**Supplemental Methods**

***Preparation of bacteriophage stocks***

*Bacteriophage Φ6*

Bacteriophage and host were kindly provided by Dr. Leonard Mindich, University of Medicine and Dentistry, New Jersey. Virus was propagated in host *Pseudomonas syringae* using the soft agar propagation method.1 Thirty mL of host bacterial culture was grown for 24 hours with shaking (100 rpm, 25°C). Virus stock (2 mL) was added and incubated with shaking for another 24 hours. This virus culture (0.5 mL) and fresh host culture (0.5 mL) were added to 30 mL of soft agar (0.7% agar), dispensed into tryptic soy bottom agar plates, and incubated at 25°C for 24 hours. The top layer was then harvested, pooled, purified by centrifugation (5900×*g*, 30 minutes, 4°C), and stored as stock in 20% glycerol-tryptic soy broth at -80°C.

*Bacteriophage MS2*

Bacteriophage MS2 was propagated in the host bacterium *Escherichia coli* Famp using the soft agar coliphage propagation method. Briefly, 50μL of virus stock was added to 30 mL of a log-phase host bacterial culture and grown on a rotating shaker for 4 hours at 37°C. “Soft” agar was prepared by adding agar to tryptic soy broth at a final concentration of 0.7%, and bottom agar plates were prepared using full strength tryptic soy agar in 150 mm petri dishes. Virus stock (0.5 mL) and log phase host culture (0.5 mL) were added to 30 mL of soft agar and dispensed into bottom agar plates. Plates were incubated at 37°C for 24 hours. The top soft agar layer was then harvested, and soft agar from all plates was pooled and purified by chloroform extraction using a 2:1 volume ratio of virus to chloroform followed by centrifugation (5900×g, 30 minutes, 4°C)., and stored as stock in 20% glycerol-tryptic soy broth at -80°C.

***Hand sampling***

Methods for hand recovery experiments were adapted from standard methods for the evaluation of healthcare personnel handwashes2,3 with modifications. The eluent used was 1.5% beef extract pH 7.5 containing 0.1% Tween 80. Briefly, eluent was placed in a bag into which the participant placed their hand. The surface of the hand was massaged for 60 seconds, covering all surfaces from wrist to fingertips. The eluent was then recovered and assayed for Φ6 and MS2 on appropriate host using the single agar layer plaque assay.4

***PPE sampling***

Gloves were placed in 500 mL 1.5% beef extract pH 7.5 containing 0.1% Tween 80 and agitated on a shaker platform at 100 rpm for 20 minutes. The eluent was then recovered and assayed for Φ6 and MS2 on appropriate host using the single agar layer plaque assay.4 Scrubs were placed in 2L 1.5% beef extract pH 7.5 containing 0.1% Tween 80 and assayed by the same method.

**References**

1. Sinclair JF, Cohen J, Mindichi L. The isolation of suppressible nonsense mutants of bacteriophage φ6. *Virology* 1976; **75**(1): 198-208.

2. ASTM. ASTM Standard E1174-13 Standard Test Method for Evaluation of the Effectiveness of Health Care Personnel Handwash Formulations. West Conshohocken, PA: ASTM International; 2013.

3. ASTM. ASTM Standard E2011-13 Standard Test Method for Evaluation of Hygienic Handwash and Handrub Formulations for Virus-Eliminating Activity Using the Entire Hand. West Conshohocken, PA: ASTM International; 2013.

4. USEPA. Male-specific (F+) and somatic coliphage in water by single-agar layer procedure. Washington DC: United States Environmental Protection Agency Office of Water; 2001.