

Getting Started Early in Your Pulmonary Hypertension Career

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The Pulmonary Hypertension Association (PHA) biennial conference welcomed more than 1000 health care providers, patients, families, and industry partners to Indianapolis this August, and there was much to celebrate this year. Among other notable accomplishments in advocacy, patient care, and promotion of research, the PHA is commemorating 10 years of both accredited care centers (PHCC) and the association's national registry (PHAR). In 2024, PHA has accrued 92 accredited programs, and PHAR has enrolled over 3000 patients from which 18 publications have been generated. The scope and growth of PHCC and PHAR is remarkable, but what is most important is sustainability. The PHA recognizes this and has made a major commitment to investing in the future. PHA understands the need to foster the next generation of pulmonary hypertension (PH) clinicians and researchers who will carry on the organization's missions for years to come. Along every step of its growth, PHA has supported the development of early-career and trainee members by providing research opportunities, mentorship, and leadership roles.

Through its dynamic mission, PHA offers many opportunities for early-career members to serve our community via membership and leadership

positions in committees and working groups. These roles provide meaningful opportunities for young clinicians and researchers to contribute to the development of programs aimed at improving the experiences of patients, caregivers, clinicians, and researchers. These working groups and committees are responsible for organizing much of PHA's educational content, ranging from live events allowing clinicians and patients to interact and exchange ideas to recorded educational videos by experts in the field. Early-career members often participate in these events, allowing them to connect with the community, elevate their own professional visibility, and accumulate public speaking experience. To further this mission, PHA held its first early-career member reception on the first evening of this year's international conference. At this event, young clinicians and researchers met to connect and develop community, spend time with old friends and formed new relationships, and learned from each other. This event also allowed PHA leadership to meet the next generation of our community. We look forward to future events and the evolution of PHA's early-career development programs.

In addition to formal programs, the PHAR represents a unique and

highly effective career development mechanism for early-career members of PHA. We know this from personal experience. I wrote my first PHAR protocol as an Internal Medicine intern during a time when I had little research experience, no formal training, and a lot of uncertainty about where my career would lead. I discovered an international community of thoughtful clinicians and researchers who were excited to welcome a very junior investigator among their ranks. This early experience working with PHAR clearly shaped my professional trajectory, and 6 years later, I am more committed than ever to dedicating my career to the care of patients with PH. My early-career coauthors Jasleen Minhas and Navneet Singh also had similar experiences with PHAR during their early training.

Our experiences were not in isolation: We'll let the stats speak for themselves. Of the 18 PHAR manuscripts published to date, all but 1 had a lead author who was either a trainee or early-career professional (<10 years from training). This includes an astonishing 10/18 articles (56%) led by students or trainees and 7/18 (39%) led by early-career professionals. Of the total 90 individual authors who have contributed to PHAR publications, over half (47/90, 52%) were either trainees or early-career professionals at the time their article was published. These authors included medical students, graduate students, residents, fellows, and postdoctoral scholars who

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not only participated in research using PHAR data but led major projects and produced high-impact publications. In this respect, PHAR truly stands alone, as few other multicenter registries can claim similar involvement of junior investigators. PHAR is, therefore, an investment not only in patients but also in building the next generation's PH workforce.

Practically, how has PHAR accomplished its impressive track record? Primarily by 2 mechanisms: (1) lowering the barrier to entry for trainees and early-career members and (2) providing an abundance of mentorship and support. PHAR research proposals are no more than 2–4 pages and can be submitted by a broad array of individuals including members of a PHCC director's team or representatives of PHA such as allied health professionals and patients. Trainee and early-career members receive inherent mentorship because

they submit proposals alongside a more senior PHAR principal investigator. All PHAR investigators can participate in and comment on pending PHAR proposals, and so lead authors receive feedback from experts across the nation. This exchange allows for the opportunity for junior authors to collaborate with senior PH providers across the country. Protocol reviews are conducted primarily to ensure scientific integrity, data availability, and no overlap with prior proposals, with a goal of providing authors feedback to strengthen their projects and lead to successful publication. Most protocols (88%) are ultimately approved, and most denied proposals are rejected due to overlap with other preexisting protocols. Once a PHAR protocol is approved and a data use agreement is in place, the investigator is granted access to the PHAR database and, sometimes, additional statistical support from the coordinating center

if requested in the original proposal. This system encourages inclusion by trainees and early-career professionals by creating a culture in which the goal is junior author participation and success, with senior investigators providing the necessary feedback and mentorship along the way.

We are grateful to have had the opportunity to have access to this powerful resource during the course of our training. We urge trainees and early-career investigators to review the registry data fields, current approved proposals, and pose novel questions using the PHAR that will enhance the real-world knowledge of pulmonary arterial hypertension, chronic thromboembolic PH, and PH due to interstitial lung disease and form the basis of further investigation in this field. The PHA and PHAR have unequivocally helped launch our research careers in PH, and we know it can do the same for you.