

## Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1. Potential Risk Factors for Household Contamination with MRSA**

Factor <sup>a</sup>	Proportion of Environmental Surfaces Per Household Contaminated with MRSA <sup>b</sup> , mean ± SD	Mean Difference (95% CI)
Race <sup>c</sup>		
African-American and multiracial <sup>d</sup> (N=18)	0.09 ± 0.11	0.01 (-0.06, 0.09)
Caucasian (N=32)	0.07 ± 0.14	1 [Reference]
Health insurance status		
Medicaid (N=20)	0.09 ± 0.12	0.01 (-0.06, 0.09)
Private or Tricare (N=30)	0.07 ± 0.14	1 [Reference]
Type of home		
Apartment/townhome/condominium (N=11)	0.12 ± 0.20	0.05 (-0.04, 0.14)
House (N=39)	0.07 ± 0.11	1 [Reference]
Home ownership status		
Rents (N=18)	0.14 ± 0.18	0.09 (-0.001, 0.19)
Owns (N=32)	0.05 ± 0.08	1 [Reference]
Urban/rural status <sup>e</sup>		
Urbanized area (N=42)	0.09 ± 0.14	0.09 (-0.08, 0.25)
Urban cluster (N=5)	0.08 ± 0.12	0.08 (-0.07, 0.23)
Rural (N=3)	0 ± 0	1 [Reference]
Household member within age group, years <sup>f</sup>		
≤3 (N=35)	0.08 ± 0.14 vs. 0.07 ± 0.11 <sup>g</sup>	0.01 (-0.07, 0.09)
4-10 (N=28)	0.08 ± 0.11 vs. 0.07 ± 0.16	0.01 (-0.07, 0.09)
11-17 (N=17)	0.06 ± 0.11 vs. 0.09 ± 0.14	-0.03 (-0.11, 0.05)
18-34 (N=33)	0.09 ± 0.15 vs. 0.05 ± 0.09	0.04 (-0.02, 0.11)
≥35 (N=30)	0.06 ± 0.10 vs. 0.11 ± 0.17	-0.05 (-0.13, 0.03)
Pet dog or cat present in household		
Yes (N=27)	0.08 ± 0.12	0.01 (-0.09, 0.07)
No (N=23)	0.07 ± 0.15	1 [Reference]
Participant colonization		
Colonized with <i>S. aureus</i> (N=21)	0.15 ± 0.17	0.12 (0.05, 0.20)
Not colonized (N=29)	0.03 ± 0.06	1 [Reference]
MRSA colonization		
Yes (N=15)	0.14 ± 0.19	0.09 (-0.01, 0.20)
No (N=35)	0.05 ± 0.09	1 [Reference]
Any history of <i>S. aureus</i> infection in participant <sup>h</sup>		
Yes (N=18)	0.09 ± 0.17	0.02 (-0.06, 0.10)
No (N=32)	0.07 ± 0.11	1 [Reference]
Any history of <i>S. aureus</i> infection in household contact(s)		
Yes (N=23)	0.06 ± 0.11	-0.03 (-0.10, 0.05)
No (N=27)	0.09 ± 0.15	1 [Reference]
SSTI in participant past year <sup>h</sup>		
Yes (N=29)	0.10 ± 0.15	0.04 (-0.03, 0.12)
No (N=21)	0.05 ± 0.11	1 [Reference]
SSTI in household contact past year		
Yes (N=33)	0.09 ± 0.15	0.02 (-0.06, 0.10)
No (N=17)	0.07 ± 0.10	1 [Reference]

Abbreviations: MRSA, methicillin-resistant *S. aureus*; SSTI, skin and soft tissue infection<sup>a</sup> Factors analyzed by linear regression and not included in table include people per 1000 ft<sup>2</sup>, number of colonized pets in home, and distance (in miles) from medical center.<sup>b</sup> Mean number of cultured environmental surfaces per household is 19 (range 16-21).<sup>c</sup> Race and ethnicity were self-reported.

<sup>d</sup> Multiracial participants include African American/Caucasian (3), Caucasian/American Indian (1), and African American/Caucasian/American Indian (1).

