**Supplemental Table 3.** Variables Associated with Increasing Inpatient Length of Staya

|  | **No AKI** | **AKIb** | **AKI-D** |
| --- | --- | --- | --- |
| Variable | Adjusted % change in cost (95% CI)c |
| Age (per year) | 0.26 (0.23, 0.29) | -0.21 (-0.23, -0.18) | -0.42 (-0.51, -0.32) |
| Sex |  |  |  |
|  Male | Referent | Referent | Referent |
|  Female | -7.1 (-7.6, -6.5) | 2.1 (1.6, 2.6) | 1.8 (-0.4, 4.1) |
| Hospital teaching status |  |  |  |
|  Rural | Referent  | Referent | Referent |
|  Urban nonteaching | 4.8 (3.0, 6.7) | 13.5 (11.5, 15.6) | 14.8 (8.4, 21.1) |
|  Urban teaching  | 14.7 (12.9, 16.5) | 25.6 (23.4, 27.8) | 30.7 (24.2, 37.3) |
| Hospital region  |  |  |  |
|  Northeast | Referent  | Referent | Referent  |
|  West | -8.8 (-10.7, -6.8) | -7.3 (-9.3, -5.4) | -6.6 (-11.1, -2.1) |
|  Midwest | -12.0 (-14.2, -9.9) | -14.9 (-16.8, -13.0) | -16.0 (-20.6, -11.4) |
|  South | -13.7 (-16.0, -11.3) | -14.6 (-17.0, -12.3) | -10.6 (-15.6, -5.6) |
| Hospital bed number |  |  |  |
|  Small | Referent  | Referent  | Referent  |
|  Medium | -0.7 (-3.5, 2.1) | 6.4 (4.7, 8.3) | 4.5 (-0.9, 9.9) |
|  Large | 7.0 (4.3, 9.7) | 16.0 (14.1, 17.9) | 12.9 (7.6, 18.1) |
| Acute medical conditions  |  |  |  |
|  Myocardial infarction | 4.4 (3.4, 5.4) | -2.8 (-3.8, -1.8) | -8.4 (-12.7, -4.1) |
|  Stroke | 7.6 (6.5, 8.7) | 23.3 (21.7, 24.8) | 23.3 (16.6, 30.0) |
|  Venous thromboembolic disease | 39.1 (38.1, 40.0) | 43.9 (42.7, 45.1) | 36.0 (31.8, 40.2) |
|  Gastrointestinal bleed | -1.7 (-2.6, -0.9) | 7.1 (5.8, 8.4) | 14.6 (10.3, 18.8) |
|  Acute pancreatitis  | 20.4 (19.4, 21.4) | 27.1 (25.3, 28.9) | 20.4 (14.8, 26.0) |
|  Sepsis | 42.7 (41.8, 43.7) | 32.5 (31.7, 33.2) | 21.5 (18.8, 24.1) |
|  Pneumonia | 23.6 (22.9, 24.3) | 23.0 (22.2, 23.8) | 28.4 (25.8, 31.1) |
| Chronic comorbidities  |  |  |  |
|  Cancer | 19.4 (18.4, 20.4) | 17.7 (16.7, 18.6) | 9.1 (5.6, 12.6) |
|  Chronic kidney disease | -0.1 (-0.7, 0.5) | 5.6 (5.0, 6.1) | 2.0 (-0.6, 4.6) |
|  Congestive heart failure | 8.8 (8.3, 9.3) | 14.3 (13.7, 14.9) | 9.2 (6.7, 11.6) |
|  Dementia | 24.6 (23.2, 26.0) | 7.1 (6.1, 8.1) | 3.8 (-2.1, 9.7) |
|  Diabetes | 5.1 (4.8, 5.5) | -1.6 (-2.1, -1.0) | -3.1 (-5.4, -0.8) |
|  Human immunodeficiency virus | 31.6 (28.2, 35.0) | 14.1 10.7, 17.6) | -2.3 (-11.8, 7.2) |
|  Hypertension | 1.5 (0.8, 2.2) | -6.0 (-6.7, -5.2) | -8.6 (-11.4, -5.8) |
|  Chronic obstructive pulmonary disease | 7.3 (6.8, 7.9) | 1.4 (0.8, 2.1) | -3.4 (-6.1, -0.7) |
