EDITORIALS

Academic Anesthesia Faculty Salaries: Incentives, Availability, and Productivity

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In the United States, financial compensation for academic anesthesiologists has usually been based on rank and/or clinical time. Typically, faculty salaries would increase with seniority and the associated increases in rank (i.e., assistant professor→associate professor→full professor). Since most of the actual financial compensation is derived from clinical activity, a certain clinical expectation (i.e., usually number of days per week in the operating room plus call) would be expected. If a faculty member has research grants, money from the grant may be used to help pay a faculty member's salary and increase his or her nonclinical time. These are the principles by which academic departments have for years compensated their faculty, although there have undoubtedly been many variations.

Over the past 10 to 15 years, many American academic anesthesia departments have increasingly had problems with recruiting and retaining faculty (especially junior faculty), making it difficult to provide clinical coverage for all of the activities usually associated with operating room anesthesia and call. Increasingly, hospital administrators—and even surgeons—have been critical of anesthesia departments' salary structures because they are not based on clinical incentives and/or productivity. In the article published in this month's issue of *Anesthesia & Analgesia*, Abouleish et al. (1) found that of 83 departments, nearly 70% had some type of incentive by which faculty could earn extra money. Abouleish et al. have also attempted to assess the current state of affairs with regard to incentive-based compensation in academic departments and its effectiveness.

A more precise definition of an "incentive" is necessary. One definition might be "the implementation of some measure to stimulate faculty to increased quality and/or quantity of performance." Obviously, incentives come in many forms. Fundamentally, as far as anesthesia departments are concerned, incentives can be divided into those based on availability versus those based on productivity. Examples of availability would be number of days in the operating room, number of calls, and their duration. For example, if one is expected to be in the operating room one particular day, the amount of anesthesia actually delivered would probably vary extensively among faculty members. However, independent of their individual clinical productivity, they would receive the same credit (i.e., 1 day in the operating room). Should one receive the same credit when they are on call, whether or not they actually deliver clinical care? Conversely, another form of an incentive is productivity, which is based on the amount of anesthesia given. Should a faculty member's salary be based on the expected amount of productivity (e.g., amount of clinical work performed) versus availability during which anesthesia may not be given? Studies in our department have determined that when someone is in the same specialty, has the same call, and has the same number of days in the operating room, his or her clinical productivity can vary widely (2). This probably relates to the individual variation in enthusiasm for volunteering for extra cases, seeking relief from their current day's activities, and the vigor with which they pursue other cases when their own are canceled.

Although this author is extremely biased, it is my opinion that only productivity-based incentives actually achieve the goals and aspirations of academic anesthesia departments and medical centers and enhance the anesthesia faculty's relationship with other specialties, such as surgery. In the Abouleish et al. survey, only 17% of the departments used a productivity measure. Nine departments based their approach on charges (financial charges), and the remaining five based it on time that clinical care was actually delivered. One could argue that a system based on charges is inappropriate because of the unevenness of charges for various medical plans and surgical procedures in anesthesia. Using time or quantity of clinical care avoids the inequalities of the compensation

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schemes. This system defines the actual time spent delivering clinical care as the prime basis for incentives. Nevertheless, the majority of departments in the United States clearly do not use such productivity-based compensation. To have an effective clinical productivity incentive, pain clinics and critical care units need to be included in most anesthesia departments. While a specific productivity may be difficult to define in pain clinics and critical care units, a fundamental basic requirement is that the incentive should be based on the actual quantity of clinical care delivered. In other words, clinicians who take care of a larger number of patients should be defined as being more productive than those who take care of fewer patients. Therefore, it is entirely possible (and we do it in our department) to have productivity measures in every clinical activity that exists in anesthesia departments.

The Abouleish et al. study nicely describes the different forms of incentives in academic anesthesia departments. However, to state that a department has incentives is, in itself, not very informative. For example, incentives need to be defined as being based on availability or productivity. Furthermore, are the incentives voluntary? An example of an involuntary incentive would be the department's decision to provide extra compensation for extra call over and above that which was expected by the faculty member from his or her salary alone. An example of a voluntary incentive would be to have a certain amount of call that needs to be provided and for which faculty members can volunteer. The advantage of a voluntary incentive is that it allows faculty members to influence the total compensation they receive.

