Revising & Resubmitting Rejected NIH Proposals: What You Should Know Before You Try Again

Presented by: Dr. Marjorie Piechowski

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Revising and Resubmitting Rejected NIH Proposals: What You Should Know Before You Try Again

Moderator: Welcome to today's webinar, brought to you by Principal Investigators Association.

Today's program is entitled: Revising and Resubmitting Rejected NIH Proposals: What You Should Know Before You Try Again.

This is a 60 minute program.

At this time, all participants are in a listen only mode. Later, we will conduct a live question and answer session and instructions on how to participate will follow at that time. If we are unable to get to your question during this conference, please email your questions to audio@principalinvestigators.org, again that email address is audio@principalinvestigators.org

It is my pleasure to introduce your speaker for today, Dr. Marjorie Piechowski

Dr. Marjorie Piechowski, currently Director of Research Support in the College of Engineering and Applied Science at the University of Wisconsin-Milwaukee, has over 25 years of experience in faculty grant development, research administration, and technical writing at three midwest urban universities. These previous positions included Grant Information Specialist at Marquette University and Director of Sponsored Programs and Research at DePaul University.

Widely recognized for her expertise in grant development, technical writing and research administration, she has made over 80 invited presentations at regional, national and international meetings. She is a member of the National Council of University Research Administrators and is a past president of the International Society of Research Administrators, which also granted her its Excellence Award.

Dr. Piechowski's technical writing clients include over 50 corporations, not for profit organizations, faith-based organizations, colleges and universities, municipalities, and government agencies. As an independent grant writing consultant she has written more than $13 million in successful grants for these organizations. She has also served as a grant reviewer for the U.S. Department of Education and the National Institute on Aging.

In addition to her work in grant development, Dr. Piechowski has taught undergraduate and graduate grant writing and technical communication courses at four colleges (University of Wisconsin-Milwaukee, Marquette University, DePaul University, and Mount Mary College). Dr. Piechowski's degrees include a B.A. and M.A. in English from Marquette University and a Ph.D. in English from the University of Wisconsin-Milwaukee.

And now let's get started, welcome Dr. Marjorie Piechowski.

Dr. Marjorie Piechowski: Thank you, and good afternoon to all of you. I'm having some trouble advancing the Power Point. So, today we're going to talk about some ways in which you can improve your resubmission of NIH proposals and perhaps the submission as well. What we will look at over the course of this hour is:

- How do you interpret agency reviews?
- What are some of the multiple and complex reasons for proposal rejections? It's often more than one reason.
- Is it feasible to think about resubmitting?

- What is your likelihood of future success?
- Then we will look at some specific strategies for revising proposals based on the reasons for rejection.

We'll start with some facts of life about rejections. Everyone gets rejected. Most proposals, in fact, are rejected the first time, sometimes multiple times—75-90% depending on the agency, the program, the funding cycle, and very few first applications do get funded. However, NIH is probably the champion agency in demonstrating that resubmissions do succeed. The most recent report I could find from 2009 mentioned that 35% of second applications do get funded. This was across all institutes. Different institutes have different funding levels. We would like to think that rejections are a learning opportunity and we actually do believe that reviewers are mostly accurate and objective. There will be times where there is an unfair reviewer, but most of the time, the peer review system works very, very well.

The other component of revising and resubmitting is that grants' success indeed is a lifelong process. Sometimes it takes a couple years to succeed, but these strategies do work.

Next slide. There is a very classic study of NIH proposals that has given me the basis for identifying the problems, but this is also based on my experience. This classic study took 605 rejected NIH proposals and grouped them into four main categories. We'll talk about some of these categories as we go along. The nature of the problem itself accounted for over half of the reasons why proposals were rejected. The approach: 73%. That's huge. That's in your control, how you set up and design a methodology. The investigator—we'll talk about some ways in which the investigator may have caused the rejection and what we can do about it, and then a whole set of other reasons: The institution in which you work; budget requests; inadequate personnel; lack of PI time; unconvincing need; and directions not followed—there's no reason for that to happen; a sloppy presentation, missed deadline and missing proposal components.

With grants.gov, some of these factors are simply not there anymore because you're not allowed to have missing components, missed deadline won't happen because you cannot apply once the deadline has passed, but we'll take a look at some of these other reasons.

So, to revise and resubmit, it's important to remember how the NIH review process works. Your advantage is that NIH has published and established review groups. You look up and know the people who are going to review you. You get a sense of their background, you get a sense of their experience, and unless it's a special one-time review group, you will get the same reviewers another time. There may be some turnover, but in effect, the same people get to see how you've improved and made a difference.

Another important point is that the review process is managed by permanent NIH staff and these are the persons who select, or who work with the reviewers and the review division is separate from the funding division, so it's a very clean process. Usually, only three to five individuals are going to read your proposal in any kind of detail. That's an important point, too, because one person is going to be the lead discussant and the whole review group will discuss the proposal. That means that your abstract and early components of the proposal are very, very important in setting a tone.

Next slide. As of January, 2010, there was a change in the review process. You used to receive scores that were in the hundreds. With the new review process, the total possible score worked into 25 along with a percentile score and a relevant score and, what's important for this presentation, only one re-submission. You will still get the additional space to explain what you did, and most of the same panel will re-review, so when we talk about ways in which you can improve your resubmission, we will be looking at some of the comments and reasons for rejection that we've previously looked at.

