

# Development of effective budgets and budget justifications for the current funding climate



## Confessions of a Reviewer

- Reviewers are busy, tired people; reviews are on top of their day job
- Impressions of the grant are formed early
- Of the 20-30 people on the study section
  - Likely only 1 or 2 are experts on your topic
  - Likely only 3 have read your grant
- Reviewers read many grants for each meeting; “stories” are easier to remember and to convey
- If you make the reviewer work harder they may be less generous in scoring
- Budgets can make them cranky too...

# General Issues re Budget Development

- Budget is not part of scientific review/score
- Expect a ~20% across-the-board cut
- Budgets need to be both reasonable and sufficient
- Do not leave budget preparation until last minute; should be one of the first things you do, once the science is planned

# Two Kinds of

Costs:

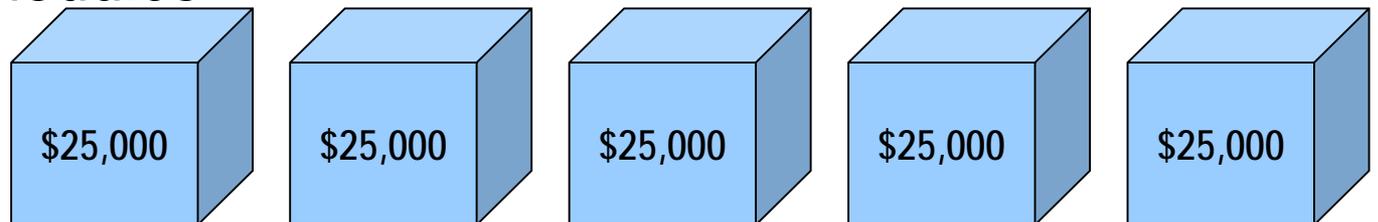
- Direct
- Indirect

NIH Budgets:

- Modular
- R & R (full)

# Modular Budgets

- Simplified budget; < \$250K DC /year
- Used for:
  - R03: up to two years and DC of up \$50,000 per year
  - R21: Combined DC budget for the two year project period up to \$275,000
  - R34 applications: DC budget ~ \$100k; amount and use varies by I/C
  - R01s: for budgets under \$250k/year
- Request funding in blocks of \$25K up to \$250K/year
- No built-in future year cost-escalations
- VERY important to do thorough internal budgeting, and then convert to modules



