

Increasing Research in Residency: The Elusive Goal

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The goal to increase research among family medicine residents is an elusive one that has been pursued for many years. A variety of studies have been conducted on how to increase resident research.^{1,2} There has even been a special issue of the *Annals of Family Medicine* dedicated to resident research in family medicine.³ Although a variety of strategies have been tried, one thing that has been clear is that a formalized structure and infrastructure is necessary for success.⁴

The article by Weidner et al in this issue of *Family Medicine* revisits this goal by focusing on the role that practice-based research networks (PBRNs) can play in building resident research, particularly in community-based programs.⁵ Are PBRNs the answer to building resident research? They can provide opportunities for residents to participate in research. They have an infrastructure as a base, but including residents in research is dependent on the timing of the bigger research project that the resident might be included in, the skill level of the resident, and the intricacy of the project. Building a culture of inquiry requires the resident to be involved in the beginning of a project so that the resident can understand how to identify a gap in our knowledge base and implement a project to help answer that question. For example, a 5-year grant with a large clinical trial may be underway in the PBRN and as such, the opportunities for resident involvement, particularly on the conception of the study and the write-up of the results may be unavailable. Further, to have a lasting impact on the resident, the project needs to have a successful conclusion so that they can see the answer to their question. Unfortunately, in a survey of PBRNs, 37% of those PBRNs not

affiliated with Clinical and Translational Science Award centers reported publishing fewer than five peer-reviewed articles over a 2-year period, suggesting that either few projects are of the quality to get published, or projects that are started don't get finished.⁶ Consequently, not every project underway within a PBRN is a great opportunity for resident research.

In addition to PBRNs, which clearly have an infrastructure on which to build resident research, there are other research infrastructure opportunities for resident research. It is incumbent on residency faculty to avail themselves of the different options. Some strategies will be more appropriate for different residents and different questions. One option is the Council of Academic Family Medicine Educational Research Alliance (CERA). This is an option with essentially no cost and free mentoring. In fact, the study by Weidner about PBRNs wasn't really a PBRN study, but was actually a survey using the CERA infrastructure.⁵ Including a resident in a project like this would be a great leveraging of infrastructure with an idea in a project that could be done in a matter of months.

Another option is to analyze one of the many large-scale data sets that are made available as public use data. For example, the National Center for Health Statistics has the freely-available National Health Interview Survey, the National Health and Nutrition Examination Survey, the National Ambulatory Medical Care Survey, and many others ([---

From the Department of Health Services Research, Management, and Policy, and Department of Community Health and Family Medicine, University of Florida, Gainesville, FL.](https://www.</p></div><div data-bbox=)

cdc.gov/nchs/index.htm). Investigators from all over the world use these data. Using the MESH heading of “NHANES” on PubMed currently yields more than 48,000 articles. Clearly, there are many different questions that can be asked with this data. These data sets, as well as the Medical Expenditure Panel Survey, the Behavioral Risk Factor Surveillance System, and others provide great opportunities for resident research.

A third option might be to access the clinical database of the local health system to conduct analyses.⁷ This is another low-cost strategy where the data already exists, thereby allowing residents to address clinically meaningful research questions in a timely manner. Many of these clinical databases include millions of patients. These questions could be of local relevance or they could have more generalizable appeal.

PBRNs are a great addition to the range of options for resident research. Encouraging residents to ask questions that have relevance to improving health and health care is key. Faculty don't have all of the great ideas. Including residents in research will enrich the pool of questions that need to be asked. Building upon existing infrastructure to conduct a feasible project in a timely manner and finish it with a peer-reviewed publication will

build a sense that the project was more than a requirement. More research and researchers moving the field forward is a good thing that will benefit us all.

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