AN EASY-TO-READ, STEP-BY-STEP GUIDE TO PAIN-FREE GRANT WRITING!

This accessible, hands-on text, for new grant writers and seasoned health researchers, educators, and clinicians alike, illuminates the process of writing a persuasive request for funding from start to finish. Packed with practical tips for dealing with common pitfalls besieging grant seekers, the text progresses step by step from establishing the need for the grant through disseminating grant findings. This third edition is distinguished by key information about newer grant mechanisms and a fresh focus for foundation and corporate grants. It also includes updates on electronic submissions and web resources. Useful supporting features include examples and underlying principles for each guideline, examples of grants and specific elements that lend themselves to the development of PowerPoint slides for traditional or online classroom use, real-life examples from actual grant applications, and links to online resources to support searches for grant funders and websites supporting grant applications. Armed with savvy tips and advice from the authors—an experienced grant writer, grant reviewer, and grant consultant—readers will be able to write a persuasive grant with ease.

NEW TO THE THIRD EDITION:
- Top-notch grant writing guidance for all health professionals
- Information about newer grant mechanisms emphasizing community-based and patient-centered outcomes research grants
- Foundation and corporate grants focusing on population health, personalized health, and interprofessional team grants that include community collaborations and corporate partnerships
- Important information on the Patient-Centered Research Institute
- Guidance on how to involve stakeholders and communities in study design and implementation
- Updates on electronic submissions and web resources
- New coauthor who is a successful PCORI awardee
- Instructor’s PowerPoint slides

KEY FEATURES:
- Describes the process of writing a persuasive request for funding from start to finish
- Delivers practical tips from experienced authors for dealing with common pitfalls and difficulties
- Includes examples and underlying principles for each guideline
- Provides real-life examples from actual grant applications
- Helps readers to apply principles for selling and justifying the grant to their own proposals
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Preface

Relatively few nurses or healthcare professionals enter their area of practice with an idea of writing a grant. Even those seeking advanced clinical training or degrees may overlook the possibility. Yet many of the goals and realities of a meaningful career require nurses and clinicians in all disciplines to request funding for projects that focus on education, clinical practice, research, or a combination of these. Grant writing is an essential skill for nursing and health scientists today but one we receive little training for, even in advanced graduate programs. So, where do you start? Where do you look for guidance? Where do you find foundations or agencies that fund enterprises like yours? These questions tend to be of first concern to most new grant writers. However, as you sit at the keyboard to write the grant, you may also feel somewhat intimidated by unfamiliar terminology, puzzling forms, and the variety of submission formats required by funding agencies. This process is more frustrating if you are unfamiliar with the structure, conventions, and essential elements of grant preparation. This grant writing handbook is a very informal conversation about the art of proposing and the process of writing grants with minimal frustration. At least we hope we accomplish that goal!

Each of the authors is an experienced grant writer, grant reviewer, and grantsmanship consultant. Examples include tips from their grant writing workshops and experiences from their own projects. The book is formatted to follow the basic steps of grant writing. We have written it in the first person to get the reader involved in the process. You will find other books on writing fundable grants that are very detailed, grant-specific, and devoid of real-life experiences. We attempted to cut to the chase and give you bare-bones strategies and quick tips that a busy professional—a would-be grant writer—needs for this adventure. In this edition, updates on electronic submissions, new grant funding areas, and web resources have been added. A new chapter (Chapter 6) highlights changes in
how researchers need to engage with community stakeholders from grant development through implementation. **Qualified instructors may obtain access to ancillary instructor’s PowerPoints by emailing textbook@springerpub.com.**

Grant writing can be exciting and even profitable given the right tools. This book is one of the “right tools.” Happy grant writing!

*Barbara J. Holtzclaw  
Carole Kenner  
Marlene Walden*
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We gratefully acknowledge the consultation and insight regarding community-engaged health research in Chapter 6, “Engaging Communities in Research Grant Development,” provided by Pamela Holtzclaw Williams, JD, PhD, RN, during her appointment as associate professor, College of Nursing, University of Arkansas for Medical Sciences, Graduate Program. Dr. Williams served as principal investigator on three community engagement–funded studies and projects funded by the Patient-Centered Outcome Research Institute (PCORI) and served as a PCORI study section member. She was actively involved with community-engagement initiatives and funding by Clinical and Translational Science Awards at several academic health science centers. She serves as an ambassador for PCORI and consults on funded engagement projects.
Share
Grant Writing Handbook for Nurses and Health Professionals, Third Edition
It Takes a Village (and the Village Has a System!)

GRANT WRITING IS NOT A SOLO SPORT

Writing a grant cannot be effectively done in isolation. Even if you are writing a grant for a capstone, thesis, or dissertation (which is expected to be an independent scholarly work), your request for funding is going to involve other individuals beyond you and your supervisory committee. These persons may include study subjects or participants, consultants, institutional review committees, clinical site authorities and personnel, clerical or technical services, and administrative research office personnel. If your grant is not being requested to support your graduate work, it is expected that your project will involve a team. How well you choose and assemble a competent, experienced team is the mark of a knowledgeable grant writer and is part of the criteria by which your application will be scored. An interprofessional team is often required for grant submission since the advent in 2009 of the interprofessional education collaborative (IPEC) to encourage interprofessional education and collaborative practice. For more information, see www.ipecollaborative.org/about_ipec.html. The goal of this work and the reason it is tied to research funding is to improve population health outcomes. Funding opportunities for IPEC can be found at www.ipecollaborative.org/funding_opportunities.html with links to the Gordon and Betty Moore Foundation, John A. Harford Foundation, Josiah Macy Jr. Foundation, and Robert Wood Johnson Foundation.

