**Supplemental Table 1.**Baseline characteristics of Medicare beneficiaries with fee-for-service claims hospitalized for coronavirus disease 2019 (COVID-19) in metropolitan and nonmetropolitan areas, United States,January 1–December 31, 2020

|  |  |  |
| --- | --- | --- |
| **Characteristicsa**  | **Metropolitan** | **Nonmetropolitan** |
| **(*n* = 373,384), %** | **(*n* = 98,538), %** |
| **Age (in years)** |
| ≤64 | 13.8 | 11.9 |
| 65–74 | 33.1 | 35.0 |
| ≥75 | 53.1 | 53.1 |
| **Sex** |
| Male | 50.6 | 51.1 |
| Female | 49.5 | 48.9 |
| **Race/ethnicity** |
| Non-Hispanic White | 64.4 | 78.9 |
| Non-Hispanic Black | 17.3 | 10.5 |
| Hispanic | 12.4 | 5.2 |
| Asian/Pacific Islander | 3.2 | 0.4 |
| American Indian/Alaska Native | 0.7 | 3.9 |
| Other/unknown | 2.0 | 1.2 |
| **US Census region, by state** |
| Northeast | 23.2 | 4.3 |
| Midwest | 22.5 | 35.3 |
| South | 38.4 | 50.3 |
| West | 15.9 | 10.2 |
| US territories | NR | NR |
| **Medicare entitlement** |
| End-stage renal disease | 5.8 | 4.0 |
| Disabled | 11.9 | 11.0 |
| Aged | 82.2 | 85.0 |
| **Medicare eligibility status** |
| Medicare only | 45.9 | 53.7 |
| Dual Medicare and Medicaid | 54.1 | 46.3 |
| **Number of comorbidities**b |
| 0 | 11.2 | 10.8 |
| 1–3 | 19.1 | 22.9 |
| 4–5 | 19.3 | 21.2 |
| ≥6 | 50.3 | 45.1 |

**Abbreviation:** NR, not reliable.

aDistribution of Medicare beneficiaries with COVID-19 with fee-for-service claims in each category for COVID-19–associated outcomes residing in nonmetropolitan counties were significantly different from metropolitan beneficiaries with COVID-19 by chi-square test at *P* <0.05.

bIncludes acute myocardial infarction, atrial fibrillation, heart failure, hypertension, ischemic heart disease, stroke, peripheral vascular disease, chronic kidney disease, diabetes, hyperlipidemia, anemia, diabetes, Alzheimer disease, depression, obesity, chronic obstructive pulmonary disease, schizophrenia, lung cancer, liver disease, viral hepatitis, HIV/AIDS, asthma, end-stage renal disease, osteoporosis, tobacco use, opioid use disorder, spina bifida and other congenital anomalies of the nervous system, and sickle cell disease.

**Supplemental Table 2.** Adjusteda odds ratios (aORs) and 95% confidence intervals (CIs) for chronic conditions associated hospitalization among Medicare beneficiaries with fee-for-service claims hospitalized for coronavirus disease 2019 (COVID-19) residing in metropolitan and nonmetropolitan counties, United States,January 1–December 31, 2020

