Sedation in Transesophageal Echocardiography: Safety, Regulation, and Disparities in Access

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I became aware of the new resolution issued by the Federal Council of Medicine (CFM) while supervising residents at a university hospital in the Sertão region of Pernambuco, where patients were waiting for surgery in the hallways. In the service's day-to-day practice, staffing shortages, including in anesthesiology, already limited care capacity. As a member of the team at one of the few regional referral services for transesophageal echocardiography (TEE) within Brazil's Unified Health System (SUS), I was immediately faced with two questions: Is the current practice of having the echocardiographer administer sedation safe? How can new requirements be incorporated without increasing barriers to access to care?

This is an urgent issue to consider. Published on September 17, 2026, CFM Resolution No. 2,471/2026 is set to take effect after 180 days, on March 16, 2027. The regulation repeals CFM Resolution No. 1,670/2003, Article 2 of which prohibited the physician performing the procedure from simultaneously administering deep sedation, assigning this responsibility to another physician without expressly requiring specialist certification in anesthesiology. The new resolution extends this separation of roles to all levels of outpatient sedation, including minimal sedation, and requires the responsible physician to be an anesthesiologist with Specialist Qualification Registration (RQE). This change alters the conditions under which an established practice in echocardiography services may be performed and requires discussion of how to reconcile patient safety, professional qualifications, and continued access to the examination. The regulation also expands equipment and infrastructure requirements, including the availability of capnography even in services that provide minimal outpatient sedation, regardless of patient risk.

I have been surprised by regulatory decisions that, through a single regulatory act, make practices that have been in place for decades noncompliant. This debate has a recent precedent in the regulation of coronary care units. CFM Resolution No. 2,135/2015 expressly recognized the prerogative of cardiologists with RQE to assume technical responsibility for or head these units, while preserving the responsibilities of intensivists. Its repeal by CFM Resolution No. 2,422/2025, effective on the date of publication, subjected these services to the general regulatory framework governing intensive care medicine and removed the specific regulatory basis for professionals who were already performing such roles. The parallel with sedation in TEE highlights the need for regulatory changes to be accompanied by dialogue among specialties, an assessment of their impact on patient care, and transitional mechanisms that take into account the competencies and experience of the professionals involved.

With regard to sedation safety, international guidelines allow minimal or moderate sedation to be administered by qualified teams, without requiring the participation of an anesthesiologist in every procedure, provided that patients are appropriately selected and that adequate monitoring and rescue capabilities are available. The involvement of anesthesiology is particularly relevant for higher-risk patients or when the need for deep sedation is anticipated. For TEE, the joint guidelines from the American Society of Echocardiography and the Society of Cardiovascular Anesthesiologists describe moderate sedation in the echocardiography laboratory, under physician supervision and with personnel trained in medication administration and monitoring. They also recommend an anesthesia evaluation in situations such as when doses exceeding institutional limits are required or when there is an increased risk of complications.[1]

A cohort study conducted at an academic center involving 914 patients undergoing TEE documented cardiologist-supervised sedation in 52% of cases and anesthesiologist-supervised sedation in 48%. Obstructive sleep apnea, a body mass index >45 kg/m^2, a left ventricular ejection fraction <30%, and pulmonary artery systolic pressure >40 mmHg were associated with anesthesiology involvement. However, differences in risk profiles and limitations in the documentation of events in the cardiologist-supervised group preclude conclusions regarding the comparative safety of the two care models.[2] A systematic review with a network meta-analysis of randomized trials evaluated pharmacological sedation strategies for TEE, including dexmedetomidine, propofol, midazolam, and a ketamine-propofol combination, and found no statistically significant differences among the strategies in the occurrence of hypotension, bradycardia, or desaturation.[3]

Keywords

Transesophageal Echocardiography; Procedural Sedation; Anesthesiology; Health Services Accessibility; Healthcare Disparities

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For upper gastrointestinal endoscopy (EGD), international recommendations also allow sedation by appropriately trained non-anesthesiologist professionals in selected patients, although societies differ in their recommendations regarding the use of propofol and deep sedation.[4-7] In cardiology, consensus documents likewise emphasize team qualifications and the presence of a professional dedicated to monitoring.[8] Thus, the discussion regarding the universal requirement for an anesthesiologist should distinguish among the intended depth of sedation, individual patient risk, and the service's safety conditions.

The references presented describe models of moderate sedation supervised by cardiologists in selected patients, with trained personnel, monitoring, and rescue capabilities. The regulatory question, therefore, is whether mandatory anesthesiologist involvement provides an additional safety benefit that justifies its universal application, including in low-risk patients. The literature discussed does not consistently demonstrate such a benefit.

The second issue concerns the potential increase in existing barriers to access to care in Brazil. The 2025 Medical Demography in Brazil report identified 22,367 physicians with specialist certification in Anesthesiology.[9] In contrast, approximately 2.51 million EGD procedures and 38,940 transesophageal echocardiograms were recorded in the supplementary health sector throughout 2024.[10] In outpatient care reported to the SUS in 2025, 1,548,242 esophagogastroduodenoscopy procedures and 20,138 transesophageal echocardiograms were recorded.[11] Potential reporting gaps, particularly within the SUS, must be taken into account, as must differences in procedure codes and descriptions between the SUS and the supplementary health sector. Even so, given the country's healthcare needs and the size of the population that relies exclusively on the public health system, the lower number of recorded TEE and endoscopy procedures warrants attention. Although these data are not directly comparable, they raise concerns about potential supply bottlenecks and inequities in access, particularly among poorer segments of the population. Moreover, these figures cover only two groups of examinations within a broader range of procedures that may be performed under sedation, including minimal sedation, and do not account for other activities that already require anesthetic care.

National totals, however, do not show the geographic distribution of these professionals, an essential factor in assessing the feasibility of expanding anesthesia coverage. According to the same publication, 59.8% of anesthesiologists are concentrated in state capitals, while only 0.3% practice in non-capital municipalities with populations of up to 100,000.[9] The requirement for anesthesiologist involvement at all levels of outpatient sedation, established by CFM Resolution No. 2,471/2026, may therefore pose particularly significant challenges for services located far from major urban centers, where these professionals are also needed to meet surgical and obstetric demand. Although the data presented do not allow a shortage to be quantified or demonstrate a causal effect of the regulation, they support concerns about local scarcity and the risk of reduced service availability, increased travel, and longer waiting times. Without workforce planning and adequate funding, implementation may exacerbate inequalities in access to these examinations, particularly among patients who rely on the SUS and residents of areas outside major urban centers.

The analysis of the data related to the new CFM resolution reinforces my concern. In the literature discussed, I find no consistent evidence of an additional safety benefit that would justify a universal requirement for anesthesiologist involvement in low-risk patients undergoing outpatient TEE under minimal or moderate sedation. Implementation may also increase barriers to care by requiring the acquisition of equipment, infrastructure upgrades, and the hiring of anesthesiologists, whose availability is limited in many locations and whose distribution is concentrated in state capitals.

Author Contributions

Conception and design of the research, acquisition of data, analysis and interpretation of the data, statistical analysis, writing of the manuscript and critical revision of the manuscript for intellectual content: Armstrong AC.

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Availability of Research Data

The public sources of the data used in this article are identified in the references.

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