Productivity-based incentives are dependent on the total amount of clinical care derived. Such an incentive may be based on the amount of money that is generated by the faculty or the amount of clinical productivity based on time, with or without concurrency. Our experience at the University of California, San Francisco, is that the productivity measure (i.e., the amount of time giving anesthesia) is tremendously beneficial in many respects. First, it rewards those who actually give more anesthesia. Second, faculty members tend to want to spend their time actually administering anesthesia instead of, in some cases, trying to avoid it. Knowing that the faculty receive compensation for actually giving anesthesia individually places confidence in the hospital that the anesthesia department has a "hands-on" assessment of clinical efficiency. To be able to tell the hospital administrator that his or her surgical service is difficult to cover for anesthesia because of its inefficiency is powerful. Not only that, but to be able to tell surgeons that their inefficiency or unavailability costs the anesthesia department income is reversing the typical role of surgeons. Likewise, surgeons typically complain when they cannot do cases, and it therefore hurts their productivity and income.

Abouleish et al. state that a likely assumption on the part of hospital administrators is that incentive plans for anesthesiologists would increase the number of surgical cases. I am not sure of the basis for this conclusion. Most certainly, the hospital administrators with whom I have interacted do not have that expectation, since the surgeons are the ones who bring the cases to the hospital. On the other hand, my experience is that hospital administrators are extremely worried about the capability of anesthetizing the available cases in a timely manner. It is common for academic anesthesia departments to be unable to run all of the rooms necessary for surgery because of an inadequate number of faculty.

Abouleish et al. conclude that "academic departments implicitly assign value to nonclinical activities." There are some departments, including ours, to which that conclusion does not apply. Only clinical activities are directly financially rewarded by our productivity system. In fact, an interesting study would be to create financial productivity measures for clinical productivity only and not for education and research. Perhaps extra nonclinical time is the proper incentive for individuals who provide valuable research and education activities. One might argue that if there were no financial incentives for researchers versus clinicians, then research productivity would decrease. About 10 years ago, our department had significant clinical coverage problems because of which our productivity incentive program was established strictly for the clinicians. Since then, we have had a dramatic increase in the number of National Institutes of Health (NIH) grants and total NIH funding. The classic satement (i.e., why don't the researchers come out of their labs to help us out?) are no longer heard. The educational program can be incentivized by extra nonclinical time rather than by direct financial incentives.

There is an inherent tendency to want to maintain the status quo, which, according to Abouleish et al., is exhibited in many departments (i.e., those without productivity-driven plans). Furthermore, even if a new incentive plan is initiated, how should its efficacy be determined? Even if a new productivity plan is compared with the old availability or salary-based plan, other conditions may account for the difference rather than the system itself. This makes it virtually impossible to study in a manner that would warrant publication in a peer-reviewed journal. Faculty members who have a vested interest in the nonincentive-based compensation may demand that the chairperson "prove" the new plan's efficacy; this is difficult to do.

Our experience is overwhelmingly in favor of a clinical productivity incentive plan. It rewards clinical productivity and penalizes availability that is not clinically productive. It also sends a strong message to the administration and surgeons that clinical productivity

is the measure by which the anesthesia department is motivated and financed. This is very powerful when resources are needed. It also allows objective analysis based on data regarding individual productivity and adverse financial impact when the hospital decides to initiate or sustain clinical services that are not busy or efficient. Also, the need for anesthesia departments to provide nonproductive coverage puts appropriate pressure on the hospital for compensation.

Anesthesia departments have decreased personnel expenses when there is a productivity-based incentive plan. When we were entirely salary based, the department was expected to have enough faculty to cover all clinical situations. When the faculty had to work more than their expectations, they complained. When they did not have to work to their commitment, but were available, they were content. We now run our department about 90% of control. Frequently when I hire additional faculty to meet the 100% coverage, faculty will ask me not to do so because it would interfere with their additional income. Finally, although we cannot prove it with objective studies, there seems to be no doubt that having the power to change one's income, especially for junior faculty, is extremely helpful in retaining young clinical faculty.

One might argue that in writing this editorial encouraging the use of clinical productivity methods for compensation in an anesthesia department, I am taking advantage of my role as Editor-in-Chief; I am guilty as charged. My opinions are based on departmental experience, on being a Chair for 21 years, on conversations with other Chairs of excellent anesthesia programs, on analysis of departments in which the Chairs were involuntarily terminated, and on having been a consultant at many academic institutions, either by invitation of the Chair, the medical school, and/or a medical center seeking consultation regarding problems associated with their anesthesia departments. Most frequently, these problems are related to the inability to cover operating rooms. Incentives are increasingly used by companies and universities and even for departmental Chairs. The pressure for anesthetic departments to be incentive based will probably increase. Abouleish et al. have well demonstrated that although many anesthesia departments do use incentives, they rarely use clinical productivity as a measure of financial compensation. Productivity measures reward faculty independent of their rank and enhance individual power. Compensation, such as financial incentives, may help to retain junior faculty and may provide fertile ground for powerful relationships among anesthesiologists, surgeons, and hospital administrators.

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