Next slide. So, in deciding whether or not to revise, let's take a look at the process to use. The first step would be to analyze the reviews. I know the first response is anger, rejection, feeling awful that all of your work went unrecognized. But what you need to do is go through the reviews a couple times, identifying the types of problems that are brought forth, looking for the consistency of comments and looking for whatever strengths may counterbalance the weaknesses. Keep in mind that you don't need to address every single weakness, if in your judgment it's not a valid weakness. It would be really useful at about this stage in deciding to revise to have other people read the reviews. This is what I do for the faculty members. I'll sit down with them, read through the reviews, and try to make some determination, some rank order about what was the most important problems and then figure out how to address these.

Another component to think about in deciding whether to recompose and resubmit: sometimes it was a one-time opportunity and you wrote specifically to that RFP. If the program is still available, you may have the opportunity to revise and resubmit. You also may have to revise and resubmit to a totally different program. So it comes down to a clear analysis of the types of problems, reassessing your time and commitment. These are two important components. Is the research still relevant? It was a one-time special request for proposals, maybe you wrote just for that and you're not going to re-tailor for a different program. Is it still important to you? Is it still important to your field? These are the primary questions to ask yourself. Sometimes the answer is no and you're just going to start over with a different project, a different program, a different deadline.

Let's start with some reasons that are, in a way, out of your control. Sometimes proposals are rejected for administrative or regulatory reasons. Sometimes, it's a matter of agency guidelines that have caused your proposal to be rejected or not even reviewed. Sometimes the format, sometimes there are restrictions in various programs. The restrictions might have to do with dollar amounts, they might have to do with how many applications can be submitted by an institution, there can be a whole variety of administrative or regulatory reasons. Sometimes, the administrative or regulatory reasons are particular deadlines that crop up that are outside the regular cycle. Sometimes there's an ineligibility. When I say ineligibility of an institution, for example, there are some programs that are for low receiving NIH institutions. They don't have a high volume of grants. Sometimes it has to do with the degrees being given by an institution.

Let's take a look at if those are reasons for rejection, what can you do about them? If administrative or regulatory reasons are what caused your proposal to be rejected, the obvious and not often practiced is to review the RFP very, very carefully and completely. I work with a lot of brand new faculty members who do not read RFPs very carefully, or they read them and don't understand them. You might ask somebody's assistance in going through the RFP extremely carefully and catching the few regulatory or administrative issues that might cause you not to be eligible or not to be funded.

Scrupulously following formats: there's no reason for a proposal to be rejected for these reasons, but there are times when attachments are not allowed. There are times when there are page limits that must be scrupulously observed. Sometimes the restrictions may have been lifted by the time you go to revise and resubmit, sometimes not. Sometimes, if the PI is the cause, if the PI is ineligible, the obvious solution is to switch to being a co-PI, or finding a new PI or even changing the applicant institution as becoming a subcontractor or partner.

Next slide, please. So, if the proposal is rejected because of the PIs, these are typical reasons. The reviewers will think that the PI does not have enough experience, either with research or with management. This is particularly true for large-scale proposals, instrumentation proposals, there's not a demonstration or evidence of enough experience to carry out the project. Sometimes there's very little evidence of experience with grants at all. Another issue why the PI may be faulted is an unclear

description of the work, role or tasks. Who's going to do the work? What's the PI going to do? What are co-PIs going to do? Sometimes the comment is that the publications are inadequate or not relevant to the project, or there's an insufficient or untrained staff. Most of these comments come when it's a relatively new investigator.

So, what can one do? Aside from age and experience, add senior PIs or consultants. It's often done that a brand new PI will add a mentor from graduate school, a senior colleague from your own institution or through another institution through a sub-contract. A good strategy, and it can help counter the inexperience factor. The other way to counter what's seen as a lack of experience in organizing and managing a large project is a management plan, an organization chart. This was not often done in scientific proposals, but it can make a huge difference if it's a complex project. Some sort of time and task chart—I say this from many, many years of reviewing faculty projects before they get submitted. Sometimes the f ocus is so much on getting in the science that PIs don't want to spend any space for anything other than science, such as management plans, organizational charts, time and task charts. If there's a perception that there's not enough staff, or that there's untrained staff, one of the strategies—and it usually goes in the budget narrative—is job descriptions of what the staff members are going to do. Again, if you don't want to take space from the science, this is a very, very good strategy to counter the objection that there aren't enough staff or there aren't enough trained staff.

Sometimes there can be a rejection of a proposal, not quite stated in this way, but sometimes funding agencies, NIH included, have to allocate proposals for reasons that are not just science. Sometimes there is incumbency on the agency to pay attention to geographic distribution, urban versus rural, diverse population. These can be factors. They may be coached in reasons of relevance, they may be coached in reasons of impact, and it really comes down to something like this—that a proposal may be funded or may not be funded because of the nature of where it's located or what population is going to be covered. This is not usually publicly allocated and you don't generally have this in your review, but this can be an issue. Sometimes the reviewers will comment that the problem is too localized and there is a strategy for that. In our case, we sometimes believe that we were rejected because 70 miles away, we have a very major university, University of Wisconsin-Madison and we are a beginning research institution. So there can be, there can be these factors.

If this is the perception of why you may have been rejected, setting the problem at a national context can take away some of the comment about too localized or not appealing to a broader population. Or use the proposal as a case study. Show a wider, larger application. Sometimes it helps to choose strategic partners from other parts of the country, more diverse populations. Sometimes this might be overtly stated, but this can be a reason why a proposal gets rejected.

