South Carolina Institute of Medicine & Public Health

2020 Policy Brief: Anesthesia Providers and Patient Outcomes

Review of the laws regarding "supervision" of CRNAs and the outcomes in quality of care

Anesthesia care provided by Certified Registered Nurse Anesthetists (CRNAs) and physician anesthesiologists is an important resource in our health care system today. While both types of clinicians are committed to providing safe anesthesia care, the two are subject to different regulations which has sparked conflict within the nursing and medical communities. This conflict primarily stems from a 2001 Centers for Medicare & Medicaid Services (CMS) rule change that allows states to opt out of the federal physician supervision requirement for CRNAs.[1] In order for a state governor to opt out of this requirement, which applies to hospitals and ambulatory surgical centers, he or she must meet three criteria: 1) consult the state boards of medicine and nursing about issues related to access to and quality of anesthesia services in the state, 2) determine that opting out is consistent with state law (i.e., the state does not have its own physician supervision requirement for CRNAs), and 3) determine that opting out is in the best interests of the state's citizens.[2] It is important to clarify that "physician supervision" applies to all physicians who work with CRNAs, including surgeons and other proceduralists, as well as anesthesiologists. This holds true at both the federal (CMS) and state levels. Further, it is important to understand that other than in some New Jersey state statutes, CRNAs are not required to be supervised by, or even work with, anesthesiologists.

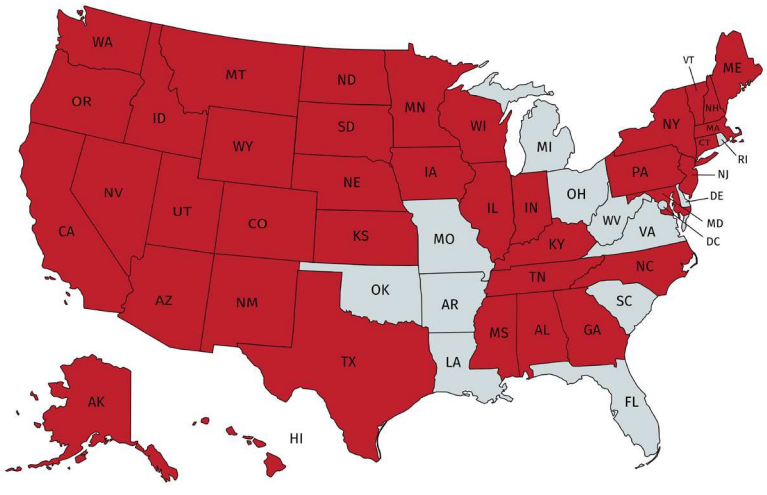
Currently, 40 states have no supervision requirement in their nurse practice acts, medical practice acts, board of nursing rules and regulations and board of medicine rules and regulations. Of those states, since 2001, 18 have chosen to opt out of the CMS physician supervision requirement and allow CRNAs to practice without physician supervision.[3] The majority of states that have opted out are predominantly rural, with large medically underserved areas where CRNAs are the primary anesthesia providers ensuring that patients have convenient access to essential health care services without having to travel long distances.[4]

Some non-opt out states that do not require physician supervision may instead require CRNAs to work in direction of or in collaboration with physicians. While these terms pertain to billing, their interpretation is decided by the facility. Physician collaboration refers to a process whereby a CRNA and a medical doctor, osteopathic physician, podiatric physician or dentist jointly manage the care of a patient; whereas physician direction refers to an anesthesiologist involved in up to four concurrent anesthesia procedures at one time with a CRNA.[5]

Currently, there is a bipartisan companion bill that would address CRNA supervision requirements in the South Carolina Nurse Practice Act (S.C. Code Ann. Sec. 40-33-20 et seq.). Senate Bill 563 and House Bill 4278 would remove references to physician supervision in the Nurse Practice Act (NPA) and require a minimum of a master's level education to become a licensed CRNA.

Many considerations exist when discussing access to care, health care spending and scope of practice laws; however, this policy brief examines quality of care outcomes related to the administration of anesthesia by a CRNA as compared to a physician anesthesiologist and the associated supervision requirements.

States Without Supervision Requirement in Their Nurse Practice Act or Board of Nursing Rule



OUTCOMES IN QUALITY AND SAFETY

While there are a limited number of studies on anesthesia quality and safety outcomes when provided by a CRNA versus an anesthesiologist, most research has found anesthesia-related complications and mortality rates between providers to be nearly identical. The most recent impartial study, an extensive literature review commissioned by the Cochrane Collaboration and published in the Cochrane Library, examined six relevant research studies to assess the effectiveness of different anesthesia providers worldwide. Though most of these studies found that there was no difference in mortality rates when anesthetics were provided by a CRNA or an anesthesiologist, Cochrane concluded that "no definitive statement can be made about the possible superiority of one type of anaesthesia care over another."[6] Considering the individual data sources reviewed by Cochrane found patient care to be similar, differing interpretations have been made by the American Association of Nurse Anesthetists (AANA) and the American Society of Anesthesiologists (ASA).

