See Article page 1885.

Commentary: Sponsoring scholarship: Mountains moved by the American Association for Thoracic Surgery

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CENTRAL MESSAGE

Focused efforts by the American Association for Thoracic Surgery have increased NIH funding for its surgeons and represent the grandest form of sponsorship.

Funding from the National Institutes of Health (NIH) is a pinnacle of scholarship in medicine and in science. NIH grant applications undergo rigorous peer-review and are awarded to only top-percentile submissions that are projected to have a high impact on advancing human health. Whereas clinicians are uniquely positioned to recognize and investigate high-impact opportunities, only 1.5% of researchers in the United States are physician-scientists.¹ Surgeons are particularly under-represented among NIH-funded physicians, yet surgeon-scientists are highly productive and the output from their grants is highly influential.² Securing a R01-equivalent award from the NIH is generally considered necessary to sustain a successful research program, and assembly of an exceptional application realistically requires years of preparation and a deep understanding of the grant-review process. Victory is achieved by few applicants, who all contend with unforgiving NIH paylines, but surgeons are faced with a common challenge: the same clinical practices that offer opportunity to innovate require a substantial time commitment that competes with the effort necessary to establish a rigorous parallel research program. Reaching funding at the individual surgeon level is an formidable task, and addressing the

deficit in the surgeon-scientist workforce would seem to require the movement of mountains.³

The American Association for Thoracic Surgery (AATS) was founded in 1917 by the earliest pioneers in cardiothoracic surgery. Through scholarship, innovation, and leadership, the AATS had demonstrated unwavering commitment to advancing our field and is addressing, head-on, the deficit in the surgeon-scientist workforce. Through a portfolio of efforts, the AATS promotes academic development of cardiothoracic surgeons. Grant writing workshops, clinical trials courses, and innovation summits are held to develop the research careers of surgeons. Through the AATS Foundation, the AATS directly promotes research activity by funding a long-standing series of pilot grants to cardiothoracic surgeon-scientists aspiring to obtain NIH funding. Importantly, on a much larger scale, the AATS has established a Scientific Affairs and Government Relations committee that identifies and interacts with funding agencies and that serves as a resource for surgeons to identify available funding opportunities and to gain the essential understanding of funding mechanisms and processes.

In their manuscript, Mehaffey and colleagues⁴ investigated the impact that these AATS activities had on increasing NIH funding to cardiothoracic surgeons. The investigators constructed a novel database of cardiothoracic surgeons in the United States and cross-referenced this database to NIH grant records. Their findings were provocative and uplifting. Over the last three-and-one-half decades,

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cardiothoracic surgeons have received more than \$1.5 billion in NIH funding. Direct correlations were observed between Scientific Affairs and Government Relations activity and an increasing number of funded cardiothoracic surgeons as well as to an increasing number of research grants awarded to cardiothoracic surgeons. Although these data are correlative and not causal, the investigators used rigorous statistics to infer a compelling likelihood of causality. Perhaps the strongest support for the authors hypothesis that AATS activities have helped to increase NIH grants awarded to cardiothoracic surgeons was the strong association with the incidence of new research grants to the individuals surgeons who participated in an AATS academic development program. By investing in their surgeons' career success, advocating for their surgeons, and promoting scholarship among their surgeons, the AATS models sponsorship on the grandest level. Although this level of

sponsorship has been present in the name of the American Association *for* (not "of") Thoracic Surgery since its inception more than 100 years ago, it is now scientifically proven by Mehaffey and colleagues.

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