1. Based on the complication rates for both groups,

12/125 for TD – 9.6%

25/154 for AD – 16.2%

You need at 404 per group to reach a power of 0.8(316 for a power of 0.7, and 537 for a power of 0.9).

| **Computed N Per Group** | | | |
| --- | --- | --- | --- |
| **Index** | **Nominal Power** | **Actual Power** | **N Per Group** |
| **1** | 0.7 | 0.701 | 316 |
| **2** | 0.8 | 0.800 | 401 |
| **3** | 0.9 | 0.900 | 537 |

If you have n=248 for both AD and TD protocol, respectively, the power will be 0.596.

1. Based on the cost or length of stay:
2. Here were the cost analysis for room and board charges between hospitals:

TD protocol $2779 +/- 617 (n=125)

AD protocol $1886 +/- 486 (n=154)

SD=549 (pooled standard deviation).

1. Length of stay between groups

TD protocol4.28 +/- 1.08 days (n=125)

AD protocol 2.02 +/- 0.71 days (n=154)

SD=0.89 (pooled standard deviation)

If based on the estimates above, then sample size to reach a power of 0.9 will be less than 10 per group. In your grant proposal, n=248 for AD protocol only, what about the sample size for TD protocol? Suppose you already have the historical data for TF protocol, then I believe n=248 will be good enough to achieve a power of close to 1.

1. It seems you are going to assign all n=248 patients to AD protocol, and get the baseline and follow-up data. If you don’t have the longitudinal data for TD protocol, it is hard to perform a repeated measures analysis. The above is just a piece of my sense.