

Risk Model Tables

Table1a: CLABSI Acute Care Hospitals (ACH): ICU

| Parameter (Variable Name) | Parameter Level | Description | Parameter Estimate | P-Value |
|------------------------------|-----------------|---|--------------------|---------|
| Intercept | | | -8.8456 | <.0001 |
| Location Groups (LOCCDC_grp) | CC_Group1 | Inpatient locations in any of the following: Medical Cardiac Critical Care Pediatric Medical-Surgical Critical Care Trauma Critical Care Pediatric Trauma Critical Care | 1.0072 | <.0001 |
| | CC_Group2 | Inpatient locations in any of the following: Surgical Cardiothoracic Critical Care | 0.4236 | <.0001 |
| | CC_Group3 | Inpatient locations in any of the following: Burn Critical Care Pediatric Burn Critical Care Pediatric Surgical Cardiothoracic Critical Care Medical Critical Care Pediatric Medical Critical Care Onsite Overflow Ward Prenatal Critical Care Respiratory Critical Care Pediatric Respiratory Critical Care | 1.1416 | <.0001 |
| | CC_Group4 | Inpatient locations in any of the following: Medical-Surgical Critical Care Neurologic Critical Care Neurosurgical Critical Care Surgical Critical Care Pediatric Surgical Critical Care | 0.9184 | <.0001 |
| | MIXED | Inpatient locations in any of the following: Mixed Age Mixed Acuity Unit Adult Mixed Acuity Unit Pediatric Mixed Acuity Unit | 0.6581 | <.0001 |
| | STEP | Inpatient locations in any of the following: Adult Step-Down Unit Special Care Nursery (Level II) Pediatric Step-Down Unit | 0.6617 | <.0001 |
| | WARD_Group1 | Inpatient locations in any of the following: Gerontology Ward Medical Ward Onsite Overflow Ward Pediatric Surgical Ward | 0.5714 | <.0001 |
| | WARD_Group3 | Inpatient locations in any of the following: Ear, Nose, Throat Ward Gastrointestinal Ward Genitourinary Ward Pediatric Genitourinary Ward Jail Unit Pediatric Medical-Surgical Ward Pediatric Medical Ward Pulmonary Ward Orthopedic Trauma Ward | 0.7840 | <.0001 |
| | WARD_Group4 | Inpatient locations in any of the following: Antenatal Care Ward Burn Ward Pediatric Burn Ward Gynecology Ward Medical-Surgical Ward Neurology Ward Neurosurgical Ward Plastic Surgery Ward Surgical Ward | 0.4028 | <.0001 |

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|---|------------------|--|--------|--------|
| | | Telemetry Ward Vascular Surgery Ward | | |
| | WARD_Group2 | Inpatient locations in any of the following: Behavioral Health/Psych Ward Pediatric Behavioral Health Ward Labor and Delivery Ward Labor, Delivery, Recovery, Postpartum Suite Pediatric Neurosurgical Ward Well Newborn-- Nursery (Level I) Pediatric Neurology Ward Orthopedic Ward Pediatric Orthopedic Ward Postpartum Ward Rehabilitation Ward Pediatric Rehabilitation Ward Stroke (Acute) Ward | REF | . |
| Medical Type Groups (medType2_grp) | G/M | Hospital Medical Affiliation Type in any Major Medical Graduate Teaching | 0.0989 | <.0001 |
| | U/N | Hospital Medical Affiliation Type in any Undergraduate Teaching Non-Teaching | REF | . |
| Facility Type Groups (facType_grp) | OTHER | Facility Type in Any Children's General Military VA Women/Children | 0.7286 | 0.0010 |
| | ORTHO/SURG/WOM | Facility Type in Any Orthopedic Surgery Women | REF | . |
| Average Length of Stay in Days (avgLOS_grp) | 4.8<=avgLOS<5.7 | Average LOS 4.8-<5.7 | 0.0946 | <.0001 |
| | avgLOS>=5.7 | Average LOS ≥5.7 | 0.2042 | <.0001 |
| | 1<=avgLOS<4.8 | Average LOS 1-<4.8 | REF | . |
| Number of Hospital Beds Groupings (numBeds_grp) | 138<=numBeds<425 | Number of Beds 138 - <425 | 0.0784 | 0.0151 |
| | numBeds>=425 | Number of Beds ≥425 | 0.1628 | <.0001 |
| | 1<=numBeds<138 | Number of Beds <138 | REF | . |
| Proportion of ICU Beds Group (propICU_grp) | propICU>=0.189 | Proportion of ICU Beds ≥ 0.189 | 0.0747 | 0.0001 |
| | 0<=propICU<0.189 | Proportion of ICU Beds < 0.189 | REF | . |