<sup>e</sup> Categorization based on 2010 U.S. Census Bureau TIGER/Line® Shapefiles.<sup>31</sup> Urbanized areas and urban clusters are densely settled territories measured at the census tract and census block levels of geography that contain ≥50,000 people or between 2,500-49,999 people, respectively. All other areas are considered rural.<sup>30</sup>

<sup>f</sup> "Household member" includes the participant and their household contacts.

<sup>g</sup> Data presented represent the proportion of environmental surfaces contaminated in households with a member within the age category vs. no household member within the age category.

<sup>h</sup> This does not include the infection which prompted enrollment into the study.

**eTable 2. Cleaning Frequency and Household Contamination with *S. aureus***

Site and Reported Cleaning Frequency	Total, N=50 <sup>a</sup>	<i>S. aureus</i> Household Contamination at Same Site		Relative Risk (95% CI)
		Yes	No	
Kitchen counter, N (%)				
Never or <1x per month	1	0 (0)	1 (100)	-
1-3x per month	5	0 (0)	5 (100)	-
At least weekly	42	4 (10)	38 (90)	1 [Reference]
Kitchen sink handles, N (%)				
Never or <1x per month	6	0 (0)	6 (100)	-
1-3x per month	12	0 (0)	12 (100)	-
At least weekly	32	3 (9)	29 (91)	1 [Reference]
Refrigerator door handles, N (%)				
Never or <1x per month	22	2 (9)	20 (91)	0.59 (0.09, 3.71)
1-3x per month	15	3 (20)	12 (80)	1.30 (0.26, 6.62)
At least weekly	13	2 (15)	11 (85)	1 [Reference]
Replace kitchen towels, N (%)				
Never or <1x per month	0	0 (-)	0 (-)	-
1-3x per month	3	1 (33)	2 (67)	2.20 (0.37, 13.21)
At least weekly	33	5 (15)	28 (85)	1 [Reference]
TV remote, N (%)				
Never or <1x per month	39	10 (26)	29 (74)	0.43 (0.18, 1.04)
1-3x per month	5	0 (0)	5 (100)	-
At least weekly	5	3 (60)	2 (40)	1 [Reference]
Telephone, N (%)				
Never or <1x per month	38	6 (16)	32 (84)	0.47 (0.08, 2.76)
1-3x per month	9	3 (33)	6 (67)	1.00 (0.16, 6.35)
At least weekly	3	1 (33)	2 (67)	1 [Reference]
Bathroom counter, N (%)				
Never or <1x per month	2	0 (0)	2 (100)	-
1-3x per month	7	1 (14)	6 (86)	0.57 (0.09, 3.79)
At least weekly	40	10 (25)	30 (75)	1 [Reference]
Bathroom sink handles, N (%)				
Never or <1x per month	3	0 (0)	3 (100)	-
1-3x per month	11	3 (27)	8 (73)	1.64 (0.49, 5.49)
At least weekly	36	6 (17)	30 (83)	1 [Reference]
Bathroom doorknob, N (%)				
Never or <1x per month	29	2 (7)	27 (93)	-
1-3x per month	10	0 (0)	10 (100)	-
At least weekly	10	0 (0)	10 (100)	1 [Reference]
Toilet seat, N (%)				
Never or <1x per month	0	0 (-)	0 (-)	-
1-3x per month	12	1 (8)	11 (92)	1.58 (0.16, 15.97)
At least weekly	38	2 (5)	36 (95)	1 [Reference]
Participant bath towel laundered after, N (%)				
4 or more uses	9	0 (0)	9 (100)	-
2 or 3 uses	7	2 (29)	5 (71)	1.86 (0.33, 10.53)
1 use	13	2 (15)	11 (85)	1 [Reference]
Water temperature in which participant bath towel washed, N (%)				
Cold	7	2 (29)	5 (71)	4.57 (0.49, 41.67)
Warm	6	1 (17)	5 (83)	2.67 (0.20, 35.71)