Although not always easy, creating an interprofessional team may broaden populations of interest. Selecting and asking for entrée to conduct your study in a clinical or community study site also involves negotiation with the appropriate personnel. Understanding the importance of these interpersonal links in the
grant process not only makes the grant submission process less bumpy, but also ensures a smoother journey throughout the entire preaward and postaward period of your study. Understanding the system by which each group of individuals operates allows you to sufficiently plan your time and procedures.

YOUR GRANT-CONSTRUCTION TEAM AND SYSTEM

Your grant-construction team can take on a variety of configurations. It may be a capstone, dissertation, or thesis committee; a research team you build from nursing or interprofessional colleagues; or in some instances, a team put together with input from the funding agency.

Capstone, Thesis, or Dissertation Committees

If you are writing a small seed grant, you will likely write the scientific research plan yourself or perhaps write it with the supervision of a capstone, thesis, or dissertation chair; consultant; or statistical advisor. Usually, the largest hurdles in this process are getting the time and help you need from assisting individuals when your grant submission date is growing close. This may have to be orchestrated around receiving institutional review board (IRB) approval from one or more institutions. For example, Kenner had to have her proposal reviewed and approved by her doctoral committee (taking 3 weeks), as well as the associate dean for research where she was on faculty (taking 2 weeks). The IRB for the University Medical Center where she was a student reviewed her proposal, although she was not collecting data there (taking 4 weeks), and finally the hospital IRB where the data were collected had to approve the proposal (taking 4 weeks). The process took 3 to 4 months. She found it helpful to submit each previous letter of approval to the next IRB. Planning ahead, getting firm commitment for appointments, and preparing your agenda and questions prior to each meeting with these members keep your relationships strong and move you ahead. More institutions are attempting to use multi-institutional approvals to fast-track the approval process. This mechanism was created to encourage comparative effectiveness research using large datasets (Paolino et al., 2014).

Larger Grants: More Complex Systems

For larger grants, particularly those with interprofessional partners, your grant writing will be similar to joint authorship. The literary give-and-take must
eventually produce a readable plan for meeting the aims and objectives of the grant application. Meeting first to discuss your overall plan gets you all in the same conceptual ballpark. If you, as principal investigator (PI), have specific aims and a short background of the problem, you can ask co-investigators to write parts of the background and significance section for you to include in the grant application. This helps you incorporate additional items in the specific aims section, and your discussion may lead you to add or modify one or more of your aims. At some point, the input of your research site authority, your expert topic consultants, your biostatistician, and your institutional financial office shape the final grant proposal. As PI, your ultimate challenge is to make this plan understandable, cohesive, and acceptable to these individuals, as well as to your funding agency.

Other members of your grant-construction team may include secretarial and financial office assistants. If your grant includes social media, or online components, a person with an instruction technology or instructional design background may be necessary. Remembering that your grant is likely not the only task for which they are responsible, give them your grant submission timeline and allow sufficient lead time for them to respond to your requests. Maintaining excellent relationships with your financial office helps keep communication lines open in the planning and administration of your grant funds. If available, use your institutional accountant to help with budget pages. You must first come up with what you need: personnel and percent effort, equipment type and specifications, types and amounts of supplies, travel, and other technical or episodic services. In large institutions, such as universities, colleges, health science centers, and military installations, your grant must be submitted to an institutional office of research administration (sometimes termed “grants and contracts”) to have its budget reviewed and signed off by the institution. Find out before you begin your grant writing what timeline this office requires to sign off on your grant. As institutions across the country have become more research active, the time they require to sign off has lengthened. Some require several days, whereas others require a week or more.

If your project includes human subjects, another part of your grant-construction team is your institution’s human research participant protection office or IRB. Developing a continuing relationship with an IRB spokesperson is important for determining the type of IRB review you wish to request and for dealing with future questions that arise during your review. For animal studies, your institution’s institutional animal care and use committee (IACUC) serves a similar purpose. In both cases, the IRB and IACUC inform you of any training or preliminary steps that must be taken in using either humans or animals in your study. Know how often these committees meet and what their review cycles are well in advance so that these times can be built into the timeline of grant writing. In the case of nursing research,
many healthcare institutions have their own nursing research council that reviews all proposals. This council may be a preliminary step in going to the interdisciplinary IRB, or it may have the authority to be the final approving body. Be sure to find out the steps that are required in your institution for IRB approval.

Last, but certainly not least, keep your dean, director, or supervisor aware of your employment time and institutional resources committed in your proposal. Your employment home is crucial to housing you and your project. Early involvement of your supervisor can avoid snags in the application process or later disappointments if your release time or use of resources is refused. Know the informal and formal politics of who should be notified that a grant is being submitted. For example, most department heads do not like to find out, after the fact, that a grant is being submitted by a departmental faculty member. This is a workforce, not a control, issue. If faculty release time is needed in the grant, supervisors must anticipate the possibility of replacing that person. If a key personnel member is employed outside your institution and has agreed to work on your grant, you should get assurance that they have received internal support for their time commitment. If an “expert” in your institution might feel your grant is in competition with their area or research, consider engaging them in your project or in an advisory capacity. Even having them write a letter of support for the grant would show your respect for their expertise. It is better to find out where you stand on competitive issues before the grant is submitted than to have problems surface when it is funded.

A potential barrier during the summer months, or December holidays, is the unavailability of persons to sign off on grants or to agree to serve on grants. Again, anticipate these scheduling problems early. Check vacation schedules and fit them into the grant timeline. Sometimes, this is not possible if a grant opportunity suddenly arises, but in those rare cases, a designated person usually has signature authority.

