

**Supplementary Table S1.** Bacterial growth on the hands of anesthesiologists before and after disinfection

Name	Gender	Before Disinfection of Hands			After Disinfection of Hands		
		CFU/total	CFU/cm <sup>2</sup>	Bacteria	CFU/total	CFU/cm <sup>2</sup>	Bacteria
Provider 1	M	114	2	<i>Brevibacillus parabrevis</i>	1	0	<i>Bacillus cereus</i>
				<i>Kocuria marina</i>			
				<i>Staphylococcus aureus</i>			
				<i>Staphylococcus epidermidis</i>			
				<i>Staphylococcus hominis</i>			
				<i>Staphylococcus epidermidis</i>			<i>Bacillus megaterium</i>
				<i>Bacillus cereus</i>			<i>Staphylococcus capitis</i>
Provider 2	M	305	5	<i>Moraxella osloensis</i>	3	0	
				<i>Kocuria rhizophila</i>			
				<i>Staphylococcus aureus</i>			
				<i>Staphylococcus hominis</i>			
				<i>Staphylococcus aureus</i>			<i>Micrococcus luteus</i>
				<i>Staphylococcus haemolyticus</i>			<i>Kocuria palustris</i>
Provider 3	M	950	16	<i>Micrococcus luteus</i>	304	5	<i>Staphylococcus aureus</i>
							<i>Staphylococcus capitis</i>
							<i>Staphylococcus warneri</i>
				<i>Bacillus firmus</i>			<i>Lactobacillus plantarum</i>
				<i>Bacillus megaterium</i>			<i>Staphylococcus capitis</i>
				<i>Enterobacter cloacae</i>			<i>Staphylococcus epidermidis</i>
				<i>Staphylococcus aureus</i>			
<i>Staphylococcus capitis</i>							
Provider 4	M	28	0	<i>Staphylococcus epidermidis</i>	6	0	<i>Corynebacterium tuberculostearicum</i>
				<i>Bacterium*</i>			<i>Staphylococcus epidermidis</i>
				<i>Neisseria mucosa</i>			
				<i>Staphylococcus capitis</i>			
				<i>Staphylococcus epidermidis</i>			
				<i>Staphylococcus hominis</i>			
				<i>Staphylococcus pettenkoferi</i>			<i>Bacterium*</i>
<i>Corynebacterium tuberculostearicum</i>	<i>Micrococcus luteus</i>						
Provider 5	M	89	1	<i>Micrococcus antarcticus</i>	2	0	<i>Bacterium*</i>
				<i>Staphylococcus epidermidis</i>			
				<i>Staphylococcus capitis</i>			<i>Staphylococcus epidermidis</i>
Provider 6	M	330	6	<i>Staphylococcus epidermidis</i>	3	0	<i>Bacterium*</i>
				<i>Staphylococcus capitis</i>			
				<i>Kocuria marina</i>			<i>Bacillus cereus</i>
Provider 7	M	2000	33	<i>Bacillus megaterium</i>	7	0	<i>Bacillus cereus</i>
				<i>Bacillus cereus</i>			
				<i>Bacillus megaterium</i>			
Provider 8	M	10	0	<i>Moraxella osloensis</i>	8	0	<i>Staphylococcus capitis</i>
				<i>Bacterium*</i>			

