Supplementary Table 1. Classification of high-risk underlying medical conditions that increase risk for severe illness from COVID-19.

| Medical Condition                          | Description                                                                                                                                 |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| **Cancer**                                 | Active solid organ cancer with or without metastases; active cancer defined as treatment for the cancer or newly diagnosed cancer in the past 6 months                                                      |
|                                            | Active hematologic cancer (such as leukemia/ lymphoma/myeloma) or active cancer defined as treatment for the cancer or newly diagnosed cancer in the past 6 months                             |
| **Chronic kidney disease**                 | Chronic kidney disease without chronic renal replacement therapy                                                                                                                                     |
|                                            | End stage renal disease on chronic renal replacement therapy (including hemodialysis or peritoneal dialysis)                                                                                           |
|                                            | Prior kidney transplant                                                                                                                                                                                |
| **Chronic obstructive pulmonary disease**  |                                                                                                                                                                                                          |
| **Heart disease**                          | Moderately or severely symptomatic heart failure                                                                                                                                                         |
|                                            | Peripheral vascular disease that limits mobility                                                                                                                                                           |
|                                            | Prior myocardial infarction                                                                                                                                                                               |
|                                            | Cardiac arrhythmias including atrial fibrillation and ventricular arrhythmias                                                                                                                               |
|                                            | Valvular heart disease                                                                                                                                                                                    |
| **Immunocompromised from solid organ transplant** |                                                                                                                                                                                                           |
| Condition                | Definition                                                                 |
|--------------------------|----------------------------------------------------------------------------|
| Obesity                  | Calculated body mass index $\geq 30$ kg/m$^2$                              |
| Sickle cell disease      |                                                                           |
| Diabetes mellitus        | Diabetes mellitus with or without end organ damage (type of diabetes mellitus not specified) |
| Pregnancy                | Pregnant at the time of admission                                          |
| Smoking                  | Current smoker or quit <6 months prior to admission                        |
Supplementary Table 2. Outcomes among hospitalized adults testing positive for SARS-COV-2 by Advisory Committee on Immunization Practices (ACIP) criteria for increased risk for severe COVID-19—14 Academic Medical Centers, United States, March-June and October-December 2020.

| Priority group † | No. (%) | Total | March-June | Oct-Dec | p-value‡ |
|------------------|---------|-------|------------|---------|----------|
|                  |         | n=647 | n=434      | n=213   |          |
| Overall          |         |       |            |         |          |
| Any severe outcome± | 273 (44) | 166 (41) | 107 (51) | 0.015   |
| NIV              | 134 (22) | 53 (13)  | 81 (39)  | <.001   |
| IMV              | 138 (22) | 88 (22)  | 50 (24)  | 0.56    |
| Vasopressors     | 119 (19) | 84 (21)  | 35 (17)  | 0.20    |
| Death            | 117 (18) | 77 (18)  | 40 (19)  | 0.75    |
| **Did not meet ACIP criteria for increased risk for severe COVID-19** | | 56/618 (9) | 35/409 (9) | 21/209 (10) | 0.41 |
| Any severe outcome | 13 (24) | 8 (24)  | 5 (25)   | 1.00    |
| NIV              | 5 (9)   | 1 (3)   | 4 (20)   | 0.053   |
| IMV              | 8 (14)  | 6 (17)  | 2 (10)   | 0.70    |
| Vasopressors     | 7 (13)  | 6 (17)  | 1 (5)    | 0.24    |
| Death            | 4 (7)   | 3 (9)   | 1 (5)    | 1.00    |
Met at least one ACIP criteria for increased risk for severe COVID-19

|                       | Met at least one ACIP criteria for increased risk for severe COVID-19 |
|-----------------------|------------------------------------------------------------------------|
|                       | 562/618 (91) | 374/409 (91) | 188/209 (90) | 0.54 |

|                       | Any severe outcome | NIV | IMV | Vasopressors | Death |
|-----------------------|--------------------|-----|-----|--------------|-------|
| ≥75 years             | 252 (47)           | 152 (43) | 100 (54) | **0.021**    |
|                       | 126 (24)           | 51 (15)  | 75 (41)  | <.001        |
|                       | 124 (23)           | 78 (22)  | 46 (25)  | 0.59         |
|                       | 108 (20)           | 75 (22)  | 33 (18)  | 0.27         |
|                       | 111 (20)           | 72 (19)  | 39 (21)  | 0.65         |

| Long-term care facilities | Any severe outcome | NIV | IMV | Vasopressors | Death |
|--------------------------|--------------------|-----|-----|--------------|-------|
| 117/628 (19)            | 60 (55)            | 51 (53) | 9 (75)  | 0.14         |
|                         | 21 (20)            | 14 (15) | 7 (58)  | <.001        |
|                         | 17 (16)            | 14 (15) | 3 (25)  | 0.36         |
|                         | 20 (19)            | 17 (18) | 3 (25)  | 0.55         |
|                         | 32 (27)            | 27 (26) | 5 (42)  | 0.24         |

