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Commentary: Resident scholarship challenges during the clinical train ride

Jonathan C. Nesbitt, MD

Scholarship is a key element in the development of young thoracic surgeons as they mature as clinicians, scientists, and educators. Its importance cannot be overstated in the complex development of these young, critical thinkers who must assimilate knowledge, judgment, and skills in the practice of lifelong learning for the care and betterment of their patients. The Accreditation Council for Graduate Medical Education has recognized the importance of scholarly activity as an integral part of thoracic surgery training and as part of its core requirements.¹ Residents are expected to achieve scholarship activities in areas that include discovery, integration, application, and teaching, and latitude is provided to every program to fulfill these goals and objectives; arguably, the most challenging activity occurs with research that ultimately results in peer-reviewed publications. The expectation is that each program provides the opportunities and resources to facilitate resident participation in scholarly activities consistent with its mission and aims. Yet, program directors frequently struggle with ways to satisfy the requirements. Residents are not permitted to have a protected research rotation as part of their clinical training, and scholarly activity does not occur except in arenas in which dedicated program support is available.

Coyan and colleagues² report the results of their structured protocol that significantly increased the academic productivity of their cardiothoracic surgery residents (I-6 and traditional) measured primarily by the number of peer-reviewed publications. Their methods included the provision of a

Jonathan C. Nesbitt, MD

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Resident scholarship can be improved using dedicated research protocols but requires resources and committed faculty mentorship for optimal success.

robust database, biostatistical support, regular planning and review meetings and, most importantly, dedicated mentoring by faculty with a record of academic productivity.

Several interesting takeaway messages can be gleaned from their 4-year study. The authors' residency program was uniquely positioned in an environment in which the necessary institutional resources and administrative support facilitated the accomplishment of their goals, including funding for a dedicated research year. Many programs do not have such backing. In addition, 70% of the authors' I-6 residents took at least 1 year of "protected academic development" after their third year of training, and these residents collectively accounted for 86% of all publications (94% of cardiac-focused manuscripts).

While in training, residents can certainly set aside dedicated time for research, but this time cannot occur during the clinical training years; in essence, the resident must momentarily hop off the clinical program train. During this protected time, in the "weigh station" before reboarding the clinical train, focused efforts for research and scholarship are optimized. Such arrangements provided the substrate for the authors' investigative success. Comparatively, their traditional residents were not afforded dedicated research time and accounted for only 14% of all publications, not a statistically significant change from pre-protocol. And, as the authors note, the experience highlights the facts that residents riding the clinical train are challenged in fulfilling this core requirement.

I commend Coyan and colleagues for delivering on their endeavor. Their protocol should serve as a model for other

From the Department of Thoracic Surgery, Vanderbilt University Medical Center, Nashville, Tenn.

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Address for reprints: Jonathan C. Nesbitt, MD, Department of Thoracic Surgery, Vanderbilt University Medical Center, 1313 21st Ave South, Nashville, TN 37232 (E-mail: jon.nesbitt@vumc.org).

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programs, and their success underscores the value of committed and sustained faculty involvement. For residents on the clinical train, this factor is even more important and emphasizes the need for heightened efforts to meet the Accreditation Council for Graduate Medical Education core standards.

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Commentary: Time and effort...resources and support: Increasing academic productivity during cardiothoracic surgery residency

Neel R. Sodha, MD

In this issue of the *Journal*, Coyan and colleagues¹ present the results of implementing a new protocol to augment academic productivity in their cardiothoracic surgical residency program.¹ The authors report in mid-2017 that academic productivity for cardiothoracic surgery residents increasingly became a programmatic priority. As a result, the division of cardiac surgery at their institution implemented a new comprehensive research protocol. The results of this change are impressive. With the added emphasis on academic productivity and the institution of their new protocol, the group reports a 5- to 6-fold increase in publications over 2 years. Five key components of the program are described: dedicated pairing of residents with a select group of academically productive faculty, regular research meetings, centralized data storage and analysis with a core team of biostatisticians within the department, peer-

From the Division of Cardiothoracic Surgery, Alpert Medical School, Brown University, Providence, RI.

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Address for reprints: Neel R. Sodha, MD, Division of Cardiothoracic Surgery, Alpert Medical School, Brown University, 2 Dudley St, MOC Suite 360, Providence, RI 02905 (E-mail: nsodha@lifespan.org).

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Neel R. Sodha, MD

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Increasing resident academic productivity requires programmatic emphasis and allocation of time and support services.

reviewed project analysis, and continual feedback with a project management system.

The real value of this contribution is within the details provided on how they went about creating this model, with the hopes of providing a reproducible framework for others with a similar goal. Specifically, among a large group of cardiac surgical faculty, only 4 with a strong publication history served as primary resident mentors. In addition to regular meetings, the department was able to provide robust support with a dedicated team of biostatisticians and data managers for cardiac surgery. Finally, their project management system ensured timelines and goals were met.

Although the results are impressive, it is important to note the following. The most significant increases in productivity occurred for residents in the I-6 program. The majority (70%) of this group elected for dedicated research time during training. This group demonstrated an approximately 6-fold increase in publications, whereas the traditional track residents demonstrated a more modest increase of approximately 1 publication, which did not