This is the most important, though: Intellectual/Scientific/Academic, the most frequent reason for rejection. Some of the comments that might be made by reviewers are these: the importance of your topic to the discipline. It might be a wonderful idea, but it might not advance the discipline, it might be too far on the edges, it might have been done too many times. They want current or cutting edge research. They don't want too narrow or too broad a focus, uncommon or unpopular methodology. These are all reasons that will be given if Intellectual/Scientific/Academic are the reasons. Inadequate literature search. This comes up that the PI is not aware of the work done by Professor So-and-so or an unclear disorganized presentation with gaps in reasoning or logic. It may be that there's a perfectly good idea, but it's not clear and it's not presented well.

So, what are some ways to deal with these comments? A very strong introduction, clearly stating why is this project important. Many, many proposals I see plunging right into the science without setting it into a context, an intellectual context, a disciplinary context, an urgency or need context. The literature review—sometimes reviewers will comment that the literature review sounds like a PhD

dissertation. In other words, it's not focused enough for this particular project. That's key. It needs to be comprehensive, but focused. The project somewhere early on needs to be presented in its intellectual context. Sometimes the PIs start too far back into the science without presenting it in a larger intellectual context and scientific context. Especially new researchers don't explain why they selected the method they did and it may be that that's what they learned in graduate school or that's what they know, but reviewers want to know that you chose the method deliberately, consciously, and that you're aware that there are other ways to do it and why you're not using them.

Another strategy to make sure that the ideas show is that the progression of ideas need to be labeled. I have seen proposals that were large blocks of black print, without any sort of formatting, or any way to show how the ideas move from one to the other. If the commentary was that the project scope is too broad, clearly there are three ways to go. One is to add co-investigators and divide up the work. Another is to decrease the project goals and focus more on them, or to add more project time, but there are only three ways to go, if that's the comment.

Project design. The comment can be that there's not enough evidence to support the need for the project. Evidence can be more than just publications and literature review. If the aims are not of sufficient importance, the project may not produce any improvement, the problem is bigger than the PI realizes, the idea is too ambitious, goals and objectives are unreachable, too many, too broad, too vague. As you can see, some of these are too big, some of these are too small. If there's a criticism of project design, it tends to be of these particular natures.

So, project design. A very detailed needs analysis justification for the project, based on data, based on reading, based on previous research.

Specific background data. One of the things I see fairly often with PIs is that in the background data, what's been done on the project before, there's not a clear distinction between their own work and the work of others. It's too subtle for the reviewers to realize that they're saying, 'I did these things before.' That's another strategy to justify the project design, justify the reasons for this project.

Measureable and obtainable outcomes and objectives. I've seen proposals that have had five, six or seven objectives and 14 aims. You really need to be very focused, very limited, and very specific. If the objection is that this is a new methodology, how do we know it's going to work? You clearly need to demonstrate that there's been some previous work and pilot studies it it's a new approach. Because otherwise, how do you convince the reviewers that this will work? If there is concern about the project activities being too ambitious or not ambitious enough, sometimes what will help is a chart, a timeline with the tasks, responsible persons, outcomes. I've seen many proposals that don't have anything, just text and some illustrations. If none of these remedies will help the proposal, sometimes you just have to look for another sponsor or program.

Sometimes proposals are rejected because of budget and this is a bitter pill to swallow. What can be budget reasons for rejecting? The funding agency has an allocated amount of money and sometimes when the proposal comes in, it's just too high for what the program can distribute. Sometimes they're already committed to continuation grants and this is not something you can always necessarily know. Sometimes the issue with budget is the fiscal year cycle and I know NIH has three cycles a year. They try very hard to allocate out their monies throughout the year, but sometimes you have to come in at the end of a funding cycle and there just isn't enough money left to fund you.

Sometimes it's on you, the applicant, for budget reasons. An unconvincing or confusing budget narrative. I just spent this morning re-doing a couple of budget narratives for my faculty members that simply didn't put in enough information.

We don't want a budget to be rejected for inappropriate or unallowable requests. Sometimes it's just bad arithmetic. One of the proposals I was reviewing this morning was using old benefit rates and old indirect costs for facilities and administration rates. One of the target areas for a budget that causes a proposal to be considered badly is very vague travel plans and very vague equipment plans. Sometimes it's just too many staff being requested for the project. Sometimes consultants are requested that have no connection whatsoever to the proposal activities. These are all budget reasons that I've seen over the years that can cause a project to be considered badly.

So. The obvious remedy would be to lower the annual budget, lower the overall request if it's possible to do. This clearly has implications for the project activity so it would cause the project itself to be reconsidered. Sometimes it's an issue of removing budget categories, not requesting them in the budget so they can be covered in other ways.

Another strategy might be when you resubmit. Perhaps in the first cycle of the fiscal year. Perhaps you aim for fall deadline. The strategy for writing a detailed, well-described narrative—I had a secretary years ago who would read through the proposal and every time she came by something that triggered a budget request, she would highlight it and then she would look at the budget and make sure that the two of them matched. I've seen budgets that have had no relationship whatsoever to the project narrative, there would be items requested in the budget that didn't seem to derive from the project. If a computer is requested in the budget, there had better be some way in the proposal that there is some mention of using a computer. The same with research assistants, the same with consultants, so there needs to be a one-to-one linkage between the budget request and the project narrative. This was not true for modular budgets, which ask only for information about the persons working on the project. For fuller proposals, you do get the opportunity to be much more specific in the budget detail.

