Budget Building Blocks

Session Transcript: 2022-2023 Grants Conference

Rosalina Bray: My name is Rosalina Bray. I am the NIH's Extramural Staff Training Officer located in the Office of the Director, Office of Extramural Research. And I am pleased to introduce to you our expert presenters today, Emily Linde and Glen McGugan.

Emily Linde: Thank you. It's a pleasure to be here today to talk to everyone from across the globe. I wanted to let you know that I am the Director for the NIAID Grants Management Program, and I will be bringing a perspective from the administrative side. I am joined by my colleague, Glen McGugan, who is a Program Officer also with NIAID, and he will be bringing a programmatic or scientific perspective. Even though we're bringing our own perspectives to this talk, I hope that you will see the grants management and program work very closely together here at NIH and that you'll see that through this presentation. And with that, I'll turn over the first bit to Glen.

Glen McGugan: All right. Yeah, so thanks so much, Emily. I was just going to say briefly that, as scientists, we are taught to design experiments, conduct research, write articles, make presentations and even, in some cases, write persuasive applications for funding. However, we're not usually taught very much about creating a budget to pay for the science that we're proposing. So while the science is certainly the most important aspect of your grant application, it's really necessary to also pay attention to the budget, and we hope to point out some of those features in the talk today. So what are some of the tips getting started, Emily?

Emily Linde: So, I would say the very first thing that you need to know when considering an application is where to get started, and that's with the Funding Opportunity Announcement. Please note that you may hear us transitioning from what we've been using for years as the Funding Opportunity Announcement to the Notice of Funding Opportunity, or NOFO. But you may hear us using that interchangeably. But in essence, this is the announcement that lets you all know that we are seeking application, and that announcement is going to let you know a lot of really important things like the number of years of support you could ask for. Is there a dollar limit to what you could ask for for that specific application? What type of budget do you need to submit? Do you need prior approval to submit that? And we'll cover some of those things throughout this presentation.

Glen McGugan: Yeah, next slide. So this is an example of one such Funding Opportunity Announcement. So program staff such as myself help to write these, and as Emily mentioned, there are a few places that you want to look like section one and section four, and it's here that you can see some of those limits on the budget as well as the number of years. And then in section four, it will list the type of budget, so this could be a detailed budget or an R&R budget or also a modular budget, and we'll talk about some examples of those and specifics of those in the next few slides. So the first thing is to know the limit, as Emily was mentioning, as I mentioned in the previous slide. So there may be a funding limit for the Funding Opportunity Announcement. There may also be some expenses that are unallowable like lobbying or entertainment, for example. And sometimes there will be links in the funding announcement for related notices that will provide updates or even clarifications. The next is to identify what is really necessary and reasonable for the work that you're proposing. You want to provide a really clear rationale for your budget. Now, this is not an exhaustive list of pitfalls, but here are a few of the top ones that we often see. And I would say the most common is the very first bullet, and that is over or underestimating the cost of your proposed work. So we'll talk a lot about that later in the talk. The other thing is large pieces of equipment. Now, while equipment is possible in your grant application, if you put a very expensive piece of equipment in your first year, this may suggest to viewers that you have an insufficient environment to conduct that research, so be careful for that. Also, make sure that you rationalize your personnel and really give a justification for all of the costs in your application. It's important to note that the budget is not a scorable item by reviewers, but they will comment on it, and they can even reduce the budget based on their recommendations. Next slide. So what are some cost principles, Emily?

Emily Linde: So some of the cost .. . These are the four cost principles, really, that you need to be aware of when considering your budget. So the first thing that you need to consider is, are the costs that you're requesting reasonable and necessary for the research of that specific grant? Is it allocable to that grant? And let's say that it is both reasonable and allocable. The next thing that you need to consider is, are those costs consistently treated at your organization? So you need to treat them the same way regardless of what the source of funds are. And then one final thing to consider is, are they allowable? Do they conform with the NIH terms and conditions or policies are or what the allowable costs are listed in the NIH GPS or in the code of federal regulations?

