



Supplemental Digital Content 20. Estimated total sample size needed to detect a group difference for a given odds ratio.

This figure illustrates that given an estimated adjusted odds ratio of 1.32, which was derived from our primary analysis comparing the surgical hospitalization group to participants without previous hospitalization, we estimate that approximately 1,700 participants would need to be included to observe a statistically significant group difference given the parameters specified (two-tailed test with 80% power, an alpha of 0.05, and the observed case/control ratio of $N_2/N_1 = 1.8$). Given the estimated effect size of 2.10 from our secondary analysis that compared the surgical hospitalization group to the non-surgical hospitalization group, we estimate that approximately 200 participants would need to be included to observe a statistically significant group difference given the parameters specified (two-tailed test with 80% power, an alpha of 0.05, and the observed case/control ratio of $N_2/N_1 = 2.23$). The observed effect size for our primary analysis is represented on the x-axis by the dotted red line.