**BUILDING A RESEARCH TEAM**

Choosing your co-workers for a research study or project is serious business. Aside from choosing people with expertise, you are looking for a cooperative team. A cooperative team will work well under your leadership. There is a line of authority and responsibility in a funded research study that is often overlooked by groups who wish to be democratic and supportive to each member. This resides in the fact that the PI is the person who is ultimately responsible for the conduct of a study, no matter how large or small the size
of the team. Even when there are co-investigators on a project, you have administrative authority over the selection of the other team members and the assignment and supervision of their work, as well as responsibility for making sure that the budgeted award is spent correctly and on time. Again, the responsibility rests with the PI to answer scientifically and fiscally to the funding agency.

As PI, you are the leader of the project team. Selecting the key personnel for your grant is like recruiting a winning lineup for a competitive challenge. Each person designated as grant personnel must be justified in terms of the role, preparation for the role, and the amount of time spent in the role. In these times of shrinking grant funds and growing competition, these aspects of the grant proposal are scrutinized closely. Two primary places where role competency and time commitment show up are in the list of key personnel, which includes the percent effort, and in the budget justification. A statement in the budget justification tells reviewers precisely the role that the person will play on the project. A person’s preparation for the role appears in the biographical sketches for key personnel, which usually follow those of the PI. If the person has any significant research findings that lay the groundwork for the proposed work, this also demonstrates competency and appears in the preliminary studies section of the proposal.

Be sure to acquaint all members of the research team with what their roles are, how much of a time commitment is involved, and how much, if any, of the grant funds will be used to pay for their time or offset their salaries. This seems like an obvious requirement, but it is surprising how many people forget this information by the time a grant is funded. Some even sign up for other grants and find they are 100% committed elsewhere by the time you are ready to begin your study. Others mistakenly believe they are “funded” on your grant when in fact they have committed their “in kind” participation at no cost. A necessary salary or a large time commitment requires negotiation between the team member and their employer. A sign-off from a department head or agency is one of the documents that your research administration office requires before submitting a grant requiring salary support. If the appropriate people have not signed off for in-kind donation of time and the grant gets forwarded to the office of research administration in the university, college, or hospital, it will more than likely be sent back. If by chance the grant goes to the funding agency without proper sign-off, they also may send it back or just not review the proposal. This is not a time to beg forgiveness later because it can spell disaster for the grant. In some cases, your co-investigator or collaborator may be in a different institution that requires a subcontract. Be sure your key personnel have reviewed and have copies of these documents and review them when your grant is funded.
Key Personnel

Key personnel include the PI, co-investigators, collaborators, research assistants, technicians, data collectors, data managers, and a variety of persons who play an ongoing part on your grant project. In grants that provide salary support, the percent effort and fringe benefits are calculated into the annual budget in detail. Personnel who play an episodic part, such as consultants, transcriptionists, or offsite data analysts, are often paid by the visit or by the hours engaged in the project. As such, they are contracted for the work and paid episodically. It is a function of the pattern of work as much as the type of job that determines this. For example, a graduate research assistant (GRA) may be a key personnel member assigned the work of data entry or data transcription, depending on research training or desire for experience. In some cases, onsite clinical experts may play small but continuing roles as key personnel by serving as consultants. In other cases, these tasks may be allocated to a contracted person by the job.

Co-investigators and Collaborators

Co-investigators and collaborators should represent significant roles on the project, either in intellectual contribution or in oversight of portions of the work. They are often interdisciplinary scientists that offer valuable insight and expertise to the conduct of the study and interpretation of findings. Having interdisciplinary partners is recognized as a strength by the National Institutes of Health (NIH) as they seek applications that facilitate an interdisciplinary research approach that brings together the biological, behavioral, and social sciences to address the nation's most pressing health problems.

Traditional NIH research project grants have a single PI. However, this model does not always work well for multidisciplinary collaborations of various sizes, goals, and disciplines, in which more than one PI would facilitate the project. The title “Co-Principal Investigator” is not used by NIH, but a new NIH model, developed in 2006, would accommodate more than one PI on specific types of grants. These Multiple Principal Investigator awards are designed to support team science and projects with justified expertise (NIH, 2018). However, such grants must justify a compelling rationale for multiple PIs or project directors (PDs), and a leadership plan must be included to show the exact scope of appropriate authority and responsibility, as well as the way that this multiple PI/PD model links to the project aims/goals (NIH, 2016, 2018). The leadership plan includes the governance and organizational structure of the research project, with communication plans and procedures for resolving conflicts. In addition, the administrative, technical, and scientific responsibilities for each specific aim or activity should be delineated for the PIs and other members of the scientific team.
Project Director

PD is a second-level position that is often necessary for a large funded study with salary support. For smaller studies, the role of PD is often taken on by the PI. This is the PI’s “right-hand person” in the sense that the role includes supervision of many of the day-to-day tasks. In some cases, the PD recruits and trains the research assistants, sets up meetings for the team, makes rounds to recruit subjects for a clinical study, or is responsible for gathering and managing data collection forms. The variety of tasks involved with a larger project can involve a large amount of effort, so a PD might be hired as a full-time member of the team.