Continued

Name	Gender	Before Disinfection of Hands			After Disinfection of Hands		
		CFU/total	CFU/cm <sup>2</sup>	Bacteria	CFU/total	CFU/cm <sup>2</sup>	Bacteria
Provider 9	M	2	0	<i>Aerococcus viridans</i>	0	0	
				<i>Lactobacillus fermentum</i>			
				<i>Acinetobacter baumannii</i>			<i>Bacillus flexus</i>
				<i>Acinetobacter nosocomialis</i>			<i>Brevibacterium linens</i>
Provider 10	M	1352	23	<i>Brevibacterium linens</i>	15	0	<i>Sphingomonas aerolata</i>
				<i>Staphylococcus epidermidis</i>			
				<i>Sphingomonas paucimobilis</i>			
				<i>Bacillus cereus</i>			<i>Bacillus infantis</i>
				<i>Bacillus flexus</i>			<i>Bacillus megaterium</i>
Provider 11	M	352	6	<i>Bacillus infantis</i>	13	0	<i>Bacillus simplex</i>
				<i>Bacillus megaterium</i>			<i>Staphylococcus cohnii</i>
				<i>Dermacoccus nishinomiyaensis</i>			
				<i>Bacillus megaterium</i>			<i>Micrococcus luteus</i>
				<i>Micrococcus luteus</i>			
Provider 12	M	109	2	<i>Neisseria meningitidis</i>	2	0	
				<i>Serratia rubidaea</i>			
				<i>Staphylococcus sp</i>			
				<i>Micrococcus luteus</i>			<i>Bacillus horikoshii</i>
Provider 13	F	120	2	<i>Moraxella sp</i>	2	0	<i>Staphylococcus capitis</i>
				<i>Staphylococcus hominis</i>			
				<i>Staphylococcus aureus</i>			
				<i>Micrococcus luteus</i>			<i>Bacillus pseudofirmus</i>
Provider 14	F	67	1	<i>Ralstonia syzygii</i>	2	0	
				<i>Staphylococcus capitis</i>			
				<i>Micrococcus luteus</i>			
Provider 15	F	77	1	<i>Staphylococcus epidermidis</i>	0	0	
				<i>Staphylococcus hominis</i>			
				<i>Bacterium*</i>			
Provider 16	F	15	0	<i>Kocuria marina</i>	0	0	
				<i>Staphylococcus capitis</i>			
				<i>Staphylococcus hominis</i>			
				<i>Bacillus mojavensis</i>			<i>Brevibacillus borstelensis</i>
Provider 17	F	202	3	<i>Kocuria rhizophila</i>	11	0	<i>Brevibacterium linens</i>
				<i>Staphylococcus sciuri</i>			<i>Bacterium*</i>
				<i>Staphylococcus epidermidis</i>			
				<i>Bacillus subtilis</i>			
Provider 18	F	2	0	<i>Staphylococcus capitis</i>	0	0	
				<i>Brevibacterium linens</i>			
Provider 19	F	450	8	<i>Bacterium*</i>	0		

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Name	Gender	Before Disinfection of Hands			After Disinfection of Hands		
		CFU/total	CFU/cm <sup>2</sup>	Bacteria	CFU/total	CFU/cm <sup>2</sup>	Bacteria
Provider 20	F	127	2	<i>Acinetobacter pittii</i>	2	0	<i>Bacillus idriensis</i>
				<i>Brevundimonas vesicularis</i>			<i>Micrococcus antarcticus</i>
				Yeast*			
				<i>Micrococcus luteus</i>			
				<i>Ralstonia syzygii</i>			
				<i>Staphylococcus caprae</i>			
				<i>Pasteurella dagmatis</i>			
Provider 21	F	103	2	<i>Brachy bacterium conglomeratum</i>	0	0	
				Bacterium*			
				<i>Brachy bacterium conglomeratum</i>			
				<i>Bacillus cereus</i>			
Provider 22	F	60	1		5	0	<i>Neisseria perflava</i>
							<i>Staphylococcus cohnii</i>
							<i>Staphylococcus epidermidis</i>
Provider 23	F	1047	17	<i>Bacillus cereus</i>	0	0	
				<i>Bacillus megaterium</i>			
				<i>Staphylococcus cohnii</i>			
				<i>Staphylococcus saprophyticus</i>			
				<i>Bacillus cereus</i>			
Provider 24	F	183	3		0	0	
Provider 25	F	2091	35	<i>Bacillus sp</i>	2	0	<i>Bacillus circulans</i>
				<i>Brevibacterium casei</i>			
				<i>Neisseria meningitidis</i>			