Hot	16	1 (6)	15 (94)	1 [Reference]
Laundered bath towel after each use and in hot water, N (%)				
No	21	4 (19)	17 (81)	-
Yes	8	0 (0)	8 (100)	1 [Reference]
Frequency of laundering participant bed linens, N (%)				
<1x per month	3	1 (33)	2 (67)	1.67 (0.28, 9.90)
1-3x/month	22	6 (27)	16 (73)	1.36 (0.48, 3.86)
At least weekly	25	5 (20)	20 (80)	1 [Reference]
Water temperature in which participant bedding washed, N (%)				
Cold	10	2 (20)	8 (80)	0.70 (0.18, 2.75)
Warm	12	2 (17)	10 (83)	0.58 (0.14, 2.35)
Hot	28	8 (29)	20 (71)	1 [Reference]
Laundered bed linens at least weekly and in hot water, N (%)				
No	36	8 (22)	28 (78)	0.78 (0.28, 2.18)
Yes	14	4 (29)	10 (71)	1 [Reference]

<sup>a</sup> Not all objects/surfaces were present in all households

**eTable 3. Prevalence of RepPCR Strain Types of *S. aureus* Isolates Recovered from 50 Households**

Isolate Source	RepPCR Strain Type <sup>a</sup>						
	1	2	3	4	5	6	7
Overall (N=212)	125 (59)	14 (7)	14 (7)	4 (2)	28 (13)	26 (12)	1 (0.5)
Human Infection (N=35)	30 (86)	-	4 (11)	-	-	1 (3)	-
Human Colonization (N=30)	22 (73)	1 (3)	-	-	6 (20)	1 (3)	-
Axilla (N=6)	3 (50)	1 (17)	-	-	2 (33)	-	-
Nose (N=11)	9 (82)	-	-	-	2 (18)	-	-
Groin (N=13)	10 (77)	-	-	-	2 (15)	1 (8)	-
Pets (N=7)	4 (57)	-	-	2 (29)	-	1 (14)	-
Dogs (N=6)	3 (50)	-	-	2 (33)	-	1 (17)	-
Cats (N=1)	1 (100)	-	-	-	-	-	-
Environment (N=140)	69 (49)	13 (9)	10 (7)	2 (1)	22 (16)	23 (16)	1 (1)
TV Remote (N=13)	7 (54)	1 (8)	-	1 (8)	3(23)	1 (8)	-
Phone (N=10)	5 (50)	1 (10)	-	1 (10)	2 (20)	1 (10)	-
Keyboard (N=8)	4 (50)	1 (13)	-	-	1 (13)	2 (25)	-
Videogame Controller (N=9)	3 (33)	3 (33)	2 (22)	-	-	1 (11)	-
Bath Sink faucet (N=9)	4 (44)	-	1 (11)	-	2 (22)	2 (22)	-
Bath Hand towel (N=7)	6 (86)	-	-	-	1 (14)	-	-
Bath towel (N=4)	-	1 (25)	-	-	1 (25)	2 (50)	-
Toilet handle (N=4)	2 (50)	1 (25)	1 (25)	-	-	-	-
Door handle (N=2)	-	-	1 (50)	-	-	1 (50)	-
Light switch (N=12)	5 (42)	-	1 (8)	-	3 (25)	3 (25)	-
Kitchen Hand towel (N=6)	3 (50)	-	-	-	3 (50)	-	-
Kitchen Sink faucet (N=3)	2 (67)	-	-	-	1 (33)	-	-
Sponge (N=1)	-	-	1 (100)	-	-	-	-
Bedsheets/ pillowcases (N=12)	8 (67)	1 (8)	1 (8)	-	1 (8)	1 (8)	-
Bathroom sink (N=9)	5 (56)	1 (11)	1 (11)	-	-	2 (22)	-
Bathtub (N=4)	1 (25)	-	-	-	-	2 (50)	1 (25)
Soap dish (N=2)	1 (50)	-	1 (50)	-	-	-	-
Toilet seat (N=3)	2 (67)	1 (33)	-	-	-	-	-
Counter top (N=11)	4 (36)	1 (9)	-	-	3 (27)	3 (27)	-
Fridge door handle (N=7)	3 (43)	1 (14)	-	-	1 (14)	2 (29)	-
Kitchen table (N=4)	4 (100)	-	-	-	-	-	-

<sup>a</sup> (#) represents row percentage

**eFigure. Proportion of SCCmec Types Detected in MRSA and MSSA Isolates by Source: human infecting, human colonizing, environmental, and pet.** NOTE: The remaining MSSA isolates (not represented) did not possess the SCCmec cassette. As MRSA infection was a requirement for study enrollment, there are no human infecting MSSA isolates.

