Additional file 1: Comparison of the logistic regressions in complete cases (n=1583) and after multiple imputations (n=2591) using the variation rate.

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| --- | --- | --- | --- | --- |
|  | Missing  values | Complete  cases | Multiple  imputation | Variation rate (%) |
|  | n (%) | ORCC (95% CI) | ORMI (95% CI) |
| Age (ref: 18-30 years old) | 0 |  |  |  |
| - 31-50 years old | 1.25 [0.85;1.83] | 1.23 [0.9;1.67] | -2 |
| - 51-65 years old | 1.95 [1.3;2.91] | 1.54 [1.11;2.14] | -21 |
| - 66-80 years old | 1.23 [0.72;2.1] | 1.15 [0.76;1.75] | -7 |
| - >81 years old | 1.65 [0.89;3.07] | 1.39 [0.83;2.32] | -16 |
| Men | 13 (0.5%) | 1.05 [0.75; 1.47] | 1.04 [0.79;1.37] | -1 |
| Season winter | 0 | 0.72 [0.5;1.03] | 0.94 [0.72;1.23] | 31 |
| Year of inclusion | 0 | 1.04 [0.96;1.13] | 1.01 [0.95;1.08] | -3 |
| Circumstances (ref: road traffic injury) | 28 (1.08%) |  |  |  |
| - Fall | 0.7 [0.48;1.03] | 0.68 [0.49;0.93] | -3 |
| - Gunshot/stab wounds | 0.36 [0.13;1] | 0.5 [0.25;1] | 39 |
| - Other | 0.61 [0.39;0.95] | 0.64 [0.45;0.91] | 5 |
| Penetrating injury | 35 (1.35%) | 0.56 [0.25;1.23] | 0.66 [0.37;1.18] | 18 |
| On-scene time (ref: 0-30 minutes) | 569 (21.96%) |  |  |  |
| - 31-60 minutes | 0.96 [0.71;1.3] | 0.9 [0.69;1.16] | -6 |
| - More than 60 minutes | 0.35 [0.2;0.63] | 0.54 [0.36;0.82] | 54 |
| Delay on-scene - hospital (ref: <15 minutes) | 464 (17.91%) |  |  |  |
| - 16-30 minutes | 1.51 [1.08;2.09] | 1.56 [1.18;2.06] | 3 |
| - More than 31 minutes | 1.07 [0.71;1.59] | 1.05 [0.75;1.47] | -2 |
| Air transport | 0 | 0.47 [0.3;0.75] | 0.52 [0.37;0.74] | 11 |
| Shock index ≥0.9 | 274 (10.58%) | 0.87 [0.62;1.22] | 0.97 [0.72;1.3] | 11 |
| Glasgow coma scale (ref: 15) | 150 (5.79%) |  |  |  |
| - GCS ≤ 8 | 0.61 [0.42;0.88] | 0.59 [0.44;0.8] | -3 |
| - GCS 9-14 | 0.81 [0.57;1.16] | 0.79 [0.59;1.07] | -2 |
| Endotracheal intubation | 238 (9.19%) | 0.47 [0.33;0.66] | 0.48 [0.37;0.64] | 2 |
| FAST-Echo | 258 (9.96%) | 0.18 [0.09;0.36] | 0.16 [0.08;0.31] | -11 |

Statistics presented: n (%); median [IQR]

OR : Odds ratio, CI 95% : confidence interval 95%.