Some general guidelines for budgeting for statistical support

Budgeting for statistical support is very project-specific. "It depends"… on how complex the project aims, hypotheses, data management and analysis will be and to what extent (and with what level expertise) other project staff are responsible for hands-on data management and analysis. With that caveat, some suggestions are given below to get you thinking—but please check with Design & Data Core for project-specific considerations.

Note that budget allocation for statistical support might change across a project timeline. For a moderately complex project, sometimes a 10% statistician allocation during the first year will assist with developing the data management process, 20% during second year will cover data management and preliminary analysis (e.g. for a poster or presentation), and 25% or more during last year of project will cover most primary data analysis.

What a <u>really small (5%)</u> statistical support allocation in proposal budget can get you….

Up to 2 hours per week of involvement in project activities, which might include some *(but not all)* of the following:

- An ongoing relationship with the Stat Team which will help them better understand your data and general research strategies in order to facilitate their work with you on other issues/projects. Remember that attending project meetings might be helpful for a statistician for involvement in any of these activities—but project meetings (and emails and phone calls) count toward your 5% stat allocation
- Participation/expertise (of appropriate level statistician) in developing data acquisition and management procedures (including coding schemes, data flow, format, validity checking)
- Preparing programming code for scoring
- Development and conceptual oversight of data analysis plan
- Supervise project-supported statistician (either project personnel or Research Office statistician) who will do most analyses
- Assist in interpreting analysis results
- Contribute to/review manuscripts/posters of study results
- Answer occasional questions about stat analysis, relevant software
- Assistance with power analysis on additional proposals that may be related to the project or use its results

Remember 5% time is 2 hours per week on average (total across any/all these activities listed above)—that time includes scheduling and attending meetings, planning, development, answering [even peripherally-related] questions (phone, email, or in-person), consideration of alternative data management or analysis approaches. It is not enough time to cover hands-on data management or analyses (except for very basic stats on very small projects). A 5% statistician allocation assumes that other project staff or PI

will have primary responsibility for hands-on data management and statistical analysis. Note that having at least some statistician time allocated on your proposal may increase "credibility" at proposal review for project team expertise for achieving goals.

What a small (10%) statistical support allocation in proposal budget can get you….

Up to 4 hours per week of involvement in project activities, which might include some *(but not all)* of the following:

- Activities listed above for 5% allocation
- Some small amount of participation in on-going data management—this might include supervision of a project-supported data management assistant (either project or Research Office staff), merging data files from different instruments/sources/time points, "data cut" (i.e. bringing in data from acquisition sources to get ready for analysis) and validity checking for interim analysis for a paper/poster, answering occasional questions about data management issues
- Some small amount of participation in actual data analysis

Remember 10% time is 4 hours per week on average (total across any/all these activities listed above)—that includes meetings, planning, development, answering [even peripherally-related] questions (phone, email, or in-person), hands-on data mgt., documentation, exploration of models and analysis approaches, running analyses a second time because PI decides that another covariate needs to be added or that one subject needs to be deleted, etc. It is not usually enough time to cover all on-going data management or to cover final analyses at end of project (except for small projects)—but it may cover on-going involvement with the data management process if project staff are doing most data acquisition and validity checking, and it may cover some minimal interim analyses for presentations/posters.

What 20-25% or more statistician time can buy…….

Up to 8-10 hours per week of involvement in project activities, which might include:

- Activities listed above for 10% allocation
- Primary responsibility for data management, which would include data file merging, programmed upper level validity checking, coding of scoring algorithms, recoding, creating new composite variables (not data acquisition/entry or basic validity checking of data)
- Statistical analysis and summary of results

Remember that 25% time is 10 hours per week. Note that these are only very general guidelines--the time required for project data management and analysis activities can vary considerably depending on project staff expertise in basic data acquisition and validity checking, number of variables, number of separate data files, data file formatting

and compatibility with statistical analysis software, number of specific aims requiring analysis, number of outcome measures requiring separate analyses, complexity of analyses and statistical models, number of preliminary or interim analyses desired, number of papers and reports, and project timelines. Very complex projects could easily use 50% statistician time or more during final year(s) of project when most data management and analyses are being done. A longitudinal project with extensive interview data at multiple time points, intensive longitudinal data (e.g. streams of data from e-technology devices), several outcomes, and complex mixed model/growth model/structural equation model analyses could easily require 50-100% statistician time during at least 2 project years (plus 25% for initial project year(s).