Glen McGugan: Okay, next slide. Let's talk briefly about the types of budgets. Now, there are two basic types, the modular and the detailed budget. This will depend on the type of application as well as the budget that you are requesting. Notice here, they both have different forms and different research project types. Next slide. So let's talk about the modular budget first. So the modular budget, in general, if your grant application has an annual direct cost less than or equal to $250,000 per year, then you're required to use a modular budget. Now, these modular budgets are built on modules of $25,000, so what you want to do is lay out a budget for everything that you would need to perform the science, and then round that up to the nearest $25,000 increment, and then this is what you would request up to $250,000. Importantly, there's no categorical budget that's required, so no detailed or itemized budget, but we always recommend that you maintain a detailed budget for your own institution's records. These will be important for you and certainly if the NIH asks for that detailed budget later. Next slide. So this is a simple work flow that you can use to decide if you need a modular or a detailed budget. So, briefly, if you're requesting direct costs that are equal to or less than 250K per year, and you're applying for a research project grant like an R01 and you're located in the US, then you are probably required to use a modular budget. If any of these things are not true, then you may be required to use a detailed budget. Next slide.

Emily Linde: So the modular budget is really intended to be a streamlined version of the budget. That means that the budget justification would match that. It is also streamlined. What you would need to let us know is which personnel were involved in this application. Let us know their name and the role that they're going to be playing and the number of person months that they'll provide. But you don't need to provide us in the budget justification with what their salary is or what the fringe benefits are. If you have some award agreements or consortia, or you anticipate that you will, you should list the costs for each of those including the total direct costs for those and the anticipated F&A rounded to the nearest thousand. Additionally, in your budget justification, you're going to want to explain any variations in the modules that are requested. So if you have more modules in the first year than you do in the second year, you would want to let us know why that's true. For example, you might need to request equipment in the first year. And you're also going to want to be sure that you know that the direct costs when looking at this cap exclude the F&A for the third party. And, lastly, you would want to explain to us any variations in calculation of the F&A itself. Do you have exclusions for equipment or tuition remission or something like that? And make sure that it's clear to us what you're excluding.

Glen McGugan: So tell us a bit about the budget components. This is something that usually confuses even program staff, so .. .

Emily Linde: Thanks, Glen. So there's a few different types of costs. Aand I haven't listed every type of cost for all grant applications, but these are the most common for research applications, right? And those are actually just four different categories of costs. Those are the direct costs for things that are directly allocable to that project, so your time on that project or a research technician's time on that project, travel or supplies or equipment specific to that project, so directly supporting that project. There's the facilities and administrative, or F&A costs, which we also sometimes refer to as indirect costs. And those are costs that can't be readily identifiable for that project, right? So they can often be, for example, costs for compliance, or, for US organizations, really the facilities costs. For foreign organizations, that's really limited to compliance, so those are the F&A costs. If you are an SBIR, small business, or STTR applicant, you may also request a fee. That fee is limited to your normal profit margins, and it cannot exceed 7 percent. All of those costs combined are referred to as the total cost. So for most research application, that will just be the direct cost plus the applicable F&A. If you are an SBIR applicant, it will be both of those costs plus your fee. All costs must follow the cost principles. And now, I'm going to talk to you a little bit about some of the sections within the budget. For the first section that you'll get to is the section on personnel, sections A and B. And here is where we're capturing the effort and salary requests for the individuals. So for a detailed budget, you would let us know what the effort is and what the salary is, and we'll get back to that in a little bit. In section A, you're going to be listing the key personnel and their salaries. And in section B, you're going to be listing others involved in the application that are not key, for example, co-investigators, technicians, postdocs, undergraduate or graduate students. And they're going to be listed in aggregate. And you're going to want to make sure that your budget's justification clearly tells us how many individuals are involved and what type of effort they're devoting to the award. So let's talk a little bit more about salary requests. And in this version, let's make the assumption that this example is for an organization that uses calendar months as their effort basis. So in that regard, if you have a calendar month effort basis, and you're devoting nine person-months, then you can request up to 75 percent of your salary. And in the coming slides, we'll talk a little bit more about the legislated salary cap.