For equipment, quotes, detailed information; for trips, what I usually advise faculty members to do is not say, 'The PI requests funding to present at professional conferences.' Name the conferences, name the organizations, if you can, name the cities where the conferences are being held, put down the approximate airfare. There are two or three sources that are impeccable. The U.S. Department of State has information on almost every city in the world for hotel and per diem rates. If you use this in budget justifications, no one can say that your budget is too high for such a trip. If consultants are included in the budget, the more information, the better. Not only 'what are they going to do?' but their daily rate, why are they needed, what kind of travel they may need… the more detail, the better. The less about adding salary schedules, job descriptions, benefit tables. At one point, I was being a site visitor on the National Institute on Aging. We were visiting a site in New York City and I was the Budget and Administrative Specialist on the site visit and there was a request for an assistant who would've been doing all sorts of data entry and other tasks, requesting something like $16,000 for a full-time job in New York City. It was inappropriate, it wasn't nearly enough, but the person putting the proposal together thought he could save some money. If you're trying to ask for staff and you've got a salary schedule in your institution, that may be a strategy that you mention in the budget narrative. Certainly job descriptions. Sometimes it's useful to put in benefit tables or benefit information. We have something like six different fringe benefit rates and sometimes you can put in what's included in those benefit rates. So these are strategies that can work if budget was the issue.

Sometimes proposals are rejected because of the institution. Some of the reasons, the perception may be that the facilities are not adequate for carrying out the work, the space is not adequate, there is not sufficient equipment, library resources, some of this can be more perception than fact, but there can be reasons. Sometimes there can be the perception of inadequate financial resources. Some proposals, cost sharing may be an issue, whether it's volunteered, or whether it's required. There may be the perception that there's inadequate research support, not enough graduate students. Sometimes there's a perception that the grant infrastructure of the institution can't support this kind of

grant. There may be legal issues why an institution is not either eligible or there is a perception this is not a good time to award the grant. The institution might be under audit. There might be some sanctions going on. There might be an inadequate compliance history or infrastructure. Over the years I've seen all of these. These can be reasons.

If there's a perception about facilities, I've seen the people put floor plans in, I've seen lists of equipment, I've seen photographs of equipment, I've seen documentation of other resources at institutions across town. For example, we have access to the Medical College of Wisconsin and its resources. We have access to Marquette University. We have access to University of Wisconsin Madison and sometimes those additional facilities might make the difference. Sometimes finding a partner institution to carry out some of the research might help.

If it's compliance issues, clearly they have to be resolved before the proposal can be resubmitted if that was mentioned. I have a paragraph about the grant management system at this institution and if people want to include something, I have such a paragraph they can put in the budget narrative. Sometimes what's needed to document to the reviewers that this is the right institution would be letters of support or commitment. If cost-sharing is an issue that hasn't been clearly described, there needs to be a specification. Is it in-kind? If that's the case, what is in-kind? That usually means people and time. If it's cash, how much? Where's it going to come from? If it's third-party funding, that needs to be identified as well.

Sometimes, and this pains me to say it, proposals are so poorly presented and the format is so bad that reviewers just get annoyed or don't even finish reading it. Presentation can be an issue. If the writing is too vague, reviewers are not going to read it carefully and positively. One of the strategies that can make a proposal almost impossible to read is very long paragraphs that contain very long sentences with very long scientific words. Of course you'll use scientific words. Long paragraphs sometimes appear not to be able to be broken up, and sometimes there's simply careless proofreading, whether it's spelling, grammar, typos or punctuation. Spell-checkers are not terribly useful for scientific proposals. Sometimes the presentation and format is just masses of print without any pictures or format markers. Sometimes—and I've seen this more often than I care to think about—poor quality or mislabeling of images. Especially if there's cutting and pasting going on from other proposals, you can have an image—a Figure 1, a Figure 2, a Figure 5 and then a Figure 3 and that's because they were cut and pasted from previous proposals.

Sometimes, particularly with some of the faculty whose native language is not English, the word choices are simply not accurate.

Reviewers can't really reject your proposal for these reasons, but it certainly influences their reading of the proposal. If it's too hard to read, too vague, terribly long paragraphs, you're going to miss important scientific ideas.

So, what do we do to help our faculty in revising and resubmitting and making sure that this does not rule against them? We try to make sure there's a very clear and specific format. NIH gives a format, but it doesn't tell you where to break up paragraphs, and it doesn't say you can't have blocks of black print. Doing very careful and multiple proofreading—what I mean by this is more than one person needs to read it or you need to read it more than one time with some separation from one reading to another. When a person is very familiar with the content, it's very easy to skip over omitted words, multiple words. It's very easy to think you said what you thought you said and it really wasn't there. If you can use an external person as an editor, this can be very, very helpful. It can be a non-scientific person like me. I can find things for scientists.

There should be headings and subheadings. These are ways to track progressions of ideas and to make sure that you've got everything in that you intended to put in. Frequent and relevant illustrations clearly and accurately labeled.

These last couple of items are something that really work. Short paragraphs. There should be several paragraphs on a page. Not only does it break up the ideas, but it helps the reviewer digest one paragraph at a time rather than trying absorb a whole page. In technical writing, there's a 20-word rule. The idea is from reading research—research on how minds read, how people read. We know that 20 words are about what a person can grasp at one time and then can go on to grasp another 20 words. To put very, very long sentences, you're asking the reader to try to break up the sentences into 20 words, anyway. There's another strategy from technical writing, if you've got long sentences, use short words. If you have long words, you try to have short sentences. Otherwise, it's just too much for the reviewer to follow. These are some strategies.

