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Anesthesia Care Team Composition and Surgical Outcomes.

Sun EC[1], Miller TR, Moshfegh J, Baker LC.

Author information

1 From the Department of Anesthesiology, Pain, and Perioperative Medicine (E.C.S.) the Center for Health Policy and the Center for Primary Care and Outcomes Research (J.M.) the Department of Health Research and Policy (E.C.S., L.C.B.), Stanford University School of Medicine, Stanford University, Stanford, California the Department of Analytics and Research Services, American Society of Anesthesiologists, Schaumburg, Illinois (T.R.M.) the National Bureau of Economic Research, Cambridge, Massachusetts (L.C.B.).

Abstract

WHAT WE ALREADY KNOW ABOUT THIS TOPIC: WHAT THIS ARTICLE TELLS US THAT IS NEW: BACKGROUND:: In the United States, anesthesia care can be provided by an anesthesia care team consisting of nonphysician providers (nurse anesthetists and anesthesiologist assistants) working under the supervision of a physician anesthesiologist. Nurse anesthetists may practice nationwide, whereas anesthesiologist assistants are restricted to 16 states. To inform policies concerning the expanded use of anesthesiologist assistants, the authors examined whether the specific anesthesia care team composition (physician anesthesiologist plus nurse anesthetist or anesthesiologist assistant) was associated with differences in perioperative outcomes.

METHODS: A retrospective analysis was performed of national claims data for 443,098 publicly insured elderly (ages 65 to 89 yr) patients who underwent inpatient surgery between January 1, 2004, and December 31, 2011. The differences in inpatient mortality, spending, and length of stay between cases where an anesthesiologist supervised an anesthesiologist assistant compared to cases where an anesthesiologist supervised a nurse anesthetist were estimated. The approach used a quasirandomization technique known as instrumental variables to reduce confounding.

RESULTS: The adjusted mortality for care teams with anesthesiologist assistants was 1.6% (95% CI, 1.4 to 1.8) versus 1.7% for care teams with nurse anesthetists (95% CI, 1.7 to 1.7; difference -0.08; 95% CI, -0.3 to 0.1; P = 0.47). Compared to care teams with nurse anesthetists, care teams with anesthesiologist assistants were associated with non-statistically significant decreases in length of stay (-0.009 days; 95% CI, -0.1 to 0.1; P = 0.89) and medical spending (-$56; 95% CI, -334 to 223; P = 0.70).

CONCLUSIONS: The specific composition of the anesthesia care team was not associated with any significant differences in mortality, length of stay, or inpatient spending.

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