|  Peripheral vascular disease | 4.9 (4.3, 5.6) | 4.9 (4.0, 5.8) | -0.6 (-4.2, 2.9) |
| Hospital procedures  |  |  |  |
|  Intravenous contrast  | 10.9 (9.3, 12.5) | 10.6 (8.3, 13.0) | 6.3 (-1.4, 14.0) |
|  Blood product transfusion | 33.4 (32.5, 34.4) | 35.9 (35.1, 36.8) | 16.5 (14.0, 19.1) |
|  Mechanical ventilation | 65.2 (64.0, 66.3) | 46.8 (45.7, 47.9) | 12.3 (9.5, 15.2) |
|  Non-invasive ventilation  | 18.8 (17.2, 20.5) | 16.2 (14.8, 17.6) | 8.8 (5.1, 12.4) |
|  Cardiopulmonary resuscitation  | -33.9 (-37.1, -30.8) | -34.9 (-37.7, -32.1) | -31.1 (-37.3, -24.9) |
|  Left ventricular assist device | 89.6 (79.7, 99.5) | 65.9 (57.1, 74.9) | 30.2 (14.0, 46.3) |
|  Extracorporeal membrane oxygenation  | 57.4 (29.9, 84.8) | 44.4 (29.9, 58.9) | -0.4 (-17.2, 16.4) |
|  Echocardiogram | 8.8 (7.4, 10.2) | 15.1 (13.3, 17.0) | 9.8 (5.2, 14.4) |
|  Coronary angiogram | -21.8 (-23.9, -19.7) | 13.0 (10.3, 15.8) | 17.7 (8.2, 27.2) |
|  Percutaneous transluminal coronary angioplasty  | -27.7 (-29.4, -26.0) | -8.9 (-11.2, -6.6) | -11.7 (-21.6, -1.8) |
|  Cardiopulmonary bypass | 23.9 (21.2, 26.5) | 23.5 (18.6, 28.5) | 15.8 (6.7, 24.9) |
|  Coronary artery bypass grafting  | 41.5 (38.8, 44.2) | 24.7 (20.0, 29.5) | 12.0 (3.7, 20.4) |
|  Heart valve surgery  | 23.7 (21.0, 26.4) | 25.8 (21.8, 29.7) | 11.3 (2.3, 20.2) |
|  Abdominal aortic aneurysm repair | -29.4 (-33.4, -25.5) | 24.6 (19.4, 29.8) | 6.4 (-6.0, 18.8) |
|  Carotid endarterectomy  | -49.9 (-52.2, -47.7) | 29.8 (23.9, 35.6) | 21.4 (4.2, 38.6) |
|  Peripheral vascular surgery | 13.1 (11.1, 15.1) | 46.2 (43.1, 49.3) | 17.6 (4.8, 30.3) |

aUnless otherwise indicated, all comparisons are stratified by column and the reference group for each comparison is patients without the covariate of interest. For example, length of stay increased by 42.7% in patients with sepsis compared to patients without sepsis. Length of stay also increased by 32.5% in patients with AKI and sepsis compared to patients who experienced AKI without sepsis. Even though these relative increases differ, the absolute length of stay increase is greater in the AKI with sepsis group because the AKI referent group has a higher baseline length of stay than the No AKI referent group.

bThe AKI group includes patients with AKI-D.

cAll length of stay estimates are adjusted for the demographic factors, hospital differences, comorbidities, and procedures listed in this supplementary table.

NOTE: Abbreviations: AKI, acute kidney injury; AKI-D, acute kidney injury requiring dialysis. CI, confidence interval.