Now, we've got time for questions, we've got time for follow-up. I'm ready.

Moderator: Instructions on how to participate in the question and answer session.

Dr. Marjorie Piechowski: There is a question: "I would guess these political reasons would not be part of the panel summary."

That's absolutely true. But keep in mind that the panel summary is only the first step in an NIH review process. The panel make recommendations, which then go up a couple more levels and there are two last levels. One is that there are council reviews that are much broader than the scientific reviewers and that's where other considerations can come in, besides the pure numerical and then really, the very last review is the director of NIH. Political consideration can come into those further discussions where they have to balance their portfolio and we know that there can be multiple projects that pretty much have the same scores and the same recommendations and not enough money to fund all of those. That's when sometimes the political considerations could come in. You're right, it would not be written in the scientific panel summary to say that we think that this population is too narrow or we think that we've already funded this project before in that location. That's true, but it can have an influence. I'm trying to give the broadest spread possible from research that I did, from experience, from talking to people, from just learning these things over the years and I'm not saying that would often be a factor, but it can be. Do we have another question?

Moderator: Yes, we do. Karen Coleman, I'm taking you off mute. Please go ahead.

Caller: I've been told by many colleagues that a certain score, for instance, in the 35th percentile, the 38th or the 40th percentile does not bode well for resubmission, that it is very unlikely that the reviewers will vastly change their score to a fundable percentile like a 10th percentile, which is what a lot of grants are being funded at today. Do you have a comment about that?

Dr. Marjorie Piechowski: I do. In a way, that's the 'good news/bad news' about NIH review processes, because you are going to get some of the same people again. Yes, of course you will take their comments and you will say, 'Your reviewer said this, and here's how I answered it:…' and I think your raising a perception point, because they've read it once and said this is what they believe it is and they gave it a score and then, you're right, there may be a perception that you can't improve it enough. On the other hand, it's certainly worth trying. I understand. Can you raise that many points? It depends on what the reviewer said needed to be fixed. It may be a judgment call whether it's worth it. It might be best to start fresh.

Moderator: Do you have any specific recommendations for the proposal that were not discussed during the first submission review?

Dr. Marjorie Piechowski: Meaning that they did not get a set of reviewers' comments?

Moderator: I'm not 100% sure. The question was typed in.

Dr. Marjorie Piechowski: That's what I think it means, that the proposal was not recommended for further review. That leaves you totally in the dark. You don't know what they found fault with. There may be some big suggestions. I don't know if NIH allows you to call the person who handled the review panel and ask. I haven't tried that myself, but that might be a possible remedy. If it was returned without review, it could be any one of these factors we looked at. It could be the science, it could be the PI, it could be any of these.

It looks like we have another question: **There was a comment about resubmitting using new shortened page limits when the original submission was allowed—basically NIH cut in half the number of pages that are allowed for research proposal and the huge question for scientists is, 'What are you going to cut?' If you needed 25 pages before, how are you ever going to do it in 12?**

The answer is that it is very, very difficult. What I find the faculty members are doing is trying to use many more bullet-points and quick ways to get ideas across without as much explanation. What happens is that you can't be nearly as detailed as you were before with the science. You simply can't give all the details. Then you have to take advantage of other strategies—as I was suggesting, sometimes you can put things in the narrative that previously would have gone in the proposal itself.

I'm trying to go back to that question. What else I do with faculty is tell them to write the 25 pages and I'll help them get it down to 12. That's another strategy. Just write the way you normally would and then just start chopping and cutting and seeing, distilling it down to the best 12 pages.

I can't read all these questions, so maybe Kristen, you can help me.

Moderator: No problem, I'll do it. If on an A-1, score is just outside of pay line, are there any strategy tips to submit again?

Dr. Marjorie Piechowski: Can you say that again?

Moderator: Sure. It says, 'If on an A-1, if score is just outside pay line, any strategy to submit again?'

Dr. Marjorie Piechowski: Oh, sure. If you were just below funding the last time, of course revise and resubmit. That may have been one of those where there were other factors that the not being funded, so sure, I wouldn't even hesitate.

I see a question, '**Is revision sent to the same readers within a panel or is the revision given to different readers within the panel than the original readers?**'

That's going to vary by the person who runs the review panel. Sometimes reviewers rotate off, so the likelihood is that yes, you'll get some of the same reviewers, but not guaranteed and that's going to depend on the scientific review administrator. So, sure, certainly many of the panel will be the same. I think there is 2/3 turnover every year and depending on how quickly you can resubmit, it's likely to be, but nobody's going to tell you exactly. It would make sense if the same readers review again.

There's another question: **Is it a good idea to approach the CSR officer to get some useful information about how the proposal was discussed? If yes, how could one do it?**

With National Science Foundation, I always advise faculty members to contact the program officer who conducted the review and many times, over the telephone, we will get many tips and reviews

that were not put in the written review. It can't hurt. But the nature of the question is important. You want to say what strategies you can give me for revising and resubmitting. In addition to what was in the written reviews, are there any other tips? You put it in that very positive 'what can you offer that would help me?' A phone call is better than an email, because as I've said, people will talk to you and you can ask follow-up questions. I certainly would.