Graduate Research Assistants

GRAs and nonstudent research assistants are important members of your team. They are listed as key personnel if they have an ongoing time commitment for a significant portion of your grant. A GRA can be named in the listing of key personnel. However, if you are not sure who will fill these roles, you may need to put “To be announced” in the space where a name would go. Hiring research assistants after the grant is funded may require checking with your institutional human resource department. Some of the best GRAs for your project may come from students you have mentored or those who apply because they are interested in your research. Although some applicants for research assistant positions may apply because they need part-time work, those who develop an interest in the project are ultimately the best team members. Students can generally be hired with little preliminary advertisement beyond posting a “help wanted” sign. However, nonstudent research assistants usually require placement through your institution’s human resource office. Good relationships with research assistants make your project run smoothly. The research assistants deserve good training, good communication channels with the PI, and continued feedback on their performance and contribution.

Consultants

Consultants are a quality check on the scientific conduct of your study. Although previous research and publications help demonstrate the expertise of the research team, consultants can contribute specialized expertise to the project and enhance the overall quality of the proposal. For example, if an infant researcher’s expertise is in pain and the proposal is to examine the interface between pain and sleep, adding a consultant with national recognition in infant sleep may strengthen
the credibility of the project and enhance its ability to successfully compete for funding. Another example is a study concerning cancer rehabilitation and exercise physiology. For this study, consultants who are expert oncologists coupled with ones who are exercise physiologists are good additions to an academic center grant in which no such expertise is on-site. Statistical consultants may give your team added strength in data analysis and interpretation, as well as help with design sensitivity in your initial planning. Consultants can contribute to the project in a variety of ways, including conceptualization of the study design, selection of research instruments, implementation issues, and data analysis and interpretation. Although consultant costs may vary, provide a detailed description of the consultation services to be rendered, number of days anticipated for consultation, expected rate of compensation, and travel, per diem, and other related costs. Most grants, including NIH applications, require a letter from the consultant confirming their willingness to provide the service. It is important that this letter include the type of service they will provide. Also remember that your agency may require a subcontract and data-use agreement be in place for paid individuals who will serve as consultants or will be involved in data analysis or interpretation.

Specialized Team Members

Specialized team members are persons who can be key personnel if they are serving a continuing role on the project, or if they are working only episodically, they can be listed in the “other” category. These might include data transcriptionists, translators, laboratory technicians, medical device engineers, instrumentation or software trainers, and other experts that are necessary for the conduct of your project.

COMMUNITY-ENGAGEMENT TEAMS

If you are planning a research grant proposal for a project that requires evidence of community engagement (i.e., meaningful involvement of patients, caregivers, clinicians, and other healthcare stakeholders throughout the research process), your attention to your research “village” must be even more explicit. Expectations for these grant proposals are to describe how you will involve the community team, from topic selection, through design and conduct of research, to dissemination of results. Greater planning and network development is necessary for community engagement research. More background and details are found in Chapter 6.
CARE AND FEEDING OF YOUR RESEARCH TEAM

Open communication is the key to caring for your research team. Up-front understanding of each member’s responsibilities and chain of communication is crucial. Whereas most of the attention to your team comes after the project is funded, clearly stated expectations should be outlined before a team member is included in your grant application.

Once the grant is funded, you should outline early the expectations for GRAs and other data collectors to attend training sessions and carry out study procedures. Give the entire team telephone, pager, or cell phone numbers to contact a supervisory project person when they are unable to fulfill their work schedule or responsibilities. Transmitting the importance of their contracted participation is essential, particularly for students, who may not realize the seriousness of lost data-collection opportunities that occur when personnel are missing. A communication book is sometimes helpful if there are overlapping shifts of grant personnel working around the clock. In a study of fever in HIV patients, personnel made rounds on each shift to seek participants who had temperature elevations. Each person made notes about potential cases and reported any messages about the study to the next person coming on. The PD checked each day to validate that something was done about requests. Regular meetings, at least monthly, with all personnel keep everyone in touch with the study progress, updates in procedures, and problems that need solving. Mutual respect between every member of the team reinforces a person’s value to the study’s success. Celebrations and parties help form a collaborative spirit. Taking team members to research conferences makes them feel more a part of the study. We have found that allowing GRAs or other team members to present portions of the study methodology in symposia helped groom them for their own scientific careers. At least three of our GRAs discovered spin-off ideas for their own dissertations from involvement with our study.

Every research team needs training to the specifics of your project. In many cases, this involves training data collectors and PDs to the instrumentation, whether it includes medical devices or test administration. Plan to hold training/demonstrations of how to approach a participant, as well as how to administer a procedure, test, or intervention. Role playing sometimes helps a beginning research assistant. Give constructive feedback with support for areas of weakness and praise for accomplishments.

Make it clear to all participants that the collected data belong to the grant and cannot be used for any other purpose. If delineating the publication plans for your project is not done early in your planning and orientation,
you will deal with sticky issues after the fact. Co-investigators can expect to be a co-author in publications arising from a grant project, although this varies across studies. Responsible conduct of research principles calls for authorship to be limited to persons who make a major contribution to concept, design, analysis, and/or interpretation of the work (American Psychological Association, 2016; International Committee of Medical Journal Editors, 2017). This includes participation in drafting the article, revising it critically for important content, and having a voice in its final draft. The PI must decide whether collaborators, experts, research assistants, or consultants are included as co-authors, and their authorship should responsibly be based on their contribution to the project and manuscript. Some journals now require all authors to state their roles and the percentage of work they contributed.

