A Cost-Benefit Analysis of Introducing and Anesthesia Residency Elective at a Private Health System

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INTRODUCTION

The United States is facing a physician shortage of immense proportions in the future, with an estimated shortage of approximately 37,800-124,000 physicians by 2034.[1] In an effort to increase graduate medical education opportunities, some private health systems in the US have sponsored residency elective rotations in conjunction with academic medical centers. Anesthesiology electives in a private health system are unique in that they may have an impact on the clinical productivity of the private anesthesiologists. Our goal was to explore the financial costs associated with establishing a one-month anesthesiology residency elective rotation at a private health system, as well as identify potential benefits to the academic center, residents, and the private health system.

RESEARCH QUESTION

What are the financial costs associated with a one-month anesthesiology residency elective within a private health system?

METHODS

A literature review of the costs associated with establishing elective residency rotations was performed. Using data from the 2020 MGMA DataDive Provider Compensation, costs were estimated based on national median compensation rates for anesthesiologists and CRNAs, as well as a median PGY4 resident salary stipend from the AAMC's Survey of Resident/Fellow Stipends and Benefits Report.

Table 1. Provider Compensation

Provider Type	Total Compensation	Calculated Monthly
Anesthesiologists[2]	$473,229	$39,436
Academic Anesthesiologist[2]	$392,116	$32,676
CRNA[2]	$196,497	$16,375
Academic CRNA[2]	$180,684	$15,057
PGY4 Resident Physician[3] (stipend only)	$65,441	$5,453

*Calculated monthly figures are generalized as some salary items paid out on an annual rather than monthly basis

RESULTS

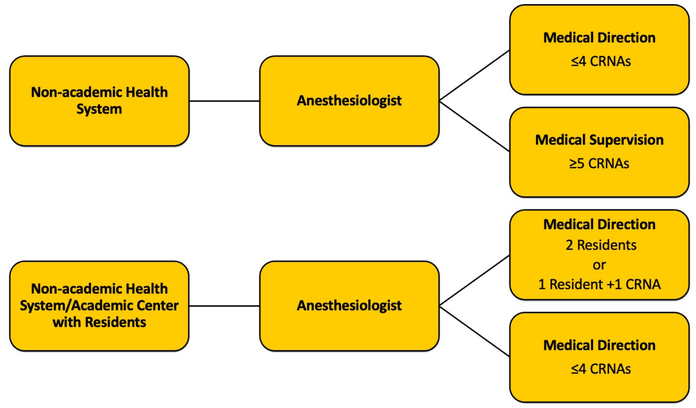

Figure 1. Differing structures of anesthesiologist oversight before and after implementation of an elective rotation at a private, non-academic health system.

- **Residents**
  - Less competition for case requirements
  - Larger case volumes
  - Varied caseloads
  - Training in private or employed-physician practices
- **Academic institution**
  - Resident recruitment
  - Additional opportunities for ACGME case requirements
- **Private health system**
  - "Audition rotation"
  - Potential for decreased cost from direct physician recruiting

Figure 2. Potential benefits for an anesthesia residency elective to residents, the academic institution, and the private health system

SUMMARY OF RESULTS

- A private health system could incur a minimum cost of $5,453 per month to reimburse the academic health center for the resident's stipend. The private practice attending anesthesiologists' wRVU productivity may be impacted, as they may oversee only two anesthesiology residents in comparison to up to four CRNAs .
- If there is a significant distance between the academic medical center and the private health system, there additionally could be resident transportation and/or housing costs.

DISCUSSION

- A private health system would need to transition from an anesthesiologist providing medical direction over up to four CRNAs to medically directing two residents. This would require the addition of one anesthesiologist or the loss of two practicing CRNAs. At the academic institution, the opposite could occur; with the loss of two residents, the facility will have to employ two more CRNAs to maintain the same level of productivity. This will also allow them to employ one less anesthesiologist, as two additional CRNAs can work under one anesthesiologists.

LIMITATIONS

- This project does not address the effects which establishment of such an elective would have on the staffing and employment of CRNAs within the private health system

CONCLUSIONS

A private health system may incur costs to facilitate a one-month anesthesia residency electives in the short-term. In addition to health system financial commitment, there would need to be a significant commitment by the attending anesthesiologists to prioritize on resident education. Not accounted for in this analysis is qualitative benefits to the residency program as the residents may have less competition to meet case requirements via higher case volumes, and a more varied caseload due to differing patient populations, all of which would also be beneficially for future resident recruitment. Furthermore, instead of completing their entire residency training within an academic health center, anesthesia residents would have the opportunity to train in private and/or employed physician practices. Private health systems would also benefit from hosting residency electives, as the rotation may serve as recruitment opportunities and reduce much higher costs associated with subspecialty physician recruitment.

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REFERENCES

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