Then there's a question, **"I understand that there's a new requirement for a data management plan. Can you give me some direction?"**

This week at my institution, we're submitting NSF proposals that all require a new data management plan, so we've been inventing them as we go along, but any fact that a data management plan asks for, is what data are you going to collect? What are you going to do to store it? What are you going to do to make it available to people outside your institution? For how long are you going to store it? In what media or medium? How are you going to make it available? How are you going to protect any confidential proprietary information? And I think there was another question about what would happen to the data if the PI were to leave the institution? Those are the types of issues that the National Science Foundation was concerned with and I would imagine NIH would be much the same.

Okay. Three types of scoring. Oh, good heavens! That's a whole other workshop to talk about the three types of scoring. It's way more complex than we can address right here.

Multiple PI leadership versus a single PI—NIH seems to favor single PI.

That's a huge blanket statement and it's really not that NIH favors a single PI, it depends on the project, the experience of the PIs, many factors. There are certain types of NIH proposals that almost call for an individual PI, some of the smaller ones—the 15s, the 21s, the O3s, some of these starter grants—but I don't think it's accurate to say NIH favors a single PI. Some projects need multiple PIs.

To what extent can the structure of the review panel be predicted or influenced? Is it counterproductive to try to change it in an resubmission?

Normally the expectation is that you resubmit to the same review panel, the same funding institute. If the reviewers' comments seem to suggest that you weren't a good fit, you might want to reconsider submitting to a different review panel. As to whether the review panel can be predicted or influenced, the only way you can predict is study the persons on it and make sure you're requesting. I didn't say this before, but NIH allows you to request appointments with specific review panels and allows you to request funding by a certain institute. If you haven't taken advantage, then yes, you do leave yourself to the mercy of whoever NIH decides to assign you to, and even after you're assigned, you can request a re-assignment. So, can you influence them? Or predict? Of course you can look at who they are, see if they're from hospitals, from universities, you can see what disciplinary background, so to that extent, you could intelligently choose the review panel, but as far as influencing? NO.

Is it counterproductive to try to change?

It depends on if it was the right fit in the first place.

Do I find any difference in expectations in comparing NIH and AHRQ submissions?

I'm not sure what the question is asking—differences in expectations? I think I'll have to pass on that one.

Moderator: Where are you?

Dr. Marjorie Piechowski: It says: "From your experiences, do you find anything different in expectations when comparing NIH and AHRQ submissions?" I'm not sure if it has to do with the structure of the proposal, the funding outcomes, I don't know what the question really is.

If a proposal is unscored when compared with a better scored one, is it better not to resubmit?

I'm not sure again what that is getting at.

Moderator: I'm not sure. Who is that one by?

Dr. Marjorie Piechowski: Karen Muse.

Moderator: If the proposal is not discussed, is there a chance to get better score after the resubmission? Or in other words, is it only worthwhile to resubmit proposals with scores close to pay line?

Dr. Marjorie Piechowski: That's a judgment call and I said very early on that making the decision to revise and resubmit—it's your time and your commitment to the project, the nature of the comments, what the reviewers found that needed to be improved. If it's very far away, sometimes no, it's not worth putting the effort in on that proposal, but sometimes starting from scratch and rewriting completely. Sometimes it's not worth the effort because we tend to cling to what we wrote previously and not want to change it too much. It might be a good idea to start fresh.

Can the aims be changed in the resubmission?

Yes. You can change anything you choose in the resubmission. The reviewers will give you guidelines about what they saw that needed to be improved, but of course you can change the aims. You can make fewer, you can make them more precise. You can add different ones. Sure, you can change the aims. You're not wedded to the proposal the way it was submitted. It's a resubmission, after all and your obligation is to say what you changed and you can change more than what the reviewer asked you to change, of course.

I'm trying to figure out this one from Helen Filmore. Kristen, can you help present it?

Moderator: Sure. Our administrative error was a requirement to submit blueprint plans was mentioned once in the text of the RFP and not in the list of requirements. Can you request NIH reconsider rejection of the application? Example: When the RFP is poorly written or missing information.

Dr. Marjorie Piechowski: That means you're asking the agency to admit that they've made a mistake or that they've provided poor instructions. That's a pretty difficult one to ask them to reconsider because very few special agencies are going to say, 'Oops!' We've found this more than once, if RFPs are badly written and there will be contradictions from one place to another place, what we have done is tried to ask for an opportunity to resubmit and I don't have a whole lot of 'yes' answers. It's rare. 'But you said on page 36 this, and on 40, you said that.' Generally the burden is on you to have read the RFP so carefully that you generally can't blame them for an administrative error. It's unlikely that they would reconsider.

Moderator: I'm not sure if we've gone over this one yet: To what extent can the review panel be predicted or influenced?

Dr. Marjorie Piechowski: Yes, I did address that. You can predict because you study who they are and you can see the exact names and affiliations and degrees and disciplines, but as far as influence, no.

Then there's a question: **Do I have any experience with the FDA? I understand their budget is small, how do I guarantee that my proposal scores well and is fundable?**

If I could guarantee, I wouldn't still be working. I'd be rich and retired! It's true that different agencies have different monies to distribute. All I can suggest is that you write the best possible and use as many of these strategies as I've tried to share with you, but to guarantee that your proposal scores well and is fundable, I have no suggestions for how we can guarantee.

