1   **Supplementary Table 1:** All-cause mortality stratified by age and gender in NYC from 2015-2018.

	Female	Male		Female	Male
2015					
Total Population	4,468,694	4,081,711	Total population ≥ 65 y/o	667,759	459,256
All-cause mortality	27,646 (0.62%)	26,140 (0.64%)	All-cause mortality ≥65 y/o	22,143 (3.3%)	17,495 (3.8%)
2016					
Total Population	4,462,674	4,074,999	Total population ≥ 65 y/o	682,766	472,309
All-cause mortality	27,365 (0.61%)	26,526 (0.65%)	All-cause mortality ≥65 y/o	21,732 (3.2%)	17,602 (3.7%)
2017					
Total Population	4,509,363	4,113,335	Total population ≥ 65 y/o	728,204	506,817
All-cause mortality	27,280 (0.60%)	26,525 (0.64%)	All-cause mortality ≥65 y/o	21,942 (3.0%)	17,780 (3.5%)
2018					
Total Population	4,392,779	4,005,969	Total population ≥ 65 y/o	733,294	512,799
All-cause mortality	27,713 (0.63%)	26,702 (0.67%)	All-cause mortality ≥65 y/o	22,428 (3.1%)	18,087 (3.5%)

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3   **Supplementary Table 2:** Rates of city-wide COVID-19 cases, hospitalizations and deaths from
4   February 29-June 1, 2020 for men vs women

	Female	Male
Total population of NYC in 2020	4,604,591	4,199,598
COVID cases	98,992 (2.1%)	104,675 (2.5%)
Hospitalizations	23,612 (0.5%)	30,589 (0.7%)
Deaths	7,494 (0.16%)	11,183 (0.27%)

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16 **Supplementary Table 3:** COVID deaths and all-cause deaths for New York State and United States
17 stratified by age and gender.

	New York State (≥18 years old)	New York State (≥65 years old)		United States (≥18 years old)	United States (≥65 years old)
COVID deaths (men: women)	18,616 / 16,681= 1.12	14,340 / 14,318 = 1.00	COVID deaths (men: women)	539,109/ 434,210 = 1.24	384,144/ 340,914 = 1.13
All-cause deaths (men: women)	130,982 / 127,508= 1.02	96,151 / 107,640= 0.89	All-cause deaths (men: women)	3,920,042/ 3,526,332 = 1.11	2,692,587/ 2,819,106 = 0.96

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40 Sensitivity analyses using continuous and categorical variables for age and Charlson score in the
41 stratified regression models found the following (of note, all of these models adjusted for race
42 (non-Hispanic White, non-Hispanic Black, Hispanic and Other) as a categorical variable, diabetes
43 (yes or no) as a categorical variable, hypertension (yes or no) as a categorical variable, asthma
44 (yes or no) as a categorical variable and smoking (no, former and current) as a categorical
45 variable):

46 When age decile and Charlson score as a continuous variable were used in the multivariate
47 models, the point estimates for odds of male death during pre-covid and covid were: 1.35
48 (1.04-1.75) and 2.02 (1.74-2.35). When age as a continuous variable and Charlson score as a
49 continuous variable were used in the multivariate models, the point estimates for odds of male
50 death during pre-covid and covid were: 1.37 (1.06-1.77) and 2.05 (1.77-2.39) respectively.
51 When age decile and Charlson score as a categorical variable (see Table 1 on page 9) were used
52 in the multivariate models, the point estimates for odds of male death during pre-covid and
53 covid were 1.49(1.16-1.93) and 2.07(1.78-2.41) respectively.

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