder |  | **0.002** |  | 0.4211 |
| Deprived level | 1.62 (1.34-1.95) | **<0.0001** | 0.91 (0.76-1.11) | 0.3536 |
| Favored level | 1.14 (0.98-1.33) | **0.0434** | 1.06 (0.91-1.23) | 0.4745 |

Model 1: unadjusted model.

Model 2: model 1 plus adjustment for variables with SD>0.1.

Model 3: model 1 plus adjustment for ICU admission.

Model 4: model 2 plus the interaction terms.

Reference: matched controls.