Table1b: CLABSI Acute Care Hospitals (ACH): NICU

| Parameter | Parameter Estimate | Standard Error | P-value |
|--|-------------------------------|---------------------------|----------------|
| <i>Intercept</i> | -7.7658 | 0.0887 | <.0001 |
| Birthweight A: ≤750 grams | 1.3132 | 0.0836 | <.0001 |
| Birthweight B: 751-1000 grams | 0.8392 | 0.0958 | <.0001 |
| Birthweight C: 1001-1500 grams | 0.2747 | 0.1038 | 0.0081 |
| Birthweight D and E: 1501-2500 grams and >2500 grams | REFERENT | - | - |
| Number of ICU beds ¹ : <56 | 0.3514 | 0.0936 | 0.0002 |
| Number of ICU beds ¹ : ≥56 | REFERENT | - | - |
| Average length of stay ² : ≥4.9 days | 0.1957 | 0.0760 | 0.0100 |
| Average length of stay ² : 1-4.8 days | REFERENT | - | - |

¹ Number of ICU beds is reported on the [Annual Hospital Survey](#).

² Average length of stay is calculated as # annual patient days / # annual admissions, as reported on the [Annual Hospital Survey](#).

Table1c: CLABSI Acute Care Hospitals (ACH): SCA

| Parameter | Parameter Estimate | Standard Error | P-value |
|---|--------------------|----------------|---------|
| <i>Intercept</i> | -8.2924 | 0.1929 | <.0001 |
| <u>CDC Location Code: Critical Care Wards</u> <i>Oncology Medical Critical Care- IN:ACUTE:CC:ONC_M</i> <i>Oncology Medical-Surgical Critical Care- IN:ACUTE:CC:ONC_MS</i> <i>Oncology Pediatric Critical Care- IN:ACUTE:CC:ONC_PED</i> <i>Oncology Surgical Critical Care- IN:ACUTE:CC:ONC_S</i> | 0.5247 | 0.2233 | 0.0188 |
| <u>CDC Location Code: Mixed/SCA/Step Wards</u> <i>Dialysis Specialty Care Area- IN:ACUTE:SCA:DIAL</i> <i>Oncology Mixed Acuity Unit (all ages)- IN:ACUTE:MIXED:ONC</i> <i>Oncology Step Down Unit- IN:ACUTE:STEP:ONC</i> <i>Pediatric Solid Organ Transplant Specialty Care Area- IN:ACUTE:SCA:SOTP_PED</i> <i>Solid Organ Transplant Specialty Care Area- IN:ACUTE:SCA:SOTP</i> | 0.3969 | 0.1739 | 0.0225 |
| <u>CDC Location Code: Hematology-Oncology Wards</u> <i>General Hematology-Oncology Ward- IN:ACUTE:WARD:ONC_HONC</i> <i>Pediatric General Hematology-Oncology Ward- IN:ACUTE:WARD:ONC_HONC_PED</i> | 0.5186 | 0.1521 | 0.0006 |
| <u>CDC Location Code: Hematopoietic Wards</u> <i>Oncology Hematopoietic Stem Cell Transplant Ward- IN:ACUTE:WARD: ONC_HSCT</i> <i>Oncology Pediatric Hematopoietic Stem Cell Transplant Ward- IN:ACUTE:WARD: ONC_HSCT_PED</i> | 0.8711 | 0.1575 | <.0001 |
| <u>CDC Location Code: Leukemia Wards</u> <i>Oncology Leukemia Ward- IN:ACUTE:WARD: ONC_LEUK</i> <i>Oncology Leukemia/Lymphoma Ward- IN:ACUTE:WARD: ONC_LL</i> | 0.7364 | 0.1762 | <.0001 |