We have difficulty identifying our program manager for FDA proposals. His or her name is not on the summary statement and we'd like to call him for guidance. How would you recommend we find this person?

If you know the name of the person, you kind of just have to drill down and do searches, but some agencies simply do not share who the person was. I don't know how else to identify that elusive person.

The comment is about insufficient preliminary results and how much preliminary results should be included?

One of the answers is by the time you revise and resubmit, if you're really committed to the research, you would've kept going and working on it, even without the external funding. If you haven't been able to demonstrate some more preliminary results, you'll probably be rejected again. How can we say how much? We have to say enough that it shows that in the six or so months in between, more data was acquired. More data were acquired.

When two reviewers disagree, one lists items as strengths and the other calls them weaknesses…

This is why one of your strategies when looking at reviews is frequency. Frequency and outliers. You want to take the reviews, you want to go through it and try to determine if something was mentioned once or infrequently. Try to figure out if it's really important enough. You don't have to agree with every single thing they said. You can choose to disregard a reviewer's comment and you can even say why in your rebuttal or you can simply ignore it. That's where your professional judgment has to come in and it's not just if you disagree with the weakness, but try to get some sense of preponderance and some sense of whether it's worth reconsidering.

Strategy to choose the most appropriate study group?

What I try to advise faculty members to do is study the study group. Maybe look at more than one. Look at several. Look at their backgrounds. I work in the college of engineering and these biomedical engineers really prefer to have somebody on the review panel who has some relevance to biomedical engineering. If it's all biologist or basic scientists in other fields, it's probably not a good fit, so the best strategy is to study these people. Absolutely you cannot contact them, but study them, take a look at some of their publications, there are bits of homework to be done that make a difference and that's the best strategy I can offer. Just see who they are. The other strategy is to sometimes make sure you've included some of their references in your work if they're a good fit.

Moderator: I have a question on the phone from.

Caller: [Intro to question inaudible] Can we ask for a different reviewer in place of that person who has shown a bias?

Dr. Marjorie Piechowski: When you write the letter where you request assignment to a review panel? I suppose you could try to specifically request that you not be reviewed by a computer scientist, but that's hard.

Caller: Computer scientist is fine, it's just that particular scientist.

Dr. Marjorie Piechowski: How strong were your reviews?

Caller: The biologist reviews were strong. One gave us 3 1s. The other gave us 2s and 3s and the one that gave 2s and 3s gave just one or two issues that can be easily addressed in the revision. The one who gave 5s and 6s came right out at the front and said that it's a hard topic, but he didn't believe it could solve the problems complete.

Dr. Marjorie Piechowski: That's a case where you've got two reviewers who are saying what's important to your project and your discipline. You can ignore, or you can address in revision, but you can say why you don't agree. You don't have to agree with everything they say and you don't have to fix what they're saying.

Caller: But it we don't change his mind, we don't get the 10th percentile. If the others give all 1s, if this guy gives all 5s, we won't make it.

Dr. Marjorie Piechowski: You're going to have to address tactfully how that person is wrong.

Caller: That can be done. Can we call the departmental head and ask?

Dr. Marjorie Piechowski: You can try.

I think we're at our time and it looks like there are lots more questions.

Moderator: We are going to wrap up here. If your questions were not answered, we do apologize. Time is running out. If you do have questions unanswered, please submit them to audio@principalinvestigators.org and we will make every effort we can to get those answer for you. At this time, I'd like to go ahead and thank everyone. Thank you, **Dr. Marjorie Piechowski**. I think this was a really great webinar. I'd like to remind you that if you'd like the MP3, CD or transcript, they are available to you for only $50 each by calling us at 800-303-0129. I encourage you to visit our web site to learn about upcoming webinars. Thank you and have a good day.

Revising and Resubmitting Unsuccessful Proposals

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Principal Investigators Association, Inc.   1

Learning Objectives

- Gain skill in interpreting agency reviews
- Understand multiple and complex reasons for proposal rejections
- Determine feasibility of resubmission
- Determine likelihood of future success
- Apply specific strategies to revise proposals based on reasons for rejection

Principal Investigators Association, Inc.   2

Rejection Facts of Life

- Most proposals are rejected: 75-90%
- Very few first applications are funded, but…
- Re-submissions do succeed:
  - NIH report in 2009:
    - 8% for first-timers, 35% for second-timers
- Rejections offer a learning opportunity
- Reviewers are mostly accurate and objective
- The peer review system usually works as intended
- Grant success is a life-long process

Principal Investigators Association, Inc.   3

Why proposals are rejected

- Classic study of 605 rejected NIH proposals
  - *Science*, Vol. 132 (Nov. 25, 1960), Dr. Ernest M. Allen, Chief, Division of Research Grants
  - Found four main categories of short-comings:
    - Problem (58 percent)
    - Approach (73 percent)
    - Investigator (55 percent)
    - Other (16 percent)
      - Institutional setting, unrealistic budget request, inadequate personnel, lack of P.I. time, unconvincing need for project, directions not followed, sloppy presentation, missed deadline, missing components

NIH Review Process: Quick Overview

- Published, established review groups
- Some special, one-time review groups
- Managed by permanent NIH staff in central NIH division
- Review division separate from funding division
- Reviewers usually serve three-year terms
- Full proposal read by 3-5 individuals
- One reviewer serves as lead discussant but...
- Whole review group discusses proposals

NIH Review Process, continued

- New scoring system in January 2010:
  - Applicant receives "summary statement" plus several numerical scores:
    - Total possible score of 25 (old range was 500)
    - Percentile score
    - Relevance score
- One resubmission allowed
- Additional space to explain revisions
- Most of same panel will re-review, with some turnover each year

Making the Decision to Revise

- Analyze the reviews
  - Identify types of problems
    - Can you address the weaknesses?
  - Determine consistency of comments
    - Significant strengths identified?
- Get other objective expert opinions
- Make sure program is still available
- Re-assess time and commitment:
  - Is the research still relevant and important to the P.I. and to the field?

