

“What common barriers to residency project completion and publication should I be aware of and therefore avoid?”

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When residents about to start their training are asked what they are most excited about, the residency research project is rarely named. The research project may in fact be the one activity that residents dread the most, but never one that is highly anticipated. Yet if you have a follow-up conversation at the end of the year with these residents about what they would want to go back and do again, the residency research project is often listed. Because these are consistent responses that many share, the residency research project never fulfills its potential for the resident’s growth. In addition, because the final report is not as robust as it could be, others in the profession cannot benefit because of incomplete results and lack of publication.

After numerous years of residency leadership and sponsoring residency research projects, I would like to provide advice on the common misconceptions of many when entering their residency year and some perspectives on how to make the most of your residency project. Recognizing these at the outset will hopefully change your individual experiences and provide information helpful to other pharmacists as well.

The drivers for the residency research requirement come from the accreditation standard that all programs must follow. For postgraduate year one (PGY1) programs, the current Postgraduate Year One Pharmacy Residencies Competency Areas, Goals, and Objectives document from the American Society of Health-System Pharmacists (ASHP) requires that each resident “demonstrate ability to evaluate and investigate practice, review data, and assimilate scientific evidence to improve patient care and/or the medication use system.”¹

Given these statements guiding residency program design and my experiences in mentoring residents on research projects, let me first discuss some of the common misperceptions or concerns that might impede the success of your research project. Then, I will share some perspectives and tips on how you can be successful in this project.

1. **As a new resident, you need not have a research project and idea** – Some new residents want to do their own projects as opposed to being provided one from their site. This is very difficult to accomplish because of the resident’s limited experience in practice and research. Although you may not be excited to complete a project provided to you because it is either not your own or not in your area of interest, your success is probably more important than anything at this stage, and provided projects are often better equipped to achieve this.
2. **Your research project may not change practice** – All of us want to be involved in discovering a new idea, treatment, or concept that will change practice. However, the likelihood of our achieving this through a residency research project is slim. If you actually talk to people who have made practice-changing discoveries, they will state that most were built on prior art. What this means is that they have completed numerous projects up to this point with various outcomes. Each conclusion added to the general knowledge and built on the previous project, laying the groundwork for the practice-changing discovery and subsequent publication. In

addition, almost all of these involved a research team with diverse experiences and training, with each team using its insight to contribute to the discovery. Each of us has to start somewhere, and your project could lay the foundation that leads to a discovery decades later.

3. **Research can require perseverance** – When asked, everyone will tell you about the frustrations that occur when undertaking research. However, most of them do not want to discourage others when they start on the journey, so we seldom see these struggles. Some of the frustrations are not getting funded for your brilliant idea, having delays in getting institutional review board (IRB) approval, having slow patient enrollment or not having all of the patients you expected getting admitted, experiencing delayed access to data from your system, not being able to find someone to do your statistics, and having your manuscript rejected from peer review with harsh comments from the reviewers. Most academics have experienced all of these frustrations many times. It is not whether you will have disappointment, but how you will handle it. Learn from your disappointments, persevere through the obstacles, and be determined that you will not be defeated so easily. Those of you who do this are the ones who will make the practice-changing discoveries that we all long to be associated with in our careers.
4. **Statistics are not that hard** – Although many of us did not have a statistics class in pharmacy school, the needs of residency research are not that difficult. With a few conversations with faculty members and some advanced planning, you can complete the statistics you need to accomplish. Don't be discouraged if a statistician is not involved in your project because you will be able to do most of what is needed at this stage.

Besides recognizing these issues, a few tips can make your residency research projects go smoothly and help you avoid many of the complications that residents before you have experienced.

- **Procrastination is a killer** – When you have a compressed timeframe like a residency, any delays introduced by not prioritizing the project will only be magnified at the end of the year when you are scrambling to complete the project. When starting a residency, you have many competing priorities, and the whole experience is new. Things like selecting a research project, writing the research plan, gaining IRB approval, collecting and analyzing the data, and writing the manuscript can add delays to your project. In addition, very few develop a research plan with timelines and end up holding themselves accountable to this plan. Yet not prioritizing each of these steps as they arise throughout the year will only put you behind later in the year and lead to a rushed project completion.
- **December is not really a great research month** – Many programs schedule December as a research month. Although this makes sense from a programmatic end, it is hard to spend quality time on your project in December, given that you have attendance at ASHP Midyear, vacation, and staffing responsibilities and need to prepare for the upcoming recruiting season. When you look at the actual time dedicated for research in December, it is pretty limited. This is why it is important that you find time before this month to be successful in completing your residency project, and not rely on December to do it all.
- **Evaluate the research experience of your mentor** – Although we always want to be involved in a project that is interesting to us, I would recommend that you evaluate your research mentor more than your project. Understanding their experience, their track record of success in accomplishing activities, and their ability to work with you is as important as, if not more important than, doing a project in your therapeutic area of interest. Having a successful project will teach you a lot more about the skills necessary for completing your project and getting you excited about future research than will doing it in an area of interest.
- **Submit your project for publication before completing your residency** – Although all residencies ask for the project to be written in manuscript form before you leave, few programs

require submission for publication before graduating. What this means is that not many residency research projects end up being published; thus, your hard work is not shared for everyone else to review and use. This is because the discipline needed for seeing a project through to publication is difficult for many. Especially if you are off to a new residency or job, the last thing you want to do is go back to your residency research project and submit it for publication. However, if your program requires you to submit your project to a journal before graduating, it is more likely to lead to a publication. With new journals being created for pharmacy residents and various online journals in existence, the potential for success is great because of the many outlets to use. However, don't get discouraged if one journal rejects your manuscript. Read and learn from the reviewers, incorporate their advice into your manuscript, and submit it to another publication. There is tremendous satisfaction in seeing all of your hard work result in a publication.

Although the residency research project can be one of your most dreaded experiences, it can also be one of your most rewarding, if done correctly. Recognizing some of the potential barriers and preventing the chronic concerns that have plagued many before you, you will find that your research project can lay a foundation for your future professional satisfaction and result in a publication that confers many benefits to others in our profession.

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Reference:

1. American Society of Health-System Pharmacists (ASHP). 2014 Required Competency Areas, Goals, and Objectives for Postgraduate Year One (PGY1) Pharmacy Residencies. Available at <https://www.ashp.org/-/media/assets/professional-development/residencies/docs/required-competency-areas-goals-objectives>. Accessed July 10, 2018.