## R & R Budgets

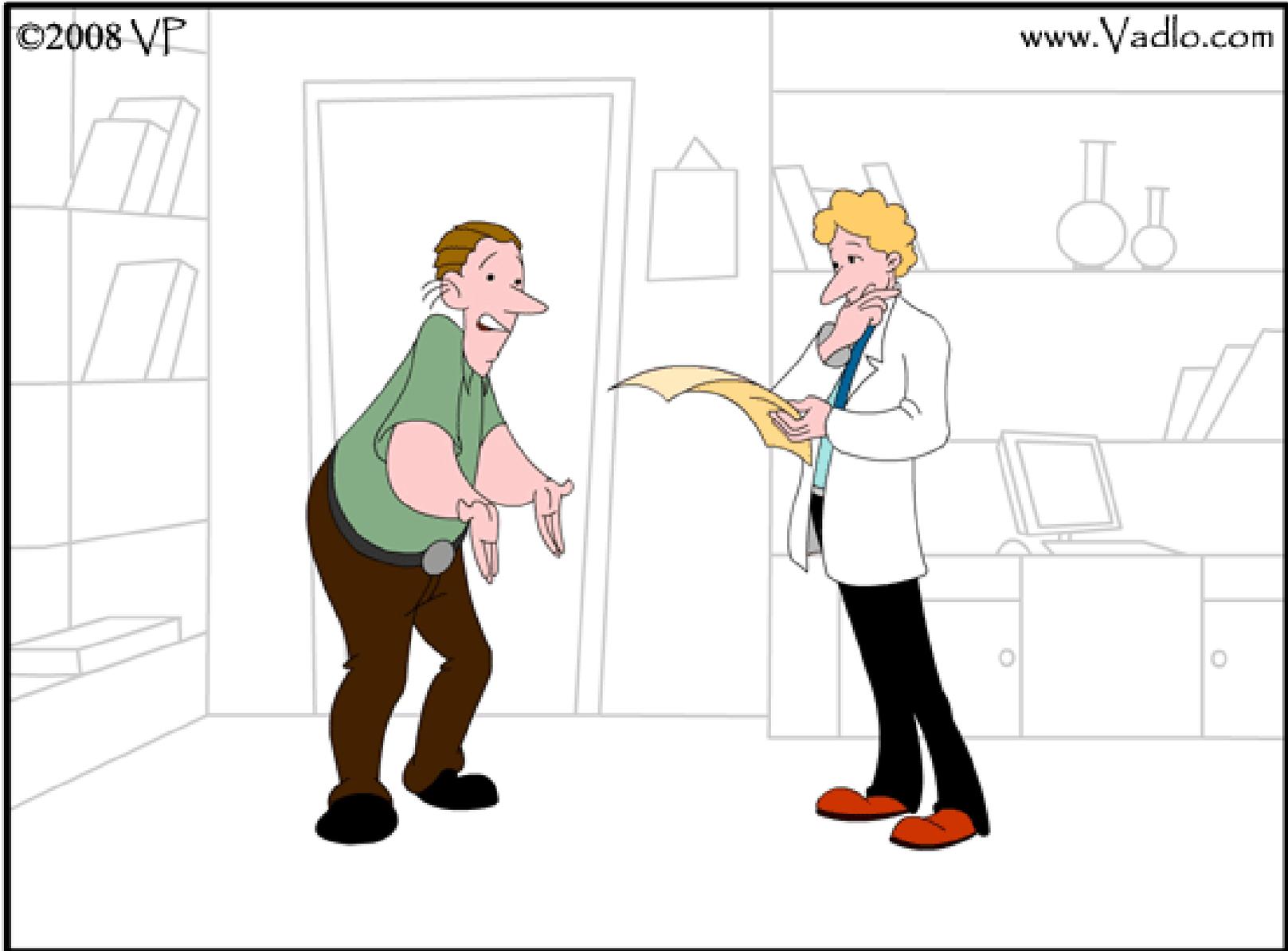
- DC budget > \$250,000/year (excluding F & A on subs) and all AHRQ grants
- Annual budgets > \$500K DC need approval
- Requires itemized budget and detailed budget justification

## FY2010, NIAID (competing)

- Average application received ~ \$290,000 DC
- 76% of new investigators used modular budget.
- 66% of non-new investigators used modular

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*With this much grant money, only experiment we can do is "flip a coin"!*

# Goals for Grant Budget Development

- Provide support needed for proposed project
- Provide continuity for research team, as appropriate and justified
- A modular approach &/or staying well below the \$500k limit doesn't help you if it means scrimping on needed resources
- Smaller budget/5 years vs. larger budget/3-4 years?
- It is important to plan for budget cuts– you will get them

# How to Construct the Budget

- Visualize the study procedures and list the personnel needed for each step
- Based on sample size and time needed for procedures, estimate the % time you'll need for each staff role
  - Include year-to-year variance in personnel, going from start-up to manuscript completion
- Get a reality check from an experienced and detail-oriented study coordinator

# Planning for Budget Cuts

- Not a great idea to drop an aim (KE view)
- Better to be prepared to reduce costs within aims
  - Your effort (can reduce by 25% w/o permission)
  - Use conservative assumptions:
    - Sample size
    - Number of recruitment sites
    - Recruitment staff effort
    - Length of recruitment period
  - Travel, supplies
  - Consultants
- Not a great idea to have very small final year budget

# Categories of Direct Costs

... costs that can be identified specifically with a particular sponsored project ...