| ≥75 years               | 140/642 (22)       | 99/429 (23) | 41/213 (19) | 0.27 |
| Any severe outcome      | 82 (60)            | 56 (58) | 26 (63) | 0.58 |
| NIV                     | 33 (25)            | 16 (18) | 17 (41) | **0.003** |
| IMV                     | 28 (21)            | 18 (19) | 10 (24) | 0.51 |
| Vasopressors            | 27 (20)            | 20 (22) | 7 (17)  | 0.54 |
| Death                   | 49 (35)            | 33 (33) | 16 (39) | 0.52 |

| 65-74 years             | 147/642 (23)       | 89/429 (21) | 58/213 (27) | 0.07 |
| Any severe outcome      | 69 (49)            | 34 (40) | 35 (63) | **0.011** |
NIV  36 (27)   11 (14)   25 (45)  <.001
IMV  39 (28)   22 (27)   17 (31)  0.60
Vasopressors  34 (24)  20 (24)   14 (25)  0.93
Death  33 (22)   17 (19)   16 (28)  0.23

**High-risk conditions** 501/600 (84)  332/394 (84)  169/206 (82)  0.49
Any severe outcome  227 (47)   138 (44)   89 (53)  0.058
NMV  114 (24)   45 (15)   69 (41)  <.001
IMV  114 (24)   71 (23)   43 (26)  0.50
Vasopressors  96 (20)   66 (22)   30 (18)  0.35
Death  93 (19)   60 (18)   33 (19)  0.71

Abbreviations: NIV = non-invasive ventilation; IMV = invasive mechanical ventilation.

† Some severity subgroups were missing data (from 4% to 6%): any severe outcome (March-June: 26, October-December: 3), non-invasive ventilation (March-June: 34, October-December: 4), invasive mechanical ventilation (March-June: 29, October-December: 3), and vasopressors (March-June: 32, October-December: 2). Denominators used to calculate proportions of respondents with select outcomes in the specified group excluded patients who had missing data.

‡ Chi-squared or Fisher’s exact test were used for statistical testing of categorical variables.

± Any severe outcome was defined as: non-invasive ventilation, invasive mechanical ventilation, vasopressor support, dialysis/renal replacement therapy, extracorporeal membrane oxygenation, stroke, venous thromboembolic event, or death.

** ACIP criteria for increased risk for severe COVID-19 includes long-term care facility residents, persons aged ≥65 years, and persons aged 16-64 years with high-risk medical
conditions associated with increased risk for severe COVID-19 defined by CDC (cancer; chronic kidney disease; chronic obstructive pulmonary disease; heart conditions [e.g., heart failure, coronary artery disease, or cardiomyopathies]; immunocompromised state from solid organ transplant; obesity; sickle cell disease; smoking; diabetes mellitus; and pregnancy) [1].
Supplementary Table 3. Distribution of patients by site and by time period.

| Site                                         | No. (%) | Total   | March-June | Oct-Dec |
|----------------------------------------------|---------|---------|------------|---------|
| Baystate Medical Center                       | 48 (7)  | 16 (4)  | 31 (15)    |         |
| Beth Israel Deaconess Medical Center         | 74 (11) | 74 (17) | 0 (0)      |         |
| UCHealth University of Colorado              | 41 (6)  | 19 (4)  | 22 (10)    |         |
| Hospital                                     |         |         |            |         |
| Hennepin County Medical Center               | 51 (8)  | 40 (9)  | 10 (5)     |         |
| Intermountain Medical Center                 | 20 (3)  | 20 (5)  | 0 (0)      |         |
| Montefiore Medical Center                    | 118 (18)| 113 (26)| 5 (2)      |         |
| Oregon Health & Sciences University          | 18 (3)  | 9 (2)   | 10 (5)     |         |
| The Ohio State University                    | 34 (5)  | 28 (6)  | 5 (2)      |         |
| Wake Forest University                       | 50 (8)  | 15 (3)  | 35 (16)    |         |
| Vanderbilt University Medical Center         | 109 (17)| 20 (5)  | 93 (44)    |         |
| Johns Hopkins University                     | 18 (3)  | 16 (4)  | 2 (1)      |         |
| Stanford University                          | 7 (1)   | 7 (2)   | 0 (0)      |         |
| University of California Los Angeles         | 32 (5)  | 31 (7)  | 0 (0)      |         |
| University of Washington                     | 27 (4)  | 26 (6)  | 0 (0)      |         |