Data collection may require varying amounts of training, and this time should be considered in setting up the timeline of your grant. Recognize that gaining intrarater reliability can take considerable practice and trials before measurement skills are honed and ready for data collection. For example, in a study of drug-induced shivering, we wished to determine if skinfold thickness might be an intervening variable that would influence neural perception of discrepancies between environmental temperature and a rising thermoregulatory set point. An unplanned delay in readying data collection was our lack of awareness of how difficult it was to precisely measure skinfold thickness, even with good instruments. It took approximately 100 trials before our PD gained acceptable intra-rater reliability within her own measurements. In that same study, we found it necessary to train GRAs in proper measurement of tympanic membrane temperatures by first teaching them to use an otoscope to visualize a tympanic membrane. When otoscope visualization was mastered, this in turn rapidly improved their inter-rater reliability in the measurement of tympanic membrane temperatures.

Another area of training that should not be overlooked involves scientific integrity and the importance of maintaining the integrity of the study design. For GRAs and new investigators, impressing on them the importance of finding the truth, rather than proving the hypothesis, is essential. Most institutions require that any research personnel be trained by their IRB office and take training in the protection of human research subjects from a recognized service, such as the Collaborative Institutional Training Initiative online program, found at www.citiprogram.org. However, the training in scientific integrity and guarding against fraudulent misconduct in research requires constant reinforcement. Research assistants and colleagues, eager to help their PI succeed, must understand that success is in finding the truthful answers to research questions, not in proving that you were right in your hypothetical test.
Gaining Access

A hallmark of an experienced and competent researcher is the ability to build networks, not only of a strong research team, but also of cooperating community or study site partners. This is not simply a description on paper, but a living breathing network that takes planning, negotiation, and respect for the requested resources. It starts with a request for entrée (power, permission, or liberty to enter). In many situations, starting at the top is essential for gaining authorization to conduct a study in a hospital or clinical agency but recognizing that the persons you may need cooperation from are mid- or service-level providers. It is important to build relationships with these individuals while you wait for formal permissions. Permission to access a military or Veterans Administration facility requires special steps that are formalized with applications, credentialing, and chains of command. Approaching a Native American tribal affiliation also requires meeting with and gaining approval from their governing body, as well as from any local agency or site. Recognizing that you cannot expect rapid access when asking for permission to study a group you are not a part of, successful researchers spend considerable time building relationships with key groups and involving them in participatory roles on the study.

Many successful liaisons are built by having clinical or agency people serve on your study as agency coordinators, inpatient or outpatient clinical site coordinators, or facilitators. Most will agree to serve in this role at no cost, since their duties are limited to making sure your study does not conflict with the daily schedule of the clinical unit or agency. It gives the agency person, often a head nurse or unit manager, close contact with the operations of the study so that they can explain it to other personnel.

Watch Out for Crowds!

As research activity grows in clinical sites, the numbers of studies competing for the same participants grows. Some clinical sites and agencies monitor this and keep the number low to avoid interfering with their operations. Others either do not monitor or are glad for any added interest in their site. One problem with competition for subjects emerged at a public welfare clinic for mothers and infants, which was being used by a nurse researcher with small grant funding. The clinic wrote a support letter for a second researcher employed by the same
university as the first, welcoming the project to the site to conduct the study without regard to the study currently taking place. Unfortunately, the second PI also failed to check and discuss the availability of subjects with the first nurse researcher and when a large NIH proposal was funded, it encroached on the existing study. Bad feelings resulted all around and affected relationships between the PIs, the agency, and university research administration. Because no oversight committee at your research site may monitor the use of clients, students, patients, or attendees as research subjects, you should try and find out if other studies are going on and determine if conflicts are likely.

Remembering Where You Are

The research site, whether it is a hospital, clinic, senior center, church, tribal center, or school, is hosting your project and you are the guest. As such, PIs should treat this gift with the respect and consideration it deserves. A spirit of cooperation between others working and studying in the site is far more productive than becoming adversarial over factors that might affect your access. If you anticipate that another study PI is seeking the same type of participants in a different study, try to work this out in a straightforward, but amicable, way. For example, we discovered that a physician was seeking bone marrow transplant patients to study the lymphatic effects of the same drug that caused the drug-induced shivering we were studying. We found it was helpful to include him as an expert on our advisory committee. We also found him willing to cooperate to alternate with us in the acquisition of study participants. In fact, our PD contacted him with participants when it was his turn to accept the next study subject. Whether or not your study is a nursing study, recognizing the interface among medicine, pharmacy, nursing, and agency administration means that you should be respectful and considerate to all who are linked to the patient’s care.

Once the grant is funded and procedures begin, the site coordinator can facilitate a time when you can present the study goals to the staff. Keep the staff informed about any changes in your project that would affect your presence, coming and going, from the study site. Be sure that GRAs and on-site grant personnel are introduced to the agency staff. Always be available by phone or pager to the research site in case there are problems with or questions about the study or study participants. Expressions of gratitude to cooperative clinical staff are much appreciated. For example, on national holidays such as Christmas/New Year’s Eve, the study team treated each of the clinical research study sites used for the HIV fever study and the drug-induced shivering study with a colorful basket of red delicious apples. Study personnel delivered them to the hospital.
units and labeled a basket for each shift. Staff also appreciated feeling included in the study by our presentations of study progress and problem solving.

Navigating the Internal Grant Submission System

Each grant writer must determine the internal mechanism for submitting grants, regardless of what type of grant it is. This statement may seem simpleminded, but it is an essential early step in the grant writing process. Many offices and people must sign off on a grant before it is submitted to an IRB or a funding agency. A timeline is needed for staying on target and getting these signoffs early in the writing process.