Why proposals are rejected

- Administrative/regulatory reasons
  - Agency guidelines
  - Proposal format
  - Program restrictions
  - Deadlines
  - Ineligibility
    - PI: degree, citizenship, e.g.
    - Institution

Remedies: Administrative

- Review RFP carefully and completely
- Scrupulously follow the prescribed format
  - Font, page limits, attachments, margins
- Determine if restrictions remain
- Apply well before deadline day
- Find new or co-PI or…
- Consider changing applicant institution
  - Become subcontractor/partner

Why proposals are rejected: PI

- Principal investigator(s)
  - Inadequate experience – research or management
  - Little evidence of experience with grants
  - Unclear description of work roles/tasks
  - Publications inadequate or not relevant to project
  - Staff insufficient or untrained

Remedies: PI

- Inexperience
  - Add senior co-PIs or consultants
    - Mentor
    - Colleague
    - Subcontract
  - Provide management plan and/or organization chart
  - Include time and task chart
  - Write job descriptions of staff

Why proposals are rejected: Politics

- Political reasons
  - Geographic distribution
    - Urban-rural
  - Diversity of population
  - Problem is too localized
  - Perception of internal competition
    - UW-Madison vs. UW-Milwaukee

Remedies: Politics

- Set problem in national context
  - Use proposal as case study
  - Show wider/larger application
- Choose strategic partners:
  - Include colleagues from Big-Time U
  - Add sub-contractors or partners from other parts of the country/more diverse populations

Why proposals are rejected: Intellectual-Scientific-Academic

- *** Most frequent reason for rejection:
  - Importance of topic to discipline
  - Currency or cutting-edge research
  - Focus: too narrow or too broad
  - Unpopular or uncommon methodology
  - Inadequate literature search
  - Unclear, disorganized presentation with gaps in reasoning and logic

Remedies

- Have a strong introduction: why is project important
- Develop comprehensive literature review
- Present project in intellectual context
- Explain method selected and why
- Explain why other methods are not used
- Use strong format to show progression of ideas
- Change project scope
  - Add co-investigators if too broad
  - Decrease project goals and provide more focus
  - Add more project time

Why proposals are rejected:
Project Design

- Project design:
  - Not enough evidence to support the need
  - Aims are not of sufficient importance
  - Project may not produce any improvement
  - Problem is much bigger than the PI realizes
  - Idea is too ambitious
  - Goals and objectives are unreachable:
    - Too many, too broad, too vague

Remedies: Project Design

- Detailed needs analysis/justification
- Specific background data—own and others
- Measurable and attainable objectives/outcomes
- Limited number of aims (3-5 maximum)
- Pilot to demonstrate likelihood--if a new approach
- Clear description of project activities, with timeline, tasks, responsible person, outcomes
- If none of the above remedies are appropriate, look for another sponsor/program

Why proposals are rejected:
Budget

- Budget reasons: agency
  - Request too high for program
  - Agency already committed to continuations
  - Fiscal year cycle
- Budget reasons: applicant
  - Unconvincing or confusing budget narrative
  - Inappropriate/unallowable requests
  - Bad arithmetic, wrong F&A and benefit rates
  - Vague travel, equipment plans
  - Too many staff requested
  - Consultants not linked to proposal activities

Remedies: Budget

- Lower the annual and overall request
- Remove some budget categories
- Resubmit in first cycle of fiscal year
- Write a detailed, well-described narrative linking budget requests to project narrative
- Provide quotes and detailed information especially for equipment, trips, consultants
- Add salary schedules, job descriptions, benefit tables.

Why proposals are rejected: Institution

- Institution
  - Facilities, space, equipment, library, etc.
  - Financial resources/cost-sharing
  - Other research support:
    - Graduate students
    - Grant infrastructure
  - Legal issues:
    - Institution being audited or under sanctions
  - Inadequate compliance infrastructure/history

Remedies: Institution

- Provide more detail on facilities—floor plans, lists of equipment, other resources
- Find a partner institution/lab/department
- Resolve compliance issues
- Describe grant management system
- Provide letters of support/commitment
- Specifically identify cost-sharing
  - In-kind
  - Cash
  - Other sources of funding

Why proposals are rejected: Presentation and Format

- Presentation
  - Writing is too vague to the reviewers
  - Long paragraphs, long sentences, long words
  - Careless proofreading: grammar, spelling, typos, punctuation
  - Masses of print without pictures or format
  - Poor quality or mislabeling of images
  - Inaccurate word choices

Remedies: Presentation, Format

- Use clear, specific format/editing strategies:
  - Do careful and multiple proofreading
  - Use external editor (not grammar/spell check)
  - Provide headings and sub-headings
  - Use frequent and relevant illustrations, clearly and accurately labeled
  - Write short paragraphs
  - Write short sentences:
    - 20-word rule
    - Long sentence/short word rule

Thanks

For Questions and Follow-up:
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