**Table S2.** Univariable models for all variables tested and final multivariable generalized estimating equation models for odds of mortality for COVID-19 ICU patients (n=2233).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristicsa | Univariable Models (n=2233) | | Multivariable Model (n=2233) b | |
|  | Odds Ratio (95% CI) | p-value | Odds Ratio (95% CI) | p-value |
| Gender |  |  |  |  |
| Female | [Reference] |  | -- | -- |
| Male | 1.2 (1 - 1.4) | 0.1 | -- | -- |
| Age (yr.) |  |  |  |  |
| 18-44 | [Reference] |  | [Reference] |  |
| 45-64 | 2.3 (1.8 - 2.9) | <0.001 | 2 (1.6 - 2.5) | <0.001 |
| 65-74 | 4.5 (3.2 - 6.5) | <0.001 | 5.1 (3.3 - 8) | <0.001 |
| 75+ | 4.7 (3.5 - 6.3) | <0.001 | 6.8 (4.7 - 10.1) | <0.001 |
| Race/Ethnicity |  |  |  |  |
| White | [Reference] |  | [Reference] |  |
| Black | 1.3 (1.1 - 1.6) | 0.003 | 1.5 (1.1 - 2) | 0.0063 |
| Hispanic | 1.3 (1.1 - 1.5) | 0.002 | 1.4 (0.9 - 2) | 0.1069 |
| Asian or Pacific Islander | 1.5 (1.1 - 2) | 0.011 | 1.5 (1 - 2.3) | 0.0321 |
| Other | 1.2 (1 - 1.5) | 0.016 | 1.5 (1 - 2.3) | 0.0384 |
| Declined, Missing, Unknown | 1.4 (1 - 2) | 0.072 | 1.1 (0.7 - 1.8) | 0.6145 |
| Primary Payer |  |  |  |  |
| Medicaid | 1 (0.9 - 1.2) | 0.553 | 1.3 (1.1 - 1.5) | 0.0015 |
| Medicare | 2.1 (1.7 - 2.7) | <0.001 | 1.1 (0.9 - 1.5) | 0.2442 |
| Commercial or Other | [Reference] |  | [Reference] |  |
| Uninsured | 1.4 (1 - 1.8) | 0.028 | 1.7 (1.2 - 2.3) | 0.0015 |
| Marital Status |  |  |  |  |
| Married, Life Partner | [Reference] |  | [Reference] |  |
| Single | 0.8 (0.6 - 1) | 0.018 | 0.9 (0.7 - 1.2) | 0.435 |
| Divorced, Separated, Widowed | 1.2 (0.9 - 1.5) | 0.144 | 1 (0.7 - 1.3) | 0.954 |
| Unknown | 1.4 (1.1 - 1.9) | 0.016 | 1.4 (0.9 - 2) | 0.107 |
| Primary Spoken Language |  |  |  |  |
| English | [Reference] |  | -- | -- |
| Non-English | 1.1 (0.9 - 1.2) | 0.35 | -- | -- |
| Borough |  |  |  |  |
| Bronx | 0.7 (0.5 - 0.9) | 0.002 | -- | -- |
| Brooklyn | 1 (0.7 - 1.2) | 0.711 | -- | -- |
| Manhattan | [Reference] |  | -- | -- |
| Queens | 1.1 (0.9 - 1.4) | 0.368 | -- | -- |
| Staten Island/Non-NYC | 0.3 (0.1 - 0.7) | 0.005 | -- | -- |
| Neighborhood Poverty Level |  |  |  |  |
| Low Poverty (0 - 9%)/ Non-NYC | [Reference] |  | [Reference] |  |
| Medium Poverty (10 - 19%) | 2.2 (1.6 - 3.1) | <0.001 | 1.6 (1 - 2.4) | 0.041 |
| High Poverty (20 - 29%) | 2.3 (1.6 - 3.3) | <0.001 | 1.8 (1.3 - 2.5) | 0 |
| Very High Poverty (30%+) | 1.9 (1.3 - 2.8) | 0.001 | 1.5 (0.9 - 2.5) | 0.153 |
| Comorbidities |  |  |  |  |
| Hypertension | 1.5 (1.2 - 1.9) | <0.001 | -- | -- |
| Diabetes | 1.7 (1.5 - 1.9) | <0.001 | 1.6 (1.2 - 2) | <0.001 |
| Asthma | 1 (0.9 - 1.2) | 0.744 | 1.4 (1.1 - 1.8) | 0.001 |
| Cancer | 0.9 (0.7 - 1.2) | 0.5 | 0.8 (0.6 - 1) | 0.082 |
| Heart Disease | 2.5 (2 - 3.1) | <0.001 | 2.5 (2 - 3.3) | <0.001 |
| Congestive Heart Failure | 1.1 (0.9 - 1.4) | 0.491 | 0.7 (0.6 - 1) | 0.028 |
| Chronic Kidney Disease | 1.7 (1.3 - 2.1) | <0.001 | -- | -- |
| Elixhauser (count of comorbidities) | 1.1 (1 - 1.1) | <0.001 | 0.9 (0.8 - 0.9) | <0.001 |
| ICU Surge Status |  |  |  |  |
| Level <2 & 2/2.5 | [Reference] |  | [Reference] |  |
| Level 3/3.5 & 4+ | 1.5 (1.3 - 1.8) | <0.001 | 1.4 (1.2 - 1.8) | <0.001 |
| Interventions |  |  |  |  |
| Vented (Mechanical) | 10 (7.5 - 13.4) | <0.001 | 8.8 (6.1 - 12.9) | <0.001 |
| Dialysis Order | 3.9 (2.9 - 5.3) | <0.001 | 3.0 (1.9 - 4.7) | <0.001 |
| Initial Labs |  |  |  |  |
| WBC (>10,000 per mm3) | 2.5 (2 - 3.2) | <0.001 | 1.8 (1.4 - 2.4) | <0.001 |
| Platelet Count (<150,000 per mm3) | 1.6 (1.3 - 2.1) | <0.001 | 1.9 (1.7 - 2.2) | <0.001 |
| Hemoglobin (< 14 g/dL) | 1.1 (0.8 - 1.5) | 0.4349 | -- | -- |
| Hematocrit (< 42 %) | 0.9 (0.7 - 1.2) | 0.4693 | 0.8 (0.6 - 1) | 0.044 |
| Creatinine (>1.5 mg/dL) | 3.2 (2.5 - 4) | <0.001 | 2.1 (1.7 - 2.7) | <0.001 |

ICU = intensive care unit, CI = confidence interval, WBC = white blood count.

aOdds ratio and 95% CI for mortality.

b Gender, Primary Spoken Language, Borough, Hypertension, CKD and Hemoglobin were eliminated from the model via backwards elimination (--).