Some people find creating a flow sheet or a project timeline helpful. Whatever tool is used, determine what steps are necessary before getting too far into the grant writing process. Find out if there are restrictions on how many grants may be submitted in the category in which you are applying. For example, no more than one training grant may be applied for by any institution from the U.S. Department of Health and Human Services in a single funding cycle. Therefore, a clearinghouse in the institution for grant development must make sure that this rule is followed. This clearinghouse may be a center for nursing research, a department-level committee or chair, or the dean’s office.

Next, find out who must approve the grant submission and when. Does the project require submission of a concept paper to a department? A training grant may require that the department or curriculum committee see the proposal before any grant is submitted. If approval by the curriculum committee is necessary, find out how often and when they meet, and how long it will take for final approval. Also, carefully read the request for proposals; it may state that a grant must have curriculum, college, or IRB approval prior to submission. For example, the NIH requires that, once the researchers are notified that their grant is within the fundable range, IRB approval must be sought. The NIH regulations further state that no grant award funds are to be released until NIH receives in writing that IRB approval has been obtained.

Early in the grant writing process, determine whether a research office or grants office must oversee or approve the project. If so, this office may have staff and support services that would facilitate the writing process. In addition to providing assistance, the grants office often serves as the final check of the grant before submission. Remember, too, that it is important to know who, outside of the college or institution, must sign off before submission. If the project is a cooperative agreement or if subcontracts must be drawn up for outside personnel to be hired, determine who does this, how long this process takes, and what the procedure is. An external agency that is to supply personnel, as well as the
college or grant writer’s own institution, often has its own indirect cost rates and financial reviews that produce additional budget pages for your grant. Most will wish to review a grant before submission.

CONCLUSION

The “village” analogy is highly relevant to the grant writing, grant submission, and conduct processes. The diversity of backgrounds, cultures, and competencies is especially heterogeneous in this group. Therefore, communication, respect, and clarity of expectations are key to successful relationships among its members. Choose your team carefully, and take exceptional care of them. They will make you proud! Planning is the name of the game when it comes to internal institutional grant submission procedures and processes. Find out the steps in this process and adhere to them. Always assume that the internal review steps are going to take twice as long as you expect. These steps are important to getting your grant out the door, so don’t try to rush them. Finally, remember that your activities aren’t the only ones in the village. Avoid traffic jams by planning each step in the submission process before you start your journey.

REFERENCES

Check Your Parachute! A Few More Hoops to Jump Through

GRANT JAIL: RECOGNIZING THE TIME COMMITMENT

Unless you have “been there and done that,” you have no idea how time-consuming grant writing is. Like childbirth, many who have experienced it once tend to forget the downside or discomfort with the passage of time. Granted, most of us write grants in between other professional and family responsibilities. The reality is that at some point you must lock yourself up for a few hours or days to write and rewrite. It feels like grant jail! As the submission deadline gets nearer, numerous last-minute changes suggested or mandated by your institutional review board (IRB) or reviewers become necessary. This is when you cannot tolerate frequent interruptions if you plan to get the work done on schedule. Every change made in the grant may have ripple effects that make it necessary to make changes in the abstract, specific aims page, or methods. Failure to concentrate on the far-reaching effects of every revision leads to flaws in the overall application. Plan on setting aside some concentrated work time to finalize your proposal for submission. It may be only 1 or 2 hours, but devoting this time to the grant, if possible, will make a big difference in the outcome. Grant writing is not a quick process. Even short grants for foundations require a commitment of several days or weeks to write a tight, solid grant.
WHAT TO INCLUDE (OR NOT)

As you near the submission of your grant, revisit what should and should not be included with your packet. All grants are not the same, and even grants submitted to the same funding agency may require different documents for applications for different grant-funding mechanisms. The National Institutes of Health (NIH) is a good example of an agency that is progressively changing the items and configuration of pages required for a grant. A major change in NIH grant applications came when the itemized budget was eliminated from requested forms. Only a “consolidated” budget page is submitted to NIH on large grants. Streamlining of the award process has brought about “modular budgets” for new, competing continuation, and revised (amended) applications with budgets of $250,000 or less per year for direct costs; these budgets are for the following funding mechanisms:

- Research project grants (R01)
- Small grants (R03)
- Academic Research Enhancement Award (AREA) grants (R15)
- Exploratory/Development Research grants (R21)
- Clinical Trial Planning Grant Program (R34)
- Some Requests for Applications (RFAs) or Program Announcements (PAs)

Even though you may have figured dollars and cents on individual items, personnel, and equipment, the budget must conform to the modular amount allowed.

Pilot studies funded by NIH most often fall into the modular budget category to fund studies awarded no more than $100,000 for the complete project. An example of how funds are allocated can be seen in the R03 award. Applicants may request a project period of up to 2 years and a budget for direct costs of up to two $25,000 modules or one $50,000 module for a one-year grant. The NIH website (grants.nih.gov/grants) offers instruction on developing your budget and provides examples of completed forms. Enter “modular budgets” to explore instructions, frequently asked questions, and examples.

CHECK YOUR NIH PASSPORT: REQUIRED eRA REGISTRATION

Today’s gateway to the NIH grant submission process is the Electronic Research Administration (eRA) Commons located at commons.era.nih.gov/commons. Designed
to be an interface between the newer electronic submission process, reviewers, and applicants, the website provides access to information, grant application status, and all things of importance to NIH applicants and awardees. With the development of the eRA Commons, all applicants and applicant organizations must have a registration username and password to access the electronic submission process. You and your senior/key personnel must be registered to submit a grant proposal. If you have ever been registered with an eRA username and profile, you should maintain this single account throughout your career. An important reason to have a current eRA Commons account is that, since October 2007, grant review scores and feedback are available only through the web-based Commons. You must also be sure that your account is affiliated with any new institution if you move. Your signing official (SO) at your new location should be notified of your eRA information and can complete the process of establishing your new institutional affiliation. The SO is usually located in the office of sponsored research or office of research administration and has the institutional and legal authority to bind the institution in grant administration matters. As principal investigator (PI), you should be sure that your research team is also on board with eRA usernames, passwords, and current affiliations. If you are at a small institution that may be new to NIH applications, be sure that your institution is also registered. Most eligible institutions have already registered for a Commons registration, but if they have not, they must do so before you can submit your grant.