**Note.** \* Indicates identification scores of  $\leq 60$ , considered "not reliable". CFU, colony-forming units.



No. of Operating Room	Before disinfection (Keyboard and Mouse)		After disinfection (Keyboard and Mouse)		Before disinfection (Medicative Cart)		After disinfection (Medicative Cart)		Before disinfection (Monitor)		After disinfection (Monitor)			
	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria		
4	38; 0	<i>Kocuria rhizophila</i>	17; 0	<i>Staphylococcus hominis</i>	208; 2	<i>Bacillus cereus</i>	<i>Paenibacillus lautus</i>	<i>Bacillus cereus</i>	50; 1	<i>Bacillus cereus</i>	0; 0	Bacteria		
		<i>Staphylococcus epidermidis</i>											<i>Micrococcus luteus</i>	<i>Kocuria rhizophila</i>
		<i>Staphylococcus pettenkoferi</i>											<i>Staphylococcus epidermidis</i>	<i>Staphylococcus epidermidis</i>
													<i>Staphylococcus haemolyticus</i>	<i>Staphylococcus hominis</i>
5	91; 1	<i>Bacterium*</i>	1; 0	<i>Paenibacillus glucanolyticus</i>	208; 2	<i>Conynebacterium aurimucosum</i>	<i>Micrococcus antarcticus</i>	<i>Staphylococcus warneri</i>	6; 0	<i>Moraxella osloensis</i>	0; 0	Bacteria		
		<i>Kocuria rosea</i>											<i>Micrococcus antarcticus</i>	<i>Moraxella osloensis</i>
		<i>Staphylococcus epidermidis</i>											<i>Staphylococcus warneri</i>	<i>Staphylococcus warneri</i>
		<i>Staphylococcus hominis</i>												
6	416; 4	<i>Bacterium*</i>	46; 0	<i>Pseudomonas luteola</i>	488; 5	<i>Micrococcus luteus</i>	<i>Staphylococcus saprophyticus</i>	<i>Acinetobacter lwoffii</i>	10; 0	<i>Staphylococcus epidermidis</i>	0; 0	Bacteria		
		<i>Micrococcus luteus</i>											<i>Micrococcus luteus</i>	<i>Staphylococcus epidermidis</i>
		<i>Staphylococcus epidermidis</i>											<i>Staphylococcus saprophyticus</i>	
		<i>Staphylococcus haemolyticus</i>												
7	202; 2	<i>Staphylococcus aureus</i>	5; 0	<i>Staphylococcus epidermidis</i>	36; 0	<i>Moraxella osloensis</i>	<i>Staphylococcus epidermidis</i>	<i>Bacillus cereus</i>	15; 0	<i>Bacillus subtilis</i>	6; 0	Bacteria		
		<i>Staphylococcus hominis</i>											<i>Micrococcus luteus</i>	<i>Bacillus subtilis</i>
													<i>Moraxella osloensis</i>	

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*Bacillus firmus*  
*Bacillus licheniformis*  
*Lactobacillus paracasei*  
*Lysinibacillus sphaericus*

No. of Operating Room	Before disinfection (Keyboard and Mouse)		After disinfection (Keyboard and Mouse)		Before disinfection (Medicative Cart)		After disinfection (Medicative Cart)		Before disinfection (Monitor)		After disinfection (Monitor)	
	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria	CFU/cm <sup>2</sup>	Bacteria
8		<i>Dietzia maris</i>		<i>Enterococcus pallens</i>		Yeast*		<i>Micrococcus luteus</i>				
		<i>Kocuria rhizophila</i>		<i>Micrococcus luteus</i>		<i>Pandoraea pulmonicola</i>		<i>Staphylococcus hominis</i>				
	197; 2	<i>Staphylococcus epidermidis</i>	12; 0		1114; 11	<i>Staphylococcus saprophyticus</i>	2; 0		0; 0		0; 0	
		<i>Staphylococcus haemolyticus</i>										
		<i>Bacillus idriensis</i>		<i>Micrococcus antarcticus</i>		Yeast*		<i>Kocuria rosea</i>				
		<i>Bacterium*</i>		<i>Micrococcus luteus</i>		<i>Staphylococcus epidermidis</i>		<i>Bacillus sp</i>				
9	621; 6	<i>Staphylococcus cohnii</i>	11; 0	<i>Staphylococcus epidermidis</i>	471; 5	<i>Staphylococcus haemolyticus</i>	5; 0		5; 0		0; 0	
		<i>Staphylococcus epidermidis</i>										
		<i>Staphylococcus warneri</i>										

