

FOUNDATION NEWS

## Building Research Capacity in Smaller Institutions

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Rehabilitation Medicine brings together diverse scientific philosophies and practices from many different disciplines, but many of these practices have not undergone rigorous scientific testing. Currently, rehabilitation research is concentrated in relatively few established centers, creating a bottleneck in research training. Small- to medium-sized residency programs may not have the knowledge, personnel or infrastructure to conduct research or train the next generation of investigators. At Montefiore Medical Center, a medium-sized urban Rehabilitation residency, we faced a similar dilemma. The following is a step-wise approach we are implementing to enhance our research presence.

1. **Make Research a Priority:** This requires a commitment from departmental leadership to support infrastructure development.
2. **Identify a Research Champion:** He/she should be at a mid-to-senior career level with experience in leading research and grantsmanship. They should build collaborations within the department, with other departments and other Rehabilitation programs. The department should provide clear goals and expectations, a title (e.g., Research Director or Vice Chair of Research), protected time for research administration (e.g., 10% effort), space and support for new initiatives.
3. **Build the Team:** It is useful to bring together the program leadership (e.g., Residency Program Director, Fellowship Directors, Chief Residents, Resident Representatives, Senior Researchers as well as Therapy and Nursing Leadership) to create a shared vision, goals, identify gaps and barriers and create an overall timeline.
4. **Create Infrastructure:** This PM&R Research Committee should meet regularly to create new processes, identify problems and find solutions. Hiring research assistants, grants administrator project managers and biostatisticians are crucial to take research to the next level. Pooling resources with other departments could be one strategy to overcoming this financial barrier.
5. **Provide Education:** Most medical schools have regular training in clinical research principles, and if the institute has a Clinical and Translational Science Awards (CTSA)

Program, there may be courses available. The Research Champion should compile all available resources, develop a research curriculum, organize a research bootcamp, monthly didactics or a journal club. AAP offers a more intensive research training through the RMSTP program. Similarly, AAPM&R provides basic "how to get started in research" education on their website. In addition, AAMC and NIH offers internships, fellowships and summer programs to hone research skills.

6. **Create a Forum:** A regularly-scheduled Research "Lab" where interested individuals can bring nascent ideas to be discussed with more experienced research colleagues can help budding researchers flesh out the aims, study design, identify potential recruitment cohorts and other resources such as content experts, mentors and statisticians.
7. **Identify Funding Sources:** In addition to medical school or hospital funds, the Foundation for PM&R offers pilot grants; the AAP offers medical student grants; and state health agencies, Agency for Healthcare and Quality and NIH may have smaller grants for new investigators. Minority faculty can apply for a NIH diversity supplement award by collaborating with a funded researcher.
8. **Mentorship:** The Research Champion can help identify, build relationships and introduce potential mentors.
9. **Research Track:** Residents or junior faculty with a strong interest in research could identify an area of interest and find appropriate mentors for a 1-2 year research project, then become part of the research infrastructure. One strategy to help them gain expertise is to write a review on the topic first. The medical school may offer a 1-year Clinical Research Training Program (CRTP) and/or 2-year Master's in Clinical Research through a K-30 CTSA grant.
10. **Create Research Databases:** Data such as demographic, hospitalization, medical history, procedures done and length of stay for different diagnostic groups, combined with data routinely collected by the rehabilitation administration, can provide a powerful database for junior investigators.



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11. **Writing/Publishing Assistance:** New investigators need guidance in writing and encouragement to pursue publication.
12. **Disseminate Findings:** Novice investigators need help putting together presentations, workshops and symposiums to disseminate their findings. Publishing a newsletter of the department's research activities helps engage everyone.
13. **Awards and Recognition:** An annual research day where trainees and faculty can showcase their work is a great boost to the department's morale. National organizations such as AAP and AAPM&R offer awards for best resident research.
14. **Support research careers:** Hire faculty interested in research and help them obtain training through programs such as RMSTP, CTSA grant programs and NIH junior investigator tracks (K08, K23).

Having a successful research program brings many benefits, including improving quality of patient care, raising the level of competence, building morale and increasing the prestige of the department.

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