- Personnel
- Consultants
- Equipment
- Supplies
- Travel
- Patient Care
- Other Expenses
- Consortium/Contractual

# Personnel-- PI Effort

- Within a Grant:
  - Must match the work proposed
  - For R01s, typical range is:
    - Established Inv: 15%-40% FTE
    - NI/ES: at least 30% FTE
  - Consider what activities you must do, vs. what is more efficient/effective at staff level

# Personnel-- PI Effort

- Across Your Portfolio:
  - Most investigators will want to have 2+ funding streams (e.g. 2 R01s simultaneously)
  - Every percent of your effort must cover a substantial portion of your team
  - Too much effort is a problem- a better one than too little, but still a problem
  - Keep track of effort allocations on monthly basis 5 years out

# Personnel

- Avoid “to be named” personnel, espec on grants < 3 years
- Types of Personnel
  - Senior/Key:
    - Have essential expertise, effort measured in CM
    - Requires biosketch
    - Need permission to replace
  - Other Significant Contributors
    - Provide essential service, but don't have CM invested
    - Consultants: critical but limited role for short time period
  - Other Personnel
    - Have effort, but are replaceable
    - Administrative assistants MAY BE allowed;  
Program coordinators definitely are

# Selecting Key Personnel

- Need expertise relevant to all key methods and analyses
- Not always wise to have a well-known Co-I w/ similar expertise to less well-known PI
- Include former mentors (espec at different institutions) in minor ways only
- Multiple PIs not always advisable
  - Can affect ESI/NI status
  - Designed to facilitate cross-institutional and interdisciplinary collaboration
  - Requires detailed Leadership Plan
- Collaborate with those:
  - You know and can work with
  - You know will deliver
  - You can trust

# Personnel-- Strategy

- Who will work on the project?
  - Typical Structure
    - Co-PIs
    - Biostatistician
    - PD
    - Intervention Delivery staff
    - RA/technicians
    - Programmers
    - Core resources
  - What % of their time will be spent on the project? Calculate work load/pt recruitment against staff time
  - How will you cover the rest of their time? Consider your portfolio, and possibility of shared staffing

# Other Categories

- Equipment:
  - must be > \$5K and have 1+ year life span
  - Should be complementary to existing equipment; NIH doesn't provide equipment start-up support
- Other Direct Costs (supplies)
  - Standard computers
    - Have to demonstrate that it's dedicated to the project
  - Supplies; less vulnerable to cuts
  - Animal Costs
  - Equipment maintenance
  - Can include well-justified publication costs
  - Travel: provide detailed justification; ~ \$1500/trip max

# To Sub Out or Not To Sub Out

Giving someone else a sub on your grant makes sense when:

- need key personnel not at home institution
- can build collaborations with needed expertise
- long-standing Co-I moves
- access to key resource requires collaboration (e.g. not purchased service)

But Consider Costs:

- fewer resources to build your team
- more to manage; increases scrutiny of your effort

# Budget Justification

- Can use to supplement info in text on personnel
- Be very detailed
- Provide road map for how costs were calculated
- Organize by budget section; provide summary data where practical

# Budget Justification -- PERSONNEL

- Fringe benefits have been calculated at DFCI's currently negotiated rates, 34 percent for MD or PhD, and 28 percent for all others. Salaries have been increased by four percent in future years to adjust for inflation.