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|---|----------|--------|--------|
| <i>Oncology Lymphoma – IN:ACUTE:WARD:ONC_LYMPH</i> | | | |
| <u>CDC Location Code: Solid Tumor Ward</u> | REFERENT | - | - |
| <i>Oncology Solid Tumor Ward- IN:ACUTE:WARD:ONC_ST</i> | | | |
| Number of ICU beds ¹ : <35 beds | 0.2868 | 0.0734 | <.0001 |
| Number of ICU beds ¹ : ≥146 beds | 0.1411 | 0.0565 | 0.0124 |
| Number of ICU beds ¹ : 35-145 beds | REFERENT | - | - |
| Central line type: Temporary | 0.3001 | 0.0499 | <.0001 |
| Central line type: Permanent | REFERENT | - | - |
| Average length of stay ² : ≥4.4 days | 0.2831 | 0.0976 | 0.0037 |
| Average length of stay ² : 1-4.3 days | REFERENT | - | - |
| Medical school affiliation ¹ : Major | 0.2859 | 0.0713 | <.0001 |
| Medical school affiliation ¹ : Graduate/undergraduate/non-teaching | REFERENT | - | - |

Table2: CLABSI Critical Access Hospitals (CAH)

| Parameter (Variable Name) | Parameter Level | Description | Parameter Estimate | P-Value |
|---|--------------------------|---|--------------------|---------|
| Intercept | | | -9.0295 | <.0001 |
| Location and LOS Groupings (Location_LOS) | CC | Location in any Critical Care | 1.5980 | <0.001 |
| | non-CC & LOS>=8.9 DAYS | Location in any NON Critical Care (i.e., Ward, Step-Down, Other) <u>AND</u> Average Length of Stay >=8.9 days | 1.0270 | 0.0155 |
| | non-CC & 1<=LOS<8.9 DAYS | Location in any NON Critical Care (i.e., Ward, Step-Down, Other) <u>AND</u> Average Length of Stay 1<= to <8.9 days | Ref | Ref |

Table3: CLABSI Long-Term Acute Care (LTAC)

| Parameter (Variable Name) | Parameter Level | Description | Parameter Estimate | P-Value |
|---|-----------------|---|--------------------|---------|
| Intercept | | | -8.8145 | <0.001 |
| Proportion of Admissions with HemoDialysis (pHemo_decilegp) | 0<=pHEMO<0.078 | Proportion of Hemo Dialysis Admissions <0.078 | Ref | Ref |
| | pHEMO >=0.078 | Proportion of Ortho Admissions >=0.078 | 0.5353 | <0.001 |
| Proportion of admissions on a ventilator (pVent_quartilegp) | 0<=pVent<0.145 | Proportion of Ventilator admissions <0.145 | Ref | Ref |
| | pVent>=0.145 | Proportion of Ventilator admissions >=0.145 | 0.5795 | <0.001 |
| Length of Stay Groupings (los_decilegp) | 27.6<=LOS<31.7 | Average LOS 27.6 - < 31.7 | 0.4178 | 0.009 |
| | LOS >=31.7 | Average LOS >= 31.7 | 0.7592 | <0.001 |
| | 1<=LOS<27.6 | Average LOS 1 - < 27.6 | Ref | Ref |
| LocationGroups (locationtype) | CC_LTAC | Any Location in Critical Care | 0.7032 | <0.001 |
| | WARD_LTAC | Any Location in Ward | Ref | Ref |
| LTAC SETTING | 1 | Higher Risk Setting: Compliment of Below | 0.4166 | 0.018 |

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|--|---|--|-----|-----|
| | 0 | Lowest Risk Setting: Located near an acute care hospital and provides acute care services OR Free -standing LTAC which shares with units other and SNF | Ref | Ref |
|--|---|--|-----|-----|