

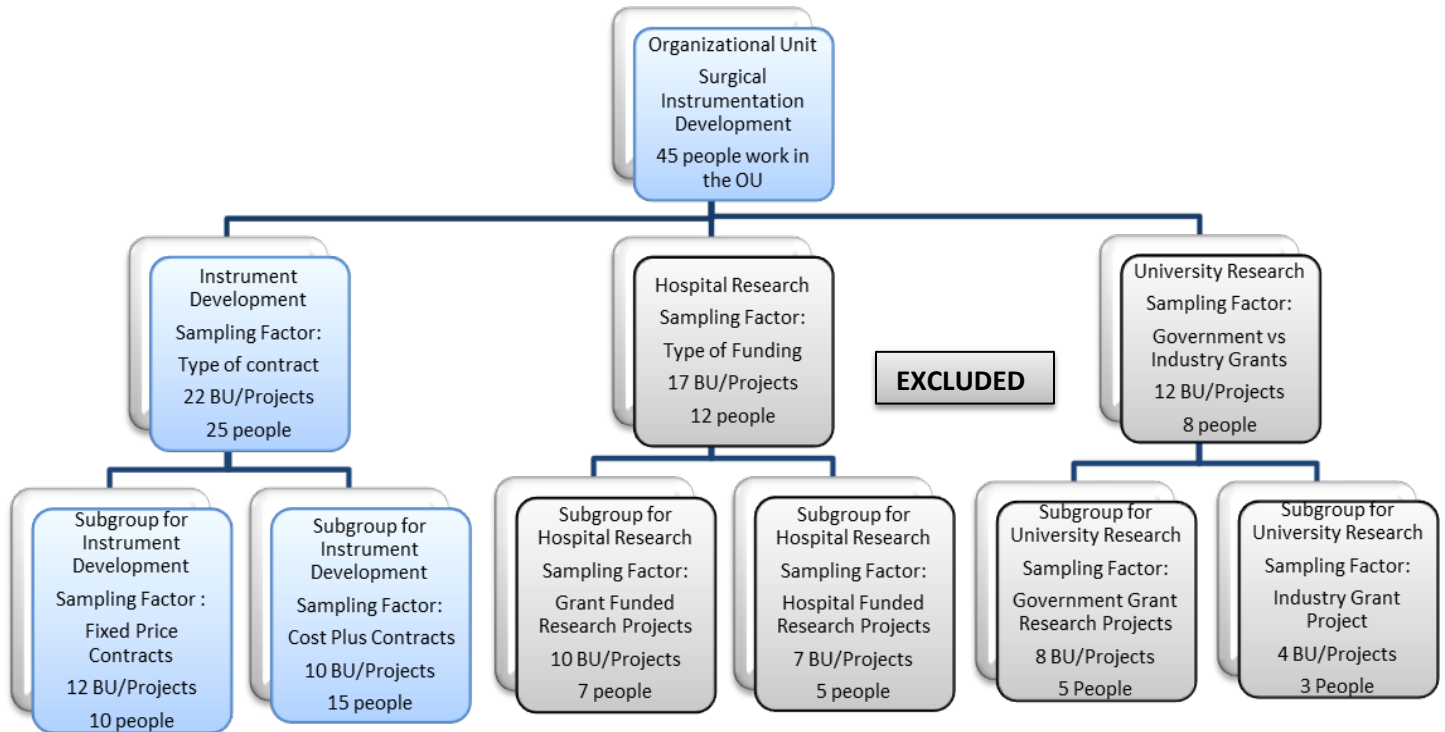
REPORTING SUBGROUP INFORMATION

How to define subgroups in SAS and appraisal plans

Guidance on how to define and report subgroups that share common sampling factors

Subgroups are groupings of basic units that share common sampling factors and are used to help determine the organizational scope of an appraisal. Quantitative sampling approaches are implemented to determine the organizational scope, but quality reviews indicate that there may be some confusion defining and reporting the subgroup information. We hope the following guidance will help.

Refer to this graphic to visualize the relationship of basic units, sampling factors and subgroups.



It should be clear to appraisal reviewers what was in the Organizational Unit for the appraisal. So, if the appraisal findings do not apply to the entire organization, the excluded projects/units should be identified as such in the plan and SAS record. In this case, the results only apply to development projects, and all hospital and university research projects are excluded.

When reporting the subgroup information in the SAS record, please remember that the numbers of basic units and people should represent the totals for the OU, and not just amounts that have been sampled. Using the previous example, the following subgroups would be entered in SAS:

Fixed Price:

Fixed Price Contracts

Description: Projects for customers who have signed a fixed price contract.

Number of Basic Units: 12

Number of People: 10

Cost Plus:

Cost Plus Contracts

Description: Projects for customers who have signed a cost plus contract.

Number of Basic Units: 10

Number of People: 15

Be mindful of the following formula published in the MDD to determine how many basic units/projects should be sampled.

$$\begin{array}{c}
 \text{Minimum number} \\
 \text{of basic units to} \\
 \text{be selected from} \\
 \text{a given subgroup}
 \end{array}
 =
 \frac{
 \begin{array}{c}
 \text{Number of} \\
 \text{subgroups}
 \end{array}
 \times
 \begin{array}{c}
 \text{Number of} \\
 \text{basic units in the} \\
 \text{given subgroup}
 \end{array}
 }{
 \begin{array}{c}
 \text{Total number} \\
 \text{of basic units}
 \end{array}
 }$$

Calculations for this organization would be:

Fixed Price Contracts (FPC)	Cost Plus Contracts (CPC)
$ \frac{2 \text{ Subgroups} \times 12 \text{ FPCs}}{22} = 1.09 \text{ (1 BU/Project)} $	$ \frac{2 \text{ Subgroups} \times 10 \text{ CPCs}}{22} = .90 \text{ (1 BU/Project)} $

Reiterating the rounding rules that apply when calculating the number of projects to be included in the sample:

- If the computed value is less than 1, round up to 1 (i.e. .25 = 1.BU; .76 = 1 BU)
- Fractional values greater than 1 are to be rounded as follows:
 - If the fractional value is .5 or greater, round UP (i.e. 1.5 = 2 BUs)
 - If the fractional value is less than .5, round DOWN (i.e. 1.49 = 1 BU).

When reporting the people sample size, the number must represent the percentage of people working in the OU who actually “work on the sampled projects,” not a percentage of people interviewed.

12 total people work on the four sampled BU/Projects

25 total people work in the OU

12/25 = 48%

When reporting the Project/Unit sample size, the number must represent the percentage of BUs sampled.

2 total BUs sampled

22 total BUs in the OU

$2/22 = 9\%$

Questions regarding this guidance can be sent to scampi-quality@cmmiinstitute.com.