PACKAGING YOUR GRANT FOR SUBMISSION: OTHER REQUIRED FORMS

Depending on the size and complexity of your home institution and the requirements of the grant-funding agency to which you apply, the packaging and accompanying forms vary. If you have followed our advice, you have already looked into the need for approval by your supervising administrator and department by the time you are ready to submit your grant proposal. Equally important are the approvals required by the overall university, hospital, or health science center that will house your research grant. The awardee’s institution, not the PI, becomes the actual grant recipient in most cases. In large institutions such as health science centers, the submitting center, college, or school may receive the funds, but the institution ensures and manages the award. As such, the institution assures grantors that they have met all the assurances and requirements of ethical and financial conduct in the management of awarded funds. When a grant is funded, the funding goes into institutional accounts and is allocated to the researcher only when requests match the specific budget details of the project.
Recognizing the great responsibility of institutions in managing large awards of research funding for numerous applicants from different sources makes the need for careful accounting, rigorous attention to ethical practices, and internal revenue processes beyond reproach. Violations or failure to comply could result in institutional censure, charges of scientific misconduct, and loss of present and future federal funding.

ASSURANCES AND CLEARANCES

It should be absolutely understood that your own particular grant proposal requires IRB (human subject or animal protection) clearances before any research can take place. What new researchers may not know are the important assurances and clearances that your university, school, or healthcare institution must pass as well. A close look at the grant application form will clue you into required specific assurance information and identification numbers that will necessitate a quick search. The best source of information about your particular institution’s assurances, clearances, and internal requirements is your own office of research and contracts or research administration office. Many large institutions post these assurance documents and SO procedures on their institutional website.

Institutions receiving any federal funds are required to document that they have a formal human- and animal-protection committee that meets certain specifications for size and activities. Qualifying institutions are issued a human-subjects assurance number and an animal-welfare assurance number that must be included on the face page of federal grants. In addition, federal grants and most foundations require certification by the Internal Revenue Service of the institution’s nonprofit status. This information is also required on the federal grant face page. There may be other assurances required by your institution, some of which may have already been filed, and for which there may exist a documented form.

Many institutions require an internal form to report disclosure of conflicts of interest in externally funded projects or external relationships and university activities. Another form may be required if the grant involves an employee jointly employed by two or more agencies (e.g., a person jointly employed by a university and a Veterans Administration agency). An internal memorandum of understanding must be filed prior to a grant submission to document that administration, clinical, research, and teaching activities add up to 100% of the person’s total work activities. This serves to verify that no dual compensation for the same work is taking place and no actual or apparent conflict of commitment exists as well.

For federal grants, an entity identifier is used to identify each institution eligible for funding. This identifier contains the employer identification number assigned by the Internal Revenue Service, which is used for the submission of
Social Security and income-tax withholding payments. NIH grant applications require the entity identification number on the face page.

Since October 2003, federal grant applications or cooperative agreements have required institutions seeking grants to include a Dun & Bradstreet Data Universal Numbering System (D-U-N-S) number in every application for a new or competing continuation grant or cooperative agreement. There is a spot to enter your institution’s DUNS number on every NIH grant application face page. If you are not associated directly with an institution that has a DUNS number, you can apply for one through Dun & Bradstreet. For example, if you have a consulting business, you or your business can apply for this number. Go to http://fedgov.dnb.com/webform

SHOWING RESEARCH PERSONNEL’S OTHER FUNDING

Listing your senior/key personnel’s ongoing and completed grant funding is one way that your funding agency checks that there is no dual compensation for the same professional work or overlap of one grant’s funding to another. This information previously appeared in NIH grants in a section called “Other Support.” Today’s NIH streamlined grant process calls for this information to be included on the last page of each person’s biographical sketch under the heading of “Research Support and/or Scholastic Performance.” In a prescribed format “Ongoing Research Support,” as well as “Completed Research Support,” is listed. Grants are listed with their grant number and mechanism, the name of the PI, the inclusive dates of the grant, the funding agency, the title, a brief one- or two-sentence description of the work, and the role of the applicant on the grant.

SPECIALY REQUESTED TABLES

Although we have discussed the need for targeted enrollment tables for ethnic minorities, women, and children in federal research grants, there may be other requirements in training or demonstration grants for minority, graduation, or faculty tables. Tables showing faculty/student assignments, publication collaboration, and previous institutions of enrolled students enhance institutional training grants for doctoral study.

Tables for educational training grants present data on how many minority students are admitted to and have graduated from the institution submitting the grant. Graduation tables contain overall data on the number of students admitted and finally graduated from the various programs the school offers. Faculty tables are
used by reviewers to see how many faculty are from ethnic minority groups, whether they are tenured, how many are full-time versus part-time, what the rank of each faculty member is, and what their areas of expertise are. These data help reviewers know if there are enough internal resources and individuals with the expertise specified in the grant to support the proposed program, special project, or research. These tables are usually not optional. Make sure they are included. Each section is given specific points, so missing tables detract from the overall points in the grant. It also suggests to the reviewers that the writer is unable to follow directions or is not detail oriented. Because tables occupy space in your grant and present a graphic representation of your program, take pains to have them constructed neatly by an experienced staff member. Review them carefully for errors and missing information.

