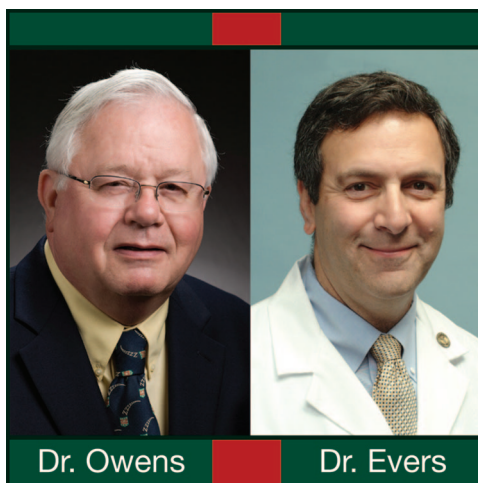


Memories and Dreams

Building an Academic Department at Washington University in St. Louis

“WHEN you’ve seen one academic department of anesthesiology, you’ve seen one department.” This variation on a common adage emphasizes that academic anesthesiology has found many pathways to success and even more to failure. When Jim Eisenach invited this editorial as a focal point for this issue of *ANESTHESIOLOGY* highlighting work from Washington University in St. Louis, he asked that we discuss the tools and techniques we used in developing the department and its academic culture. The truth is that our academic culture has evolved, and the evolutionary process has involved both steadfast adherence to sound principles and serendipitous decisions that have been labeled retrospectively as axioms. We summarize our experience not as a recipe or a tool kit, but rather as a set of guiding principles that may be applicable to the broad array of academic departments.

When one of us (WDO) became the second department chairman 30 yr ago, the department had no laboratories or grants and very limited publications. The chairman’s charge was to initiate research programs that would increase the stature of the department to that of the other clinical departments at the medical school. In retrospect, an essential success factor was the good fortune of having leaders in our medical school* who saw the lack of anesthesiology research as an institutional deficiency and were willing to commit both resources and counsel to rectifying this deficiency. Even the best plan could not have succeeded in an unsupportive environment. In starting the research program, two principles were enunciated: (1) The quality of anesthesiology re-



“We summarize ... a set of guiding principles that may be applicable to the broad array of academic departments.”

search had to be of the same quality as the best basic science and clinical departments, based on clear metrics, such as publication in high-impact journals, federal funding, and fundamental discovery; and (2) the scientific effort of our department had to be coordinated and collaborative with the broad scientific themes in other departments (molecular biology, genetics, neuroscience, *etc*).

Joe-Henry Steinbach, Ph.D., a world-class cellular physiologist, was hired as director of the Research “Unit” and embraced the two guiding principles as well as the quest of developing a group of physicians and scientists dedicated to advancing the science of anesthesiology. He established that lab space would be provided only to faculty who could obtain joint appointments in basic science departments and that all faculty with research space must be approved as graduate student thesis mentors. These simple rules helped us to maintain high quality standards and earn local visibility and respect as an academic discipline. Implicit in this structure was that all research was centralized so that faculty from the various clinical divisions had their lab space in the “research unit,” sharing resources and adhering to a common set of quality standards. This has promoted collaboration between our clinical divisions and has been a cost-effective way of avoiding duplication of resources. It was also agreed that although National Institutes of Health funding was a necessity for investigators, it could not serve as the sole surrogate for quality. For that reason, nonclinical time and departmental support for research have never been strictly formulaic. This principle has avoided the hiring and firing of staff, thereby enhancing continuity and building faculty loyalty. In retrospect, it is clear that a scientific leader (such as Professor Steinbach) who can identify and develop talent and who takes ownership of disciplined resource allocation was essential to the birthing of our research enterprise.

As the department became scientifically successful, there was some national perception that the research unit was a PhD-driven appendage to an essentially nonacademic department; this was an inaccurate critique (the faculty was composed of an equal number of PhD and physician scientists) that had a

Accepted for publication September 13, 2011. The authors are not supported by, nor maintain any financial interest in, any commercial activity that may be associated with the topic of this article.

* The heads of several departments, Gerald Fischbach, M.D., Ph.D. (Neurobiology), Philip Needleman, Ph.D. (Pharmacology), and David Kipnis, M.D. (Internal Medicine), actively worked to support the development of an academic anesthesiology department at Washington University.