The United States has greatly reduced mortality in anesthesia care; anesthesia related deaths have decreased 97% since the 1940s and to a .001% mortality rate as of 2005.[7]

The most recent study conducted by researchers with the Lewin Group, "Scope of Practice Laws and Anesthesia Complications," indicates that the odds of patient complications were found to differ significantly based on patient characteristics while showing virtually no evidence of increased odds of complications based on scope of practice or delivery model.[9] The research, which focused on 5,740,470 United Healthcare claims involving anesthesia between 2011 and 2012, states that eight in every 10,000 anesthesia-related procedures resulted in a complication, regardless of who administered the anesthesia.[10]

An analysis of Medicare data between 1999 and 2005 published in Health Affairs found no evidence that requiring physician oversight of CRNAs resulted in an increase in anesthesia-related deaths or complications among patients.[11] Researchers found that "In opt-out states, there were no statistically significant mortality differences between the periods before and after opting out," which led them to conclude that the data did not support the hypothesis of increased surgical risk based on physician supervision of CRNAs.[12]

Contrary to most research studies, Silber et al. suggests that better surgical outcomes in Medicare patients are associated with anesthesiologist direction and oversight; "adjusted odds ratios for death and failure-to-rescue were greater when care was not directed by anesthesiologists."[13] This study also concluded that hospitals with more advanced facilities, greater nurse staffing rates and more educational programs were consistently associated with reduced failure-to-rescue rates.[14] However, the Health Care Financing Administration (HCFA), which became the CMS, dismissed all claims and affirmed that the study is not relevant to the issue of physician supervision of nurse anesthetists as the study examined postoperative care, not anesthesia care provided by CRNAs.[15]

A study funded by the United States Department of Health and Human Services (DHHS) found an increased risk of admission to a hospital or death following ambulatory surgery when the anesthesia provider was a non-anesthesiology professional or a CRNA compared to a physician anesthesiologist.[16] This study noted that there was no difference in disposition when the care team model was in place and that there are not enough studies or data on the quality of care provided by a CRNA versus an anesthesiologist to make a meaningful comparison.[17]

NEIGHBORING STATES

While North Carolina does not have a physician supervision requirement for CRNAs, the state does require that CRNAs collaborate with a physician, dentist or podiatrist.[18] "Collaboration" is defined as "a process by which the certified registered nurse anesthetist or graduate nurse anesthetist works with one or more qualified health care providers, each contributing his or her respective area of expertise consistent with the appropriate occupational licensure laws of the State and according to the established policies, procedures, practices and channels of communication which lend support to nurse anesthesia services and which define the role(s) and responsibilities of the qualified nurse anesthetist within the practice setting.[19]

North Carolina legislators have introduced bipartisan companion bills to remove this collaborative agreement which they call the S.A.V.E. Act (Safe, Accessible, Value-directed and Excellent care). This bill would remove the collaborative practice agreement between APRNs and their supervising physician, granting them full practice authority. Legislators believe that this will allow North Carolinians faster access to health care and drive down costs by more than $500 million per year. [20]

The Georgia Registered Professional Nurse Practice Act states that anesthesia can be administered by a CRNA under the direction and responsibility of a dually licensed physician, which can be a surgeon or other proceduralist, or an anesthesiologist. The two must enter a Nurse Protocol Agreement which is governed by the Georgia Board of Nursing to outline and identify the appropriate standard of care, authority and parameters.[21]

Though they are allowed to practice under the direction of a physician and order drugs, medical devices, medical treatments and diagnostic studies, Advance Practice Registered Nurses (APRNs) in Georgia are not permitted to order Radiological Imaging Tests (CT, CAT, MRI, MRA, PET and PET-C).[22] Georgia legislators have introduced companion bills that would remove this restriction.

On October 3, 2019, President Trump signed Executive Order 13890: Protecting and Improving Medicare for Our Nation's Seniors. Section five of this executive order calls for the Secretary of DHHS to propose reforms to the Medicare program that would eliminate burdensome regulatory billing, remove supervision requirements and remove laws that limit professionals from practicing at the top of their profession.[23]

South Carolina is one of 10 states nationally that have supervision terminology in their Nurse Practice Acts. With North Carolina seeking to remove its collaborative practice agreement and Georgia requiring physician direction of CRNAs, South Carolina is expected to consider House Bill 4278 and Senate Bill 563 during the 2020 legislative session.

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The South Carolina Institute of Medicine & Public Health (IMPH) is a nonpartisan, non-profit organization working to collectively inform policy to improve health and health care in South Carolina. In conducting its work, IMPH takes a comprehensive approach to advancing health issues through data analysis and translation and collaborative engagement. The work of IMPH is supported by a diverse array of public and private sources. This policy brief was produced at the request of the South Carolina Association of Nurse Anesthetists. Please direct any questions to info@imph.org.

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