Glen McGugan: So just a bit about personnel from the scientific perspective, so it's important to note that for most grant applications, personnel is going to be a large portion of your budget. We're talking 80 percent of your budget. So you really want to make sure that everybody listed in your budget has a specific role on the project, and be realistic about what you think they can accomplish and also the level of effort that Emily was talking about. Now, I would say this is one of the most common questions that I receive a Program Official, particular from new investigators. How many people do I need? What effort should they have? And unfortunately, there is no magic algorithm to use for this. It really depends on the nature of the science you're proposing. So what I would recommend is contacting a Program Official or people in your department, other scientists who are conducting similar research, and they can kind of give you a guide, particularly if you're a new investigator, as to what you should request. Next slide.

Emily Linde: So a little bit about the salary cap. The salary cap is actually a legislated mandate, which dictates the amount of salary that can be compensated via an NIH award. In this case, the salary cap is increased to just over $200,000. But when you're thinking about your budget application, what we are going to recommend that you do, and I will use the word recommend, because I've been in this business a long time, and even though we provide this guidance, we don't always see budget applications come in this way. We recommend that you include the person's actual institutional base salary. That base salary may exceed this cap. You may ask me, "Why are you going to do that?" The salary cap often changes year to year, and if you haven't requested what your actual base salary is, and you've self-selected to limit it to the current salary cap, that's the amount that we can provide you in your budget. If you have requested over that cap because your actual salary is over that, then we can then adjust it to the new cap when it comes out. So we definitely suggest that you do that. We don't always do that, but please be sure, if you're not doing that, that you are noting in there that, with an asterisk, we have requested up to the current salary cap, but our salary actually exceeds that. That gives us the ability to adjust it at the time of award. So for equipment, and I think I saw a note fly by in the chat about this, equipment is defined by NIH as an item that costs $5,000 or more and has a useful service life of greater than 1 year. Please note that your institution can have a lower amount that they define as equipment, and then you would have to follow that amount. Organizations cannot have an amount that's greater than the $5,000 amount definition that NIH uses. And some related considerations to equipment, we usually see equipment in the first year. That's because we would expect for it to be used over the life of the project. If you're using a modular award, please be sure that you're justifying why those extra modulars are needed in the year that you've requested that equipment. Be sure that it's justified. Why do you need this equipment? And also consider, especially for large pieces of equipment, including a price quote for more than one. We may ask you that prior to the time of the award.

Glen McGugan: So what about travel? This is a question that I also often get, and in general, travel is allowable on your NIH grant. And for most people, this is for travel to scientific meetings. You want to present your research progress, for example. But this is usually pretty small, so a couple of thousand dollars per meeting per person per year. But there are times when you may want to request a larger travel budget, so particularly as an example, let's say that you had a research project in a different country, clinical project, for example, and you needed to collect research samples or research organisms. In that case, it may be necessary to have a larger travel budget, and that's fine as long as you clearly justify it in the application as to why this travel is crucial for the science you're proposing. Next slide.

Emily Linde: This one, I'm not really kind of going to cover other than to let you know that NIH rarely uses this cost, and if we expect to see costs in section E of your budget, we will expressly state so in your funding opportunity announcement. Some other direct costs that you need to consider: the materials and supplies needed for the personnel that are involved, equipment or equipment maintenance, tuition remission, your subcontracts. The main thing here is to make sure that you provide some level of detail in your budget justification so we know why you're requesting it. So let me give you one example. If you're requesting consultant costs for $5,000, and then all you write is, "Consultant cost, $5,000," in your justification, we're going to be asking more information. We're going to want to know how many consultants. How much time are they devoting? How much money are they getting for that period of time? So that's the sort of question that a grant administrator might have. The other thing that you really need to pay attention to is a Consortium Agreement, and these are used when you're planning to have a subaward agreement. Please note that the formal .. . Award, once it's awarded, is between NIH and the prime, and the prime grantee then would be responsible for overseeing the work of the subrecipient. That means you need to have a really good subaward agreement that defines what you're doing scientifically and programmatically, but also from a financial and administrative point of view. And I highly recommend viewing the section in chapter 15 of the GPS that addresses that and those requirements. Whoops. I went one too fast. The budget justification .. . Glen, is this one mine?

Glen McGugan: Yes.

Emily Linde: Ah.

Glen McGugan: I believe it is.

