

**Title: Impact of wearing slippers on transfer of bacteriophage MS2 from floors in patient rooms to bedding and surfaces**

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**Statistical Analysis Plan**

## **Statistical Analysis Plan**

Information on demographics, medical conditions, devices, and mobility will be obtained through chart review. The primary outcome will be acquisition of bacteriophage MS2 on a composite of all sites, including the percentage of sites contaminated and the average  $\log_{10}$  PFU. Based on previous published results, we anticipate that at least one site will be contaminated with MS2 in ~60% of control group participants. A power calculation indicated that 17 patients per group would provide 80% power to detect a 75% reduction in contamination from 60% to 15%. Linear and generalized linear mixed-effects models controlling for time of collection and site of contamination will be used to compare the percentages and average  $\log_{10}$  PFU levels of contamination for the groups. Bivariate analyses will be conducted to compare characteristics of groups. Fisher's exact test will be used for categorical data and the Student paired t-test for normally distributed data. Analyses will be performed using R version 3.5.1 statistical software (The R Foundation for Statistical Computing, Vienna, Austria) and functions from the lme4 and lmerTest packages will be implemented.