Improving Veterans Health Administration Anesthesia Cost, Quality, and Access Synthesis Project

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Project Aims

- Inform stakeholders about anesthesia models utilized in the private sector, the VHA, and within military branches and to compare the cost, access, and quality of care delivered.

Background

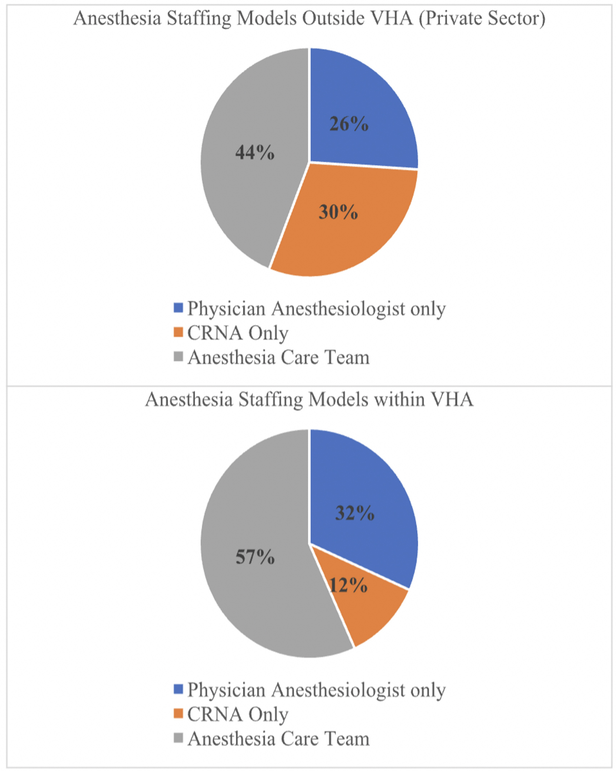
- The Veterans Health Administration (VHA) provides surgical care in 110 hospitals and 27 ambulatory care centers nationwide.
- The vision of this organization is to provide exemplary care that is patient centered and evidence-based while being delivered by a collaborative team of healthcare professionals.
- Currently, the anesthesia practice models utilized do not align with evidence-based literature recommendations regarding patient outcomes, cost of care, or access to care.
  - There is currently no universal practice model used throughout the VHA system, and practices vary widely among facilities.
- A physician anesthesiologist-only practice consists of anesthesiologists as the exclusive anesthesia providers.
  - Approximately 31.6% of VHA cases were performed by either a physician anesthesiologist alone or with a resident.
- In a Certified Registered Nurse Anesthetist (CRNA) independent practice model, the CRNA creates and performs an anesthetic in collaboration with the surgeon or proceduralist.
  - Approximately 11.7% of all surgical cases conducted within the VHA are completed by CRNAs without anesthesiologist supervision.
  - 22% of VHA facilities allow CRNAs to practice without supervision.
  - The ACT model consists of a varying combination of physician anesthesiologists and CRNAs and provides 54% of anesthesia delivery in VHA facilities.
  - Can be either medical supervision or medical direction.

Results

Access to Anesthesia Services

- Majority of rural anesthesia is provided by CRNAs.
- During the COVID-19 pandemic, when APRNs were granted increased autonomy, 36% of their care was provided in rural settings, compared to 28% prior to the waiver.
- Within the VHA, the independent CRNA practice model was mostly utilized in rural areas and made up for 11.6% of cases.
- There are currently 822 CRNAs and 892 physician anesthesiologists working within the system VHA. These metrics provide insight into VHA staffing ratios and inefficiencies in allocation of anesthesia providers.

Comparison of Anesthesia Staffing Models



CRNA Practice Authority within the Government Entities

	CRNA Full Practice Authority
US VHA (National Anesthesia Service)	No
US Army (Army regulation 40-68)	Yes
US Air Force (Air Force Guidance Memorandum)	Yes
US Navy (Utilization Guidelines for Nurse Anesthetists)	Yes
US Indian Health Services (Anesthesia Programs Within Indian Health Service Hospitals)	State Dependent

Average Cost of Anesthetic Based on Anesthesia Staffing Model

Anesthesia Staffing Model	Average Cost of Anesthetic
Physician Anesthesiologist Only	$336
CRNA only	$170
Supervision 1:6	$226
Medical Direction 1:1	$506
Medical Direction 1:2	$339
Medical Direction 1:3	$287
Medical Direction 1:4	$267

Average Annual Cost of Anesthesia Provider Based on Anesthesia Staffing Model

Anesthesia Staffing Model	Average Clinical Staff Cost per Year
Independent CRNA (non-medically directed)	$170,000
Medical Direction (1:4) Anesthesiologist	$305,079
Medical Direction (1:2) Anesthesiologist	$440,157
Physician Anesthesiologist Only	$540,314

Quality of Anesthesia

- Anesthesia care services offered by anesthesiologists and CRNAs were found to be of similar quality.
- Cochrane Review from 2014 was unable to ascertain whether anesthesiologists or CRNAs offer greater quality of care.

Significance

- Inappropriate assignment of anesthesia providers at the Denver VHA resulted in surgeries being canceled or delayed.
- Forty veterans died at Phoenix VHA due to delays in access to care.

Study Limitations

- Limited literature available on anesthesia staffing and its effects within the VHA and other government entities.
- Strict time constraint for publication in a recognized journal.
- Resistance from clinicians to change current anesthesia practice models.

Conclusions

- Patient outcomes following an anesthetic administered by a certified registered nurse anesthetist (CRNA) vs anesthesiologist are similar.
- CRNA scope of practice varied among different government entities. The Army, Air Force, and Navy grant CRNA independence, while the VHA does not.
- Ratios of 1:4 or greater provide the most financial benefit without sacrificing quality and increasing access to care.

References