Copyright © 2011, the American Society of Anesthesiologists, Inc. Lippincott Williams & Wilkins. *Anesthesiology* 2011; 115:1147–8

grain of truth. Fortunately, the clinical faculty took pride in the research accomplishments of the department and did not resent the faculty who had research time. This was, in part, because of financial transparency; the faculty knew that clinical reimbursements remained in the clinical budget and that research funding came from university and extramural funds. Although the ability to apply this principle depends on local finances, it certainly prevents the antiresearch resentments that can arise in a department, poisoning the environment for development of an academic culture.

The truth about the early weakness of our academic department was that a minority of the clinical faculty was fully engaged in the intellectual activities of academic anesthesiology. Our approach to this has been to develop programs that meet the following three criteria: (1) address areas and questions of fundamental importance to the specialty of anesthesiology; (2) either complement an institutional strength or address a perceived institutional weakness; and (3) provide infrastructure and leadership for faculty and trainee development. In retrospect, the success of our initial emphasis on laboratory-based neuroscience and pharmacology was facilitated because it meshed with institutional strengths. Our subsequent development of a Division of Clinical and Translational Research (DoCTR) has flourished in parallel to the development of the University-wide Institute for Clinical and Translational Research and Institute of Public Health. The department has developed several other programs, including the Washington University Pain Center (WUPC) and most recently an Institute for Quality Improvement, Research and Informatics (INQUIRI), that were prioritized and timed to harmonize with perceived institutional needs and initiatives. By coordinating departmental programmatic development with institutional strengths and needs, we have been able to gain access to institutional resources, benefit from mentorship in other disciplines, harness trends in faculty interest, and further integrate into the academic fabric of the university. Interestingly, this infrastructure has not only facilitated clinicians to engage in clinical studies, but also has encouraged laboratory-based investigators to become more translational and engage in patient-centered research. Development of these programs, coupled with a consistent departmental message about faculty engagement, led us to a tipping point where the dominant faculty culture is “academic” (see final paragraph).

We do take exception to the commonly held idea that “PhD-driven research is a weakness” in an academic anesthesiology department. Our department has been fortunate to attract investigators from a variety of medical and nonmedical disciplines who have embraced the importance of the pharmacologic, pathophysiologic, educational, and organizational challenges facing anesthesiology and perioperative medicine. We believe that one of our greatest departmental strengths is that we are a meritocracy in which accomplishment, rather than credentials, is the metric of success. The goal of academic anesthesiology should be to promote appreciation of the importance of the problems in perioperative

medicine and enlist all interested parties in solving them! Indeed, we posit that excessive credentialism is a likely pathway to diminished importance.

Critical to the success of any academic anesthesiology department is engaging trainees in the intellectual life of our specialty. For many years, the perceived financial and lifestyle lure of private practice has served as a negative motivator to attracting and developing academically interested anesthesiology trainees. This has changed for the better in our program, a result we attribute to three factors. First, we were fortunate to have a faculty member who seized on simulation as an academic opportunity 15 yr ago and developed the Washington University Simulation Center as well as a federally funded research program. This has been the nidus for development of a variety of innovative educational programs that have engaged a significant sector of the faculty and catalyzed a positive learning and research culture in our training programs. Our development of simulation research and innovative educational programs has flourished, at least in part, because these were also areas of perceived need for which our medical school was seeking leadership and was prepared to support. Second, the development of a cadre of enthusiastic clinical and basic research faculty has served as a reservoir of role models as well as an overall influence on the clinical environment. Finally, we have adopted a strategy of building the residency through the fellowships. Fellows come to a program because they see the opportunity to acquire skills and knowledge that distinguish them from their peers and build their careers. Engaged and excited fellows are accessible role models to the residents; engaged residents graduate to become role model fellows, who then populate the faculty with academic anesthesiologists.

The structures and programs we have developed to grow the department’s academic mission are valuable tools but are important only insofar as they support a culture that embraces all of the aspects of what we do. A successful academic culture embraces and integrates research, quality improvement, clinical care, and education. The measure of that culture is not National Institutes of Health funding, publications, or resident match lists. It is the impact and legacy of the people who train and work in the department that influences and improves anesthesiology and medicine. Our department has made many contributions and strides of which we are proud, but it is dangerous to let our memories eclipse our dreams. There are major unanswered and important questions facing every domain of our specialty, from molecular pharmacology to patient safety to health financing. The accomplishment of which we are most proud is that we have nurtured a successful (and it is hoped self-replicating) academic culture that has developed people who are equipped and motivated to respond to the perpetual new challenges and opportunities that our specialty faces. We hope that some of our experience will be helpful to our colleagues elsewhere.

Alex S. Evers, M.D., William D. Owens, M.D., Department of Anesthesiology, Washington University School of Medicine, St. Louis, Missouri. eversa@wustl.edu