Supplemental Online Content

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eAppendix. Statistical Considerations

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

eMethods. Statistical Considerations: Sample Size

We sought to determine whether wearing a face mask would be associated with a fall of 2% or more in O2 saturation. Assuming an alpha = 5% and power = 90%, for a paired t-test comparison, the expected sample sizes are tabulated below for a range of expected mean differences and standard deviations. We anticipate that a study with a sample size ranging between 27 to 97 participants will be adequately powered to detect (or exclude) a > 2% drop in oxygen saturation assuming a standard deviation of at least 3%. Therefore, we aim to recruit 25 participants to assess the analytical performance of using a portable pulse oximeter in an older population and obtain estimates of the mean and standard deviation of oxygen saturation. An interim analysis will occur after the first 25 participants, and the study expanded if the actual standard deviation were to be > 3%.

Expected Mean of the Paired Differences	Expected Standard Deviation of the Paired Differences					
	1	2	3	4	5	6
1	14	46	97	171	265	381
1.5	8	22	46	78	119	171
2	6	14	27	46	69	97

Reference: Dhand, N. K., & Khatkar, M. S. (2014). Statulator: An online statistical calculator. Sample Size Calculator for Comparing Two Paired Means at http://statulator.com/SampleSize/ss2PM.html