Emily Linde: Okay, so this is the one thing that, if you take home nothing else from this talk, to know that the budget justification should match what's in your dollar figures for your overall budget and the rest of the section that we went over. And it should be clear to anybody picking it up, right? That's usually the standard that I try to have people go to. It needs to be clear what you're asking for and why you're asking for it and how you reached those dollar figures.

Glen McGugan: And from the programmatics point on the same slide, if you take nothing else away from the talk, this last point: significant over or underestimation of your budget, it really suggests to reviewers that you have a lack of understanding of the scope of the work. And while it's not a scorable item, this will negatively impact their overall view of your project. So you really want to make sure that you only request what you actually need. Next slide. Next slide. So on the same lines, how do program officials and reviewers use that? As I mentioned, this is not a scorable item. This is more an administrative. But, importantly, after they review the science, the reviewers will discuss your budget, and if it's overly inflated, they may suggest cutting your budget. And pay close attention to this last point in red on the slide, and that is that reviewers' recommendations are usually followed by the institute and the program staff. So make sure that you only request what you actually need for the project. Next slide. So these are some special situations. I won't belabor the point, but there are times, if you need to request more than $500,000 per year in any single year, this requires prior approval from the institute staff. This slide says 6 weeks before submission. I would say that's a minimum, so you want to reach out to Program Officials early because each institute may have their own process for doing that. And just having an MPI application is not the sole justification for exceeding that. And then, finally, if you're a well-funded investigator, meaning you have multiple R01s, for example, make sure you reach out to a Program Official because institutes sometimes impose caps on the number of applications that can be funded per lab. Next slide. So what happens if you don't receive the amount that you requested? As I mentioned, sometimes it's the study section that will reduce the amounts. Contact a Program Official, and discuss how that might impact your project to see if some of those can be restored. There's no guarantee, but you should discuss that. And then the second point is that sometimes the institute itself may reduce the budget. Each institute has its own financial management plan. Again, you would reach out to the Program Official. Importantly, if you need to revise your application, revise your work, don't do this without seeking prior approval from NIH before you engage in that. Next slide.

Emily Linde: So ideally your science is going to be driving what your budget is, right? The budgets, however, please keep in mind, need to be consistent with what your institution's policies are for those budget amounts. The amounts should be reasonable and based on what your current needs are. Please don't request contingencies or uncommitted promotions. That means, don't anticipate that you will have a promotion and increase your salary in the budget request. We will take that back down on the administrative side when we see it. And justify everything, especially anything that's an unusual item, a large-ticket item, variations from year to year. There are budgets that will go up and down from year to year based on the science that's happening. Just justify that for us so that we know why those changes are happening. Some common budget errors, so this is not an exhaustive list, but these are the ones that we see most frequently: requests that exceed the amount of budget allowed in the FOA; using a modular budget when a detailed budget is needed or vice-versa; not seeking permission to exceed $500,000 before submitting the application; modular budgets not including F&A for their consortium. Costs in the budget .. . and this is the number-one thing. Costs in the budgets differ from the justification. The calendar months don't equate to what's in the budget request; a miscalculation of the indirect cost rates; or the years for your budget don't actually match the amount of time that you've requested overall. And not contacting NIH staff. If you have questions, it's best to ask before you submit your application rather than after.

Glen McGugan: I think we were right at 15 minutes left, so do you want to skip through the last few? What do you think, Emily?

Emily Linde: I think .. . Do you want to do some highlights on the last few just really quickly?

Glen McGugan: Sure, sure.

Emily Linde: Okay, so for this, I would just say, please consult the NIH Grants Policy Statement or see FR200 for allowable and unallowable costs. Go to the next one.

Glen McGugan: Yeah, this is one of the most common misconceptions, just to note that the application .. . The grant is actually awarded to the institution, not to an individual. So the institution is responsible as well as the others listed on the slide here. Next slide.