## Karen M. Emmons, Ph.D., Principal Investigator

- Salary/Effort 15%, years 1-5
- Background: Dr. Emmons is the Deputy Director of Dana-Farber Cancer Institute's Center for Community-Based Research (CCBR), a Professor of Society, Human Development and Health at the Harvard School of Public Health (HSPH) and Dana Farber Cancer Institute (DFCI), and leader of the Dana-Farber/Harvard Cancer Center (DF/HCC) Initiative to Eliminate Cancer Disparities. Dr. Emmons was the Principal Investigator of the Healthy Directions study (HD-1), and is the PI of Healthy Directions 2. In addition, he brings a long history of intervention research targeting smoking, physical activity and diet and the use of motivational interviewing and tailored health education strategies. Dr. Emmons has a strong track record in the conduct of risk reduction interventions with lower income, multiethnic populations.
- Responsibilities: As the PI for the parent study, Dr. Emmons will be responsible for the administrative, fiscal and scientific oversight of the competitive revision. he directs the team of investigators and staff involved in the design of intervention protocol and evaluation tools including surveys, process evaluation and qualitative evaluation. In addition, he has final sign-off authority on intervention and evaluation protocols. he is responsible for ensuring the implementation of the Institutional Review Board (IRB) protocols, and works closely with the Harvard Vanguard Medical Associates (HVMA) providers to ensure smooth integration of the project into their daily operations. Dr. Emmons is not requesting additional effort on this competitive revision- the proposed activities fall within her responsibilities as covered on the parent grant.

# Jimmy Jones, MS, Project Director

## Salary/Effort: As tabulated above

- Background: Mr. Jones is currently the HD-1 project director. In this study, he participated in the development of the intervention and data collection protocols, office audits and office characteristics surveys, the physician training protocol and development of study materials. He also oversaw the pre-testing of study materials and intervention protocols, and was responsible for the training and daily supervision of the study staff. In addition, he has been responsible for making sure that study timelines were met and for administering the budget. Mr. Jones, with many years of experience working for a Managed Care Organization, brings his expertise in managed health care delivery systems to this project. Additionally, he is a trained Tobacco Treatment Specialist.

Demonstrate  
Competence/Experience

# Jimmy Jones, MS, Project Director Salary/Effort: As tabulated above

High Level of Detail re  
Responsibilities

Responsibilities: Mr. Jones will be responsible for managing day-to-day project activities. He will oversee the development and maintenance of our relationship with the Harvard Vanguard Medical Associates (HVMA) Health Centers. He will manage the budget and the day-to-day implementation of the project intervention and evaluation protocols. In addition, Mr. Jones will oversee the implementation of the office audits and characteristic surveys, as well as the office system intervention and capacity building plans. he will assist Dr. Emmons with the preparation of project protocols for the Institutional Review Board (IRB). He will assure that intervention protocol is being delivered as planned. he will hire and train Research Assistants and Health Educators. he will supervise the Research Assistants and Health Educators on the implementation of the recruitment and intervention protocols, as well as the collection and documentation of process evaluation data. He will serve as the day-to-day contact with the HVMA centers and our collaborators at Harvard Pilgrim Health Care (HPHC), in order to streamline communication between the project, HVMA and HPHC. Specifically, he will work closely with the HPHC subcontract Project Director, to assure a smooth integration of project activities in the HVMA health centers, including the implementation of the sustainability pilot in the intervention sites. Mr. Jones will also form the Health Center Advisory Committee. In collaboration with the Health Center Advisory Committee and Dr. Emmons, he will develop a sustainability plan to increase the likelihood that the health program becomes institutionalized within HVMA and that interventions continue at the conclusion of the study. he will also be responsible for developing the process tracking and data transfer and collection protocol. In collaboration with Ms. Lederman, he will administer and coordinate appropriate systems for data collection and institute strategies to maximize response rates. he will oversee adherence to project timelines. he will work closely with Dr. Emmons to ensure that the involvement and enthusiasm of the HVMA providers is maintained. This will require a substantial on-site presence at all 10 health centers. he will be a member of the IWG, where he will provide her expertise in the development of intervention messages related to smoking cessation.