DATA TO SUPPORT THE CASE FOR THE GRANT

Data to support the rationale for the research, practice, or educational grant must be detailed enough to let the reviewer know that the writer is aware of the national, regional, and local needs and healthcare trends. For example, if a cancer rehabilitation center is proposed, the rates and types of cancer in Denver may greatly differ from Chicago. This should be reflected in the writing. Data need to be current, and if no current data are available at one of these levels, then make sure to state that and why. Even an informal needs assessment strengthens the proposal. Include information on this assessment and the way that the data were collected. Giving only national data when the grant is administered locally is insufficient to provide a strong rationale for funding. Be as specific as you can in terms of each facet of the grant. Give accurate rationale to support your requests. Your grant should not appear to be adding to already adequate resources. Another important aspect is to project ongoing self-sufficiency. If the grant period is 3 years, how are you or your institution going to ensure that this program does not just die at the end of the funding cycle? The self-sufficiency statement, if requested, must be specific, with goals and acknowledgment of potential barriers. The potential barriers should have potential solutions built into the grant even though they are only projected. Not having a solid plan for sustainability can substantially reduce funding chances.

PRE-SUBMISSION REVIEW

The need for good presubmission review is so helpful to success that many nursing research centers build the process into their operation and hire experts to
review grants before final submission. Some schools of nursing conduct mock reviews or “modeling parties” in which colleagues constructively critique grant applications to look for potential trouble spots. Hearing how discourse and discussion of a proposal can influence a group’s scoring decision is helpful because this is exactly what a grant goes through at the funding agency. If getting a group together is not possible or if you fear your ability to tolerate honest feedback in a public forum, get one or more individuals to review your proposal privately. Try to decide who might be very objective but will give you good, constructive criticism that can improve your grant. Have these persons read the grant as if they were peer reviewers. They may be experts in the area of the grant and can make sure that you are quoting the most recent researchers or educators in the area (reviewers want to make sure you know your grant area and the key names associated with the grant’s content area). Others might review the grant for flow and grammar and make sure that you have built a credible case for why it should be funded. Even if they have no knowledge of your grant area, they should be able to tell you if you have presented enough details to explain the rationale for the grant. An editor can also be extremely helpful in reviewing the grant by correcting grammar and cutting out excessive verbiage, formatting the application document, designing tables and figures, and checking references.

Presubmission reviewers may include some of the people in your institution who must read and sign off the grant prior to its submission. Their comments also help in the peer-review process. Of course, you will have to decide how many of the suggestions you will act on. The most important comments are those that reflect confusion about what you have written. Areas where your proposal has generated misunderstanding must be corrected. If reviewers have been part of previous grant-review panels, pay careful attention to their comments. They know what reviewers look for in grants and what constitutes a red flag.

AGENCY CONTACT PERSON FOR FINAL CHECKLIST OR TECHNICAL SUPPORT

As mentioned in earlier chapters, the contact person at your agency or technical support staff can be immensely helpful in the grant writing process. Draw on their expertise. They will help make sure your grant is complete. Use the checklist supplied with your application and, if included, the review criteria for the reviewers to ensure that all elements of the application are completed. Look at the criteria for selection and make sure your application addresses each of these points. Go over and over this checklist before you submit. Ideally, have someone else check the application with you; sometimes you cannot see your own omissions.
GRANT CHECKLIST

The grant checklist is the final step in the process. The NIH includes a checklist as part of the application. However, if your funding agency does not provide one, create your own consisting of each required element and the materials required by the agency. Review the checklist for submission again, and make sure that each item required is included in the packet. The checklist is part of the application packet. The list varies among funding agencies, but the basic elements are essentially the same. Look at the specific mailing instructions given in the packet. Grants mailed to the wrong person or the wrong addresses are often never reviewed. The person doing the electronic process checks off items on the checklist for the new SF242 electronic submission forms online. This may be your office of research administration.

GUIDELINES: READ, REREAD, AND PRAY!

Just as with the checklist, go over the actual guidelines for the grant. Review the funding areas, and the key words or objectives that the application packet uses; use these terms as headers and descriptors in your grant. It shows the reviewers that you read and paid attention to details. If you make a change in one section of the grant, make sure that the table or other sections also contain this information as well. Depending on the type of grant you are submitting or the type of institution in which you are working, determine whether optional tables or sections are needed. These are small items that are often overlooked in the grant. If someone else is copying and compiling multiple files to create your grant, make sure the final copies include all the pages in the order you want them. Omission of pages or paragraphs can make the grant incomplete and sometimes invalid for review. Be sure to scan or photocopy pages with signatures to be submitted as portable document format (PDF) files. This compiled version of your grant may need a final internal review by your institutional supervisor, dean, or director before it can be sent to your office of research administration for submission. Once you have done your best to review these items, have reviewed the guidelines, and have checked everything on the application checklist, begin the submission process, sit back, and pray.

CONCLUSION

A well-planned submission process makes grant writing much easier. The key is to plan, plan, and plan. Be realistic in your timeline for completion. Dedicate
time to the actual writing and editing of the project. Have it reviewed by others not involved in the grant, and be ready to revise your proposal if revision is warranted. On the rare occasion when you are required to mail a proposal, be sure to check the final pages to be sure they have all been copied, printed, and numbered. Be sure to reexamine your grant proposal checklist just before the grant is mailed.