Emily Linde: Pre-award costs, please know that pre-award costs may be limited by either the type of award that you have or your institution's own policies, and they're only applicable for competing awards. But you can find this information also in the NIH GPS. The Notice of Award: this is the most important thing in many ways. If you are selected for funding, if we've worked up your award, and we are going to give you an award, you will receive what's called a Notice of Award, NoA. That NoA is a legal document telling you exactly how much money we have given you, how much money we plan to give you and what the regulations, policies and special terms and conditions governing that work are. And so we definitely want you to read your NoA when you get it and understand what it's saying. If you have questions, please ask. Especially, I would like to highlight that most restricted terms are in section four, which is very near the end of the NoA, so please read the entire thing. If we have restrictions on that award, you are expected to abide by them. In fact, once you draw your first dollar, you have agreed to everything that's in that NoA including by reference. And that includes the regulations, the NIH Grants Policy Statement and the terms on the award.

Glen McGugan: Then, finally, you will request a budget, as we mentioned earlier, but that budget may be cut. And so make sure that when you get your notice of award, you look carefully at the budget because that's the money that you're going to have to do the work. If you need changes or there's going to be delays, always reach out to Grants Management or the program before you implement those changes. Next slide.

Emily Linde: Some additional thoughts, these are taxpayer dollars that we are committing when the GMO issues the award, so please be aware of that. Spend your money wisely. We are held accountable by the public and by Congress for spending those taxpayer dollars. And if you have questions, please consult your Program Officer or your Grants Management Staff. Some resources here, and I won't spend any time on that slide, here's our contact information. And with that, we're very happy to answer questions.

Rosalina Bray: Thank you very much, Emily and Glen. We have a number of questions, but we are going to start with the questions that have been uploaded. The first question is, what are the rules regarding budget projections on salaries or other costs in proposal budgets? Should the salary cap be projected for annual increases on the budget calculations? Should they be disclosed in a justification when the cap is used?

Emily Linde: So, thank you. So that's really a question for me .. .

Glen McGugan: Yeah.

Emily Linde: .. . from the administrative side, and that is a great question. So it really sounds to me like people are interested in knowing two things. Can you project changes in salary over time even though those aren't committed?

Rosalina Bray: Correct.

Emily Linde: And, can you include a cost of living increase in those salaries, right? So one thing is for sure. Don't include projected salary changes, right? In that way that you think you're going to get a promotion, or you think the salary cap is going to change. You shouldn't do that. It's a little bit trickier to answer the question on cost of living. That is not treated consistently across NIH. Some ICs will allow for cost of living up to 3 percent usually, and they will let you .. . so you can request it, and they will actually include it in your final award and your .. . out year commitments. NIAID has a policy that specifically states we will remove any cost of living requests. In addition to that, Congress can. In some years, they have said you are not allowed to award any cost of living increases. So that's why that one is a little bit more challenging to answer. I think that gets to the heart of most of the questions, so you can ask for it, but depending on the IC for the cost of living, you may or may not receive it.

Rosalina Bray: So, yes. I think when you started it, you did open it, open the question, answered the question. So what was the required percent effort that has to be included for the PI in the budget for an R03? And they're asking this question because R03s have a smaller budget, and they're thinking that perhaps they can use this funding to support data collection or support a grad student. So what are your thoughts? Is this percent of the budget for the PI, or can it be used for other efforts?

Glen McGugan: I can speak to it from the scientific standpoint, and this goes not only for an R03 but for any application. If you are a new investigator, then you're going to usually put more percent effort than if you're a more established investigator. The R03 does have a smaller amount of money, but you need to convince reviewers by the amount of effort you're putting on the particular grant that you are committed. And again, on the earlier slides, if you commit a very low effort, and you say, "I'm planning to do X, Y and Z," it's going to cause them not to have confidence in that, that you're going to be able to do it. And while we're on the topic of that, let's say that you're a new investigator or an R01. In general, people normally .. . At least 25 percent effort is pretty normal, 25 to 35, for a new investigator R01. But again, there's no magic algorithm, right? But it depends on what you're proposing to do.

Rosalina Bray: Well, let's stay on this salary question. Would you expect a slightly higher FTE by a new investigator compared to a seasoned investigator? It's one of the questions that are coming forward. I wouldn't .. . I think that .. .

Emily Linde: So I think that what I would answer is, what is sometimes, I think, frustrating for people that attend this conference, the appropriate answer is, it depends, right?

Glen McGugan: Yeah, it does.

