

Supplemental Table 1. Facility Characteristics

	Facility 1	Facility 2	Facility 3	Facility 4	Facility 5	Facility 6
Number of beds	74	143	103	72	133	102
Ownership	For-Profit	For-Profit	For-Profit	For-Profit	For-Profit	For-Profit
Star rating (Nursing Home Compare, 2013)	5	2	4	4	4	3
Number of patients eligible	260	195	356	290	132	151
No. (%) enrolled	132 (50.8)	82 (42.1)	169 (47.5)	137 (47.2)	54 (40.9)	76 (50.3)
No. (%) male	60 (45.5)	31 (37.8)	68 (40.2)	47 (34.3)	29 (53.7)	39 (51.3)
No. (%) admitted following acute care hospital stay	127 (96.2)	77 (93.9)	161 (95.3)	129 (94.2)	54 (100.0)	69 (90.8)
Mean (SD) days follow-up per patient	20.3 (39.0)	42.7 (56.3)	26.0 (40.5)	25.9 (36.7)	30.0 (35.6)	39.0 (56.9)

Supplemental Table 2. Predictors of MDRO colonization among patients enrolled within 3 days of admission (N=175)

Characteristic	Patient Colonization ^a				
	No Colonization [n=277]	No Hand Colonization, Other Body Site(s) Colonized [n=204]		Hands Colonized [n=164] (%)	
	n (%)	n (%)	Multivariate RRR (95% CI)	n (%)	Multivariate RRR (95% CI)
Age, mean (SD)	72.9 (12.7)	75.9 (9.2)*	1.02 (1.00-1.05)**	74.9 (10.2)	1.02 (0.99-1.05)
Male	31 (39.2)	24 (42.9)	1.23 (0.66-2.31)	26 (65.0)*	3.28 (2.15-5.00)**
Charlson Comorbidity Score, mean(SD)	2.5 (2.2)	2.6 (2.1)	NA	3.1 (2.2)	NA
Cognitive Sum Score, mean(SD) ^{b,d}	13.9 (2.1)	14.1 (1.7)	1.11 (0.87-1.42)	12.8 (3.7)*	0.97 (0.91-1.04)
Physical Self Maintenance Score, mean (SD) ^c	12.4 (3.4)	13.3 (4.1)	1.03 (0.95-1.12)	15.0 (4.5)*	1.19 (1.12-1.27)**
Feeding Disability	1 (1.3)	4 (7.1)	NA	0 (0)	NA
Bathing Disability	29 (36.7)	25 (44.6)	1.23 (0.60-2.53)	21 (52.5)*	1.80 (0.81-3.99)
Ambulation Disability	41 (51.9)	29 (51.8)	0.95 (0.54-1.69)	30 (75.0)*	3.38 (2.38-4.80)**
Toileting Disability	10 (12.7)	12 (21.4)*	1.23 (0.59-2.58)	16 (40.0)*	4.29 (2.01-9.15)**
Dressing Disability	40 (50.6)	31 (55.4)	1.05 (0.67-1.64)	27 (67.5)*	1.99 (1.60-2.47)**
Grooming Disability	12 (15.2)	7 (12.5)	0.60 (0.31-1.15)	12 (30.0)*	1.73 (0.71-4.25)
Urinary Catheter	3 (3.8)	6 (10.7)	2.16 (0.41-11.49)	6 (15.0)*	1.32 (0.22-7.83)
Feeding Tube	1 (1.3)	2 (3.6)	NA	0 (0)	NA
Peripherally-inserted central venous catheter	10 (12.7)	8 (14.3)	1.03 (0.17-6.21)	6 (15.0)*	1.39 (0.28-6.98)
Antibiotic Use in previous 30 days ^d	43 (56.6)	38 (69.1)	1.79 (0.83-3.86)	28 (71.8)*	2.00 (1.33-3.00)**
Diabetes	35 (44.3)	25 (44.6)	NA	23 (57.5)	NA
Dementia ^d	6 (7.6)	5 (8.9)	NA	7 (17.5)	NA
Prolonged Hospital Stay (>2 weeks)	4 (5.1)	3 (5.4)	0.98 (0.17-5.69)	5 (12.5)*	2.95 (0.72-12.07)

^a N=175

^b Possible Cognitive Sum Score range, 0 to 15, higher scores indicating higher cognitive function.

^c Possible Physical Self Maintenance Score range, 6 to 30, higher scores indicating more functional disability.

^d These variables had missing data. The totals for each are: cognitive sum score, n=166; antibiotic use, n=170. For multivariate analyses, missing values were assigned as the population average (cognitive score) or zero (antibiotic use), and missing controls were added.

* These variables were significant at $P < .05$ in clustered univariate analysis and included in the adjusted model. Disability variables are collinear; adjusted RRRs for these do not include other disability variables.

** These variables were significant at $P < .05$ in clustered multivariate analysis.

Supplemental Table 3. Fluidity of colonization among patients with ≥ 60 days of follow-up (N=93)

	MRSA	VRE	RGNB
Patients with hand colonization, N(%)	30 (32.3)	37 (39.8)	26 (28.0)
Patients with pre-existing hand colonization, n(%)	10 (33.3)	22 (59.5)	6 (23.1)
Persistent ^a , n(%)	4 (40.0)	5 (22.7)	0 (0)
Intermittent ^b , n(%)	6 (60.0)	17 (77.3)	6 (100)
Patients with acquired hand colonization, n(%)	20 (66.7)	15 (40.5)	20 (76.9)
Persistent ^a , n(%)	8 (40.0)	5 (33.3)	3 (15.0)
Intermittent ^b , n(%)	12 (60.0)	10 (66.7)	17 (85.0)

^a Colonization was considered persistent if one or less negative hand swabs between positive swabs.

^b Colonization was considered intermittent if positive swabs were separated by at least two negative samples.