# Budget Justification -- PERSONNEL

## To Be Named, Research Assistant 1

Salary/Effort

Background: 7  
years research

Responsibilities:  
recruitment,  
with manuscript



**CUT!**

and 1-2

participant  
helping

# TRAVEL

- Local Travel to health centers (Year 1: \$250; Years 2 and 3: \$7,800 each year; Year 4: \$1,300)
- The Research Assistants will be visiting the Harvard Vanguard Medical Associates health centers to foster relationships with the health center's staff, to determine the logistics around recruitment and survey administration, to recruit eligible patients and to administer surveys. An average trip cost for local travel has been estimated as \$5 each trip, which would allow for mileage and/or parking and tolls at a range of 10 to 15 miles. During Year 1, there will be an average of five trips to each of 10 sites, totaling \$250 ( $\$5 * 5 \text{ trips} * 10 \text{ sites}$ ). In Years 2 and 3, this amount would increase to an average of three trips each week of the year to each site, totaling \$7,800 ( $\$5 * 3 \text{ trips} * 52 \text{ weeks} * 10 \text{ sites}$ ). In Year 4, there will be a weekly trip only to the intervention sites to oversee the implementation of the sustainability pilot ( $\$5 * 1 \text{ trip} * 52 \text{ weeks} * 5 \text{ sites}$ )

# Drown 'em in Detail

## OTHER EXPENSES

### Development of Intervention Materials (Year 1: \$30,220)

- We will develop 2 personalized feedback reports, 12 tailored print materials, 12 companion family/friends materials, 12 mail-back reply cards, a community resource guide and an organizational toolkit. In addition, we will develop a project brochure, and some tip sheets. The first personalized feedback report will be distributed after the baseline survey and the second will be distributed after completion of the 1st follow-up survey. We estimate that 60% (810) of the participants enrolled in the intervention will choose to receive the intervention via mail, which would mean delivering the 12 tailored intervention contacts via mail over a six-month intervention period. All the intervention materials will be available in English and Spanish.

### Survey Incentives (Year 2: \$13,500; Year 3: \$10,800; Year 4: \$4,556)

- At the beginning of Year 2, we will begin to conduct the baseline survey. The follow-up surveys 1 and 2, will take place 1- and 12-months post-intervention, respectively. A total of 2,700 baseline surveys will be administered. We are estimating a 75% retention rate at the final survey, as a result we are expecting to have 2,025 participants for follow-up survey 2. In HD-1, we used incentives successfully to ensure an acceptable response rate. Our plan for incentives will be adapted as necessary, based on the findings from our formative research. In Year 2, as an incentive for completing the baseline survey, we are requesting \$13,500 to purchase \$5 vouchers to pay for the participant's parking. In Year 3, as an incentive for completing follow-up 1, we are requesting \$10,800 to purchase 40-minute phone cards at \$4 each. In Year 4, as an incentive for completing follow-up 2, we are requesting \$4,556 to purchase 6 stamps at \$2.25.

# Tidbits

- Explain dramatic costs shifts from year to year
- FB rate has to match rate in grantee organization's rate agreement
- Link your budget to project goals

# How to Build Your Research Team in Tight Times

- Keep the team lean
- Develop studies that utilize existing resources where possible
- Integrate technology for first responders; reserve high touch strategies for where needed
- Share resources
- Use institutional resources (e.g. CTSAs, cancer center cores)
- Collaborate on others' grants via a sub
- Other ideas??

# To Sub In or Not To Sub In

Having a sub on someone else's grant makes sense when:

- You need to balance your portfolio/effort
- You have an opportunity for substantial effort for yourself **and** your team
- You are building your national reputation

But Consider Costs:

- Does it build your team?
- Are you getting carved into increasingly smaller pieces?
- Will it distract you from your own research program?

PI: 20% of you  
100% post-doc  
20% RA  
50% PD

Co-PI (sub):  
20% of you

-- or, 70% of you has to cover 100% of your research team

# Summary

- Plan ahead– way ahead
- Get input from experienced study coordinator
- Be realistic
- Write a strong budget justification
- When planning each budget, think about your whole portfolio, and support of your team overall