Emily Linde: It really depends on the science that you're proposing and what role you are going to have. You could be a new investigator, but you may have a lot of postdocs that are working on that, so maybe your effort is less. So I don't think that there is a golden rule. I think Glen would agree with me on that. It depends on the science that you're proposing and what you as an individual are doing on that application.

Glen McGugan: Absolutely, and if you have questions, again, reach out to a program official. Talk to people who are doing similar research in your department, for example. They can kind of give you a guide as to what is reasonable because ultimately, from the NIH's standpoint, we're going to go by how reviewers see this. And these are people, peers, from your scientific field. And if they think this is not appropriate, then they're going to comment on that.

Rosalina Bray: Another question that's coming through is, what's considered a large request for new equipment? Would over 5K be considered a large request?

Emily Linde: So NIH defines equipment at the $5,000 mark, so I probably personally wouldn't think that that's a very large amount. That's the minimum amount that's considered as equipment. But remember, NIH does awards from very small awards to very, very large awards. So I would say that that's situationally dependent, right? Is it a large portion of what you're requesting? We would actually probably have some questions about that, scientifically. But is it proportional to the award? I would probably go with that. On some of the larger awards, we do see large equipment. We will probably ask you for quotes for those, right, especially, so what do I mean, large equipment? So that's probably going to be a little bit of a personal preference for the grants management specialists. If you're over $10,000, I'm probably going to be asking you, as a specialist, can you tell me why you need this, and did you get quotes for this?

Rosalina Bray: You have more justification. So we do have a question that had a number of upvotes. We're going to get to that one because it has the most. The purchasing power of 500K annual direct has been dramatically reduced in the last few years, but PIs feel like to continue to be competitive, they need to propose the same level of activity in R01 applications they're currently writing compared to those they wrote in 2017, 5 to 10 years ago. Are reviewers .. . Do reviewers look at this effort at 500K and what it looks like today versus back then? And how can we balance requesting our true needs without appearing as though we're not being as productive as we have been in the past? So this is a thought for our Program Officer here.

Glen McGugan: This is an excellent question, and I can't tell you how many discussions I've had around this topic because this cap has been around for .. . The 250 cap even has been around for a long, long, long time. I would say that the thing to remember is that people who are reviewing your grant applications are in the exact same boat that you're in, right? They're submitting grant applications to the NIH. They understand exactly what you are up against. So what I recommend is proposing a budget that is reasonable for the science that you're proposing to do. And if you run up to a situation where that's going to run you above the 500 cap, reach out to a program official. And that's what people do. And we provide those justifications internally, and then it will go to review after that. So, yeah, I appreciate your concern.

Rosalina Bray: Thank you so much, Glen, and our last question that we can take for now is, there's a lag between grant submission and grants being funded. What's the leeway to adjust the the budget once the grant is funded?

Glen McGugan: Is there any leeway, Linde?

Emily Linde: Well, so, there is some leeway, right? So what happens is, we work up the budget based on the application that was submitted, right? So if you haven't requested funds, we can't put it in there, right? We have to base it on the application that was submitted. But once we have issued that award, for the most part you are allowed to rebudget as long as you are not changing the scope of what you proposed, right? As soon as you would change the scope, you would need to have prior approval to do that. I would say if we have cut your budget beforehand, and you are concerned about meeting that scope, you need to have a discussion with us and negotiate with us what that scope is prior to us issuing the award.

Rosalina Bray: Excellent. I hope that answered the question, but that was very succinct. Thank you so much, Emily. So I would love to give us more time, but we are coming to the end of this session. So I'm going to ask both Glen and Emily any final thoughts before we close.

Glen McGugan: I guess the final thought I would say is that when you have questions, please don't hesitate to reach out to a program official or GM specialist. That's what we're here for. Don't be afraid. And if we can't answer your question, we'll find out for you. So, Emily?

Emily Linde: And I would echo that same sentiment, right? So we are the people that may be able to answer your question. If you're not coming to us, you may not get the answer to your question. The other person who is going to be really integral in your application process is the research administrator at your organization. They are also a very, very valuable resource.

Rosalina Bray: Well, thank you both so much for presenting during this session, and we thank our attendees, as well.