**Supplemental Table 1. Multivariable Models Assessing Effect of Decolonization on MRSA Infection Stratified by USA300 Criteria**

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| **Variable** | **Full Trial Population7a** | **USA300 2-Criteria Definition****MLST 8, SCC*mec* type IV** | **USA300 3-Criteria Definition****MLST 8, SCC*mec* type IV,*****spa* t008** |
| **N=2021** | **N=420** | **N=321** |
| **HR (95% CI)** | **P-Value** | **HR (95% CI)** | **P-Value** | **HR (95% CI)** | **P-Value** |
| **Per-protocol Analysis** |
| Decolonization Trial Arm | 0.61 (0.44, 0.85) | **0.004** | 0.59 (0.32, 1.09) | 0.09 | 0.82 (0.42, 1.59) | 0.55 |
| Receipt of an Antibiotic that is Active Against MRSA b,c | 0.96 (0.94, 0.99) | **0.001** | 0.96 (0.92, 1.00) | **0.04** | 0.96 (0.92, 1.01) | 0.14 |
| Female | 1.25 (0.90, 1.74) | 0.19 | 1.11 (0.6, 2.07) | 0.73 | 0.94 (0.46, 1.92) | 0.86 |
| Primary Insurance |  |  |  |  |  |  |
|  Medicaid vs Commercial | 1.00 (0.67, 1.51) | 0.98 | 1.7 (0.76, 3.78) | 0.20 | 2.12 (0.82, 5.49) | 0.12 |
|  Medicare vs Commercial | 0.89 (0.51, 1.56) | 0.68 | 1.84 (0.60, 5.65) | 0.29 | 2.99 (0.81, 10.96) | 0.10 |
|  Other vs Commercial  | 0.77 (0.44, 1.33) | 0.34 | 1.75 (0.64, 4.75) | 0.27 | 2.54 (0.84, 7.68) | 0.10 |
| Diabetes | 1.62 (1.14, 2.29) | **0.01** | 1.45 (0.79, 2.67) | 0.23 | 1.63 (0.82, 3.26) | 0.17 |
| Renal Disease/Dialysis | 1.34 (0.88, 2.05) | 0.18 | 1.54 (0.67, 3.55) | 0.31 | 1.62 (0.62, 4.28) | 0.33 |
| Liver Disease | 2.43 (1.52, 3.88) | **<0.001** | 2.01 (0.79, 5.12) | 0.15 | 1.40 (0.47, 4.19) | 0.55 |
| Cancer | 1.42 (0.92, 2.20) | 0.11 | 1.45 (0.65, 3.22) | 0.36 | 0.86 (0.29, 2.51) | 0.78 |
| Cerebrovascular Disease | 0.30 (0.14, 0.64) | **0.002** | 0.66 (0.20, 2.20) | 0.50 | 0.21 (0.03, 1.60) | 0.13 |
| Hospitalized Previous Year d | 1.79 (1.23, 2.62) | **0.003** | 1.45 (0.75, 2.79) | 0.27 | 1.57 (0.75, 3.28) | 0.23 |
| Nursing Home Previous Year d | - | - | 1.06 (0.45, 2.50) | 0.89 | 1.15 (0.44, 3.02) | 0.77 |
| Device at Discharge d | 0.87 (0.6, 1.25) | 0.44 | 1.5 (0.77, 2.92) | 0.23 | 1.24 (0.58, 2.64) | 0.58 |
| **As-treated Analysis e** |
| Decolonization Adherence b |  |  |  |  |  |  |
|  Fully Adherent vs Education  | 0.72 (0.57, 0.92) | **0.01** | 0.51 (0.25, 1.04) | 0.06 | 0.75 (0.35, 1.61) | 0.45 |
|  Partially Adherent vs Education | 0.75 (0.59, 0.95) | **0.02** | 0.79 (0.29, 2.11) | 0.64 | 0.90 (0.33, 2.48) | 0.83 |
|  Nonadherent vs Education | 0.78 (0.36, 1.71) | 0.54 | 1.33 (0.16, 11.23) | 0.79 | 2.21 (0.26, 19.05) | 0.47 |
| Receipt of an Antibiotic that is Active Against MRSA b, c | - | - | 0.96 (0.92, 1.00) | **0.04** | 0.96 (0.92, 1.01) | 0.13 |
| Female | 1.24 (0.89, 1.73) | 0.20 | 1.15 (0.61, 2.14) | 0.67 | 0.96 (0.47, 1.96) | 0.90 |
| Primary Insurance |  |  |  |  |  |  |
|  Medicaid vs Commercial | 0.95 (0.63, 1.43) | 0.80 | 1.67 (0.74, 3.75) | 0.21 | 2.06 (0.79, 5.37) | 0.14 |
|  Medicare vs Commercial | 0.8 (0.46, 1.4) | 0.43 | 1.89 (0.61, 5.80) | 0.27 | 2.99 (0.82, 10.97) | 0.10 |
|  Other vs Commercial  | 0.79 (0.45, 1.37) | 0.39 | 1.68 (0.61, 4.58) | 0.31 | 2.42 (0.79, 7.40) | 0.12 |
| Diabetes | 1.5 (1.06, 2.11) | **0.02** | 1.43 (0.78, 2.64) | 0.25 | 1.61 (0.80, 3.22) | 0.18 |
| Renal Disease/Dialysis | 1.22 (0.79, 1.88) | 0.38 | 1.49 (0.64, 3.48) | 0.36 | 1.54 (0.58, 4.10) | 0.39 |
| Liver Disease | 2.22 (1.4, 3.53) | **<0.001** | 2.16 (0.84, 5.57) | 0.11 | 1.52 (0.49, 4.66) | 0.47 |
| Cancer | - | - | 1.46 (0.66, 3.25) | 0.36 | 0.80 (0.27, 2.38) | 0.69 |
| Cerebrovascular Disease | - | - | 0.66 (0.20, 2.21) | 0.5 | 0.21 (0.03, 1.58) | 0.13 |
| Hospitalized Previous Year d | 1.79 (1.23, 2.62) | **0.003** | 1.43 (0.74, 2.76) | 0.29 | 1.55 (0.74, 3.25) | 0.25 |
| Nursing Home Previous Year d | - | - | 1.02 (0.43, 2.41) | 0.97 | 1.16 (0.44, 3.05) | 0.76 |
| Device at Discharge d | 1.01 (0.71, 1.44) | 0.94 | 1.54 (0.79, 3.01) | 0.21 | 1.27 (0.59, 2.71) | 0.54 |

**Bold font indicates statistical significance at P <0.05**

**a** This model also adjusts for randomization strata, bathing frequency, and the need for bathing assistance. Differences with the full population and the subpopulation models are based upon what the subpopulation models could adjust for with much smaller numbers.

**b** Receipt of anti-MRSA antibiotics and adherence to the intervention were assessed as time-varying covariates;

**c** This variable indicates whether the patient received an antibiotic that is active against MRSA (e.g. vancomycin, trimethoprim-sulfamethoxazole) for any reason

**d** Relative to enrollment hospitalization

**e**Models were adjusted according to the as-treated adherence strata (fully adherent, partially adherent, and nonadherent participant-time) during at-risk periods before each study visit