|  |  |  |
| --- | --- | --- |
| **Condition** | **Metropolitan** | **Nonmetropolitan** |
| **Hospitalized versus Nonhospitalized** | **Hospitalized versus Nonhospitalized** |
| **aOR** | **Lower Limit of 95% CI** | **Upper Limit of 95% CI** | ***P* Value** | **aOR** | **Lower Limit of 95% CI** | **Upper Limit of 95% CI** | ***P* Value** |
| End-stage renal disease | 2.52 | 2.48 | 2.57 | <0.0001c | 2.53 | 2.43 | 2.64 | <0.0001c |
| Sickle cell disease | 2.14 | 1.89 | 2.41 | <0.0001c | 2.35 | 1.58 | 3.49 | <0.0001c |
| Chronic kidney disease | 1.70 | 1.68 | 1.71 | <0.0001c | 1.68 | 1.65 | 1.70 | <0.0001c |
| Acute myocardial infarction | 1.65 | 1.60 | 1.71 | <0.0001c | 1.45 | 1.36 | 1.54 | <0.0001c |
| Heart failure | 1.58 | 1.57 | 1.60 | <0.0001c | 1.59 | 1.56 | 1.62 | <0.0001c |
| Chronic obstructive pulmonary disease | 1.55 | 1.53 | 1.57 | <0.0001c | 1.59 | 1.56 | 1.62 | <0.0001c |
| Lung cancer | 1.48 | 1.43 | 1.53 | <0.0001c | 1.61 | 1.49 | 1.74 | <0.0001c |
| Diabetes | 1.47 | 1.46 | 1.49 | <0.0001c | 1.51 | 1.49 | 1.54 | <0.0001c |
| Obesity | 1.45 | 1.43 | 1.46 | <0.0001c | 1.49 | 1.46 | 1.51 | <0.0001c |
| Cardiovascular disease† | 1.37 | 1.36 | 1.38 | <0.0001c | 1.39 | 1.36 | 1.41 | <0.0001c |
| Opioid use disorder | 1.36 | 1.33 | 1.39 | <0.0001c | 1.38 | 1.32 | 1.44 | <0.0001c |
| Ischemic heart disease | 1.36 | 1.35 | 1.37 | <0.0001c | 1.41 | 1.39 | 1.43 | <0.0001c |
| Hypertension | 1.34 | 1.33 | 1.35 | <0.0001c | 1.33 | 1.30 | 1.35 | <0.0001c |
| Spina bifida and other congenital anomalies of the nervous system | 1.31 | 1.22 | 1.42 | <0.0001c | 1.30 | 1.10 | 1.52 | 0.0017c |
| Anemia | 1.31 | 1.30 | 1.32 | <0.0001c | 1.33 | 1.30 | 1.35 | <0.0001c |
| Atrial fibrillation | 1.27 | 1.26 | 1.29 | <0.0001c | 1.24 | 1.21 | 1.27 | <0.0001c |
| Peripheral vascular disease | 1.27 | 1.26 | 1.28 | <0.0001c | 1.20 | 1.18 | 1.22 | <0.0001c |
| Liver disease | 1.26 | 1.24 | 1.28 | <0.0001c | 1.37 | 1.32 | 1.41 | <0.0001c |
| Asthma | 1.23 | 1.21 | 1.25 | <0.0001c | 1.33 | 1.29 | 1.37 | <0.0001c |
| Hepatitis | 1.19 | 1.16 | 1.23 | <0.0001c | 1.23 | 1.13 | 1.33 | <0.0001c |
| Stroke | 1.18 | 1.16 | 1.19 | <0.0001c | 1.09 | 1.05 | 1.12 | <0.0001c |
| Hyperlipidemia | 1.17 | 1.16 | 1.18 | <0.0001c | 1.21 | 1.19 | 1.22 | <0.0001c |
| Schizophrenia | 1.16 | 1.14 | 1.18 | <0.0001c | 0.91 | 0.87 | 0.95 | <0.0001c |
| Tobacco | 1.13 | 1.12 | 1.15 | <0.0001c | 1.10 | 1.08 | 1.13 | <0.0001c |
| Depression | 1.12 | 1.11 | 1.13 | <0.0001c | 1.05 | 1.03 | 1.07 | <0.0001c |
| Rheumatoid arthritis/osteoarthritis | 1.06 | 1.06 | 1.07 | <0.0001c | 1.12 | 1.10 | 1.13 | <0.0001c |
| Osteoporosis | 1.04 | 1.03 | 1.06 | <0.0001c | 1.04 | 1.01 | 1.07 | 0.0077c |
| Alzheimer disease/dementia | 1.00 | 0.99 | 1.01 | 0.8695 | 0.76 | 0.74 | 0.79 | <0.0001c |
| HIV/AIDS | 0.94 | 0.89 | 0.99 | 0.0122c | 1.26 | 1.04 | 1.52 | 0.0159c |

aAdjusted for age, sex, and race/ethnicity.

bIncludes acute myocardial infarction, atrial fibrillation, heart failure, hypertension, ischemic heart disease, stroke/transient ischemic attack, and peripheral vascular disease.

cSignificant by chi-square test at *P* <0.05.