**Note.** \* Indicates identification scores of ≤ 60, considered “not reliable”. CFU, colony-forming units.

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No. of Operating Room	Before Table Disinfection		After Table Disinfection (0 hours)		After Table Disinfection (1 hour)		After Table Disinfection (2 hours)		After Table Disinfection (3 hours)		After Table Disinfection (4 hours)	
	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria
4	30; 0	<i>Kocuria marina</i>	0; 0	3; 0	<i>Bacterium*</i> <i>Staphylococcus capitis</i>	25; 0	<i>Bacterium*</i> <i>Enterobacter cloacae</i> <i>Staphylococcus epidermidis</i>	175; 2	<i>Yeast*</i> <i>Micrococcus antarcticus</i> <i>Micrococcus luteus</i> <i>Staphylococcus capitis</i>	719; 7	<i>Yeast*</i> <i>Micrococcus luteus</i> <i>Moraxella osloensis</i> <i>Staphylococcus capitis</i>	<i>Bacteria</i>
		<i>Paenibacillus chitinolyticus</i>										
		<i>Bacterium*</i>										
		<i>Staphylococcus hominis</i>										
5	684; 7	<i>Bacterium*</i>	1; 0	6; 0	<i>Staphylococcus capitis</i>	18; 0	<i>Yeast*</i>	34; 0	<i>Bacillus sp</i> <i>Staphylococcus cohnii</i> <i>Staphylococcus lugdunensis</i>	264; 3	<i>Bacterium*</i> <i>Staphylococcus warneri</i>	<i>Bacteria</i>
		<i>Neisseria subflava</i>										
		<i>Staphylococcus hominis</i>										
		<i>Staphylococcus sciuri</i>										
6	115; 1	<i>Bacillus cereus</i>	1; 0	3; 0	<i>Bacterium*</i> <i>Staphylococcus cohnii</i> <i>Staphylococcus epidermidis</i>	3; 0	<i>Brevibacterium iodinum</i> <i>Bacterium*</i> <i>Kocuria marina</i> <i>Staphylococcus epidermidis</i>	20; 0	<i>Micrococcus luteus</i> <i>Paenibacillus massiliensis</i> <i>Pseudomonas flavescens</i>	24; 0	<i>Bacillus megaterium</i> <i>Moraxella sp</i> <i>Staphylococcus cohnii</i> <i>Staphylococcus hominis</i>	<i>Bacteria</i>
		<i>Enterobacter cloacae</i>										
		<i>Micrococcus antarcticus</i>										
		<i>Staphylococcus cohnii</i>										
7	74; 1	<i>Kocuria marina</i>	7; 0	40; 0	<i>Neisseria perflava</i> <i>Rothia mucilaginoso</i> <i>Staphylococcus aureus</i> <i>Staphylococcus hominis</i>	42; 0	<i>Neisseria perflava</i> <i>Rothia mucilaginoso</i> <i>Staphylococcus aureus</i> <i>Staphylococcus hominis</i>	65; 1	<i>Micrococcus luteus</i> <i>Neisseria flavescens</i> <i>Neisseria sicca</i> <i>Rothia mucilaginoso</i>	201; 2	<i>Bacillus megaterium</i> <i>Neisseria flavescens</i> <i>Staphylococcus hominis</i>	<i>Bacteria</i>
		<i>Micrococcus antarcticus</i>										
		<i>Staphylococcus capitis</i>										
		<i>Staphylococcus epidermidis</i>										
		<i>Staphylococcus haemolyticus</i>										

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No. of Operating Room	Before Table Disinfection		After Table Disinfection (0 hours)		After Table Disinfection (1 hour)		After Table Disinfection (2 hours)		After Table Disinfection (3 hours)		After Table Disinfection (4 hours)	
	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria	CFU/total; CFU/cm <sup>2</sup>	Bacteria
8		<i>Kocuria rhizophila</i>			<i>Arcanobacterium phocae</i>		<i>Bacillus cereus</i>		<i>Staphylococcus epidermidis</i>			<i>Alkalibacillus haloalkaliphilus</i>
		<i>Kocuria rosea</i>			<i>Cardiobacterium sp</i>		<i>Corynebacterium sp</i>		<i>Staphylococcus haemolyticus</i>			<i>Micrococcus luteus</i>
	13; 0	<i>Moraxella osloensis</i>	0; 0		<i>Staphylococcus hominis</i>	5; 0	<i>Kocuria palustris</i>	8; 0	1.1; 0	105; 1		<i>Staphylococcus capitis</i>
		<i>Staphylococcus capitis</i>					<i>Staphylococcus haemolyticus</i>					<i>Staphylococcus epidermidis</i>
		<i>Staphylococcus hominis</i>										<i>Staphylococcus epidermidis</i>
9		<i>Bacillus simplex</i>			<i>Staphylococcus haemolyticus</i>		<i>Bacillus smithii</i>					<i>Micrococcus luteus</i>
		<i>Staphylococcus epidermidis</i>					<i>Micrococcus antarcticus</i>					<i>Staphylococcus epidermidis</i>
	187; 2	<i>Staphylococcus hominis</i>	0; 0	1; 0		3; 0	<i>Staphylococcus epidermidis</i>	6; 0		10; 0		<i>Staphylococcus warneri</i>
		<i>Staphylococcus saprophyticus</i>										

**Note.** \* Indicates identification scores of ≤ 60, considered “not reliable”. CFU, colony-forming units.