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| **Sample size criteria** | **Sample size requirement** |
| **T1. Estimate the overall outcome proportion with sufficient precision at one or more key time-points in follow-up**Assuming an overall event rate of 45% at 30-days (or 0.02 per patient per day), to estimate this event rate with a precision of ±0.025 requires at least 34,869 patient-days of follow-up, or 1163 patients with a mean follow-up of 30 days. | 1163 patients |
| **T2. Target a shrinkage factor of 0.9**R2Cox-Snell of 0.23 was estimated based on fitting models of similar complexity to random samples of historic patients with viral pneumonia and evaluating these models on independent validation data | 20.33 events per parameter |
| **T3. Target small optimism of 0.05 in the apparent R2Nagelkerke**Assuming an overall event rate of 45% at 30-days with a mean follow-up of 30 days corresponds to max(R2Cox-Snell)=0.84 and a shrinkage factor of 0.846 | 12.28 events per parameter |