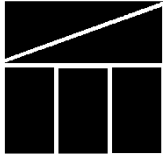


Adverse impact notification sent to Joint Commission on Administrative Rules, House Committee on Appropriations, and Senate Committee on Finance (COV § 2.2-4007.04.C): Yes Not Needed

If/when this economic impact analysis (EIA) is published in the *Virginia Register of Regulations*, notification will be sent to each member of the General Assembly (COV § 2.2-4007.04.B).



Virginia Department of Planning and Budget Economic Impact Analysis

18 VAC 60-21 Regulations Governing the Practice of Dentistry
Department of Health Professions
Town Hall Action/Stage: 4411/7470
April 25, 2016

Summary of the Proposed Amendments to Regulation

The Board of Dentistry proposes to require that a dentist who administers conscious/moderate sedation or deep sedation/general anesthesia maintain a capnograph/end tidal CO₂ monitor in working order and immediately available to areas where patients will be sedated and recover from sedation.

Result of Analysis

The benefits likely exceed the costs for all proposed changes.

Estimated Economic Impact

In order to administer conscious/moderate sedation dentists must: 1) hold a conscious/moderate sedation permit, 2) hold a deep sedation/general anesthesia permit, or 3) be an oral and maxillofacial surgeon who maintains membership in the American Association of Oral and Maxillofacial Surgeons (AAOMS). In order to administer deep sedation/general anesthesia dentists must either hold a deep sedation/general anesthesia permit or be an oral and maxillofacial surgeon who maintains AAOMS membership.

The Board proposes to require that dentists who administer conscious/moderate sedation or deep sedation/general anesthesia maintain a capnograph/end tidal CO₂ monitor in working order and immediately available to areas where patients will be sedated and recover from

sedation. The National Institutes of Health, National Library of Medicine Medical Dictionary defines capnograph as a monitoring device that measures the concentration of carbon dioxide in exhaled air and displays a numerical readout and waveform tracing. Some but likely not all dentists who administer conscious/moderate sedation or deep sedation/general anesthesia already have and use a capnograph.

According to the Department of Health Professions, capnographs cost approximately \$2,200 to \$4,500, depending on the technology and functionality of the equipment. The proposed amendment will require those dentists who administer conscious/moderate sedation or deep sedation/general anesthesia and do not already have a capnograph to obtain one.

A 2011 meta-analysis article in the *Journal of Clinical Anesthesia* found that cases of respiratory complications were 17.6 times more likely to be detected if monitored by capnography compared to standard monitoring alone.¹ Given this very large increase in the likelihood of detecting potentially life threatening complications, the benefits of the proposed amendment likely exceed the costs.

Businesses and Entities Affected

The proposed amendment pertains to the 51 dentists who have a permit for deep sedation/general anesthesia, the 194 dentists who have a permit for moderate/conscious sedation, and any dentists who are considering administering conscious/moderate sedation or deep sedation/general anesthesia in the future. Of the 258 licensed oral/maxillofacial surgeons, the majority would hold AAOMS membership that includes periodic inspections by AAOMS, and therefore, are not required to obtain an anesthesia/sedation permit from the Board. Most dentists work for dental practices, virtually all of which would qualify as small businesses.²

Localities Particularly Affected

The proposed amendment does not disproportionately affect particular localities.

Projected Impact on Employment

The proposed amendment may have a small positive impact on employment at firms that sell or manufacture capnographs.

¹ Waugh JB, Epps CA, and Khodneva YA. "Capnography enhances surveillance of respiratory events during procedural sedation: a meta-analysis." *Journal of Clinical Anesthesia*, 2011 May; 23(3):189-96.

² Data source: Department of Health Professions

Effects on the Use and Value of Private Property

The proposed amendment may moderately increase the value of firms that sell or manufacture capnographs.

Real Estate Development Costs

The proposed amendment does not affect real estate development costs.

Small Businesses:**Definition**

Pursuant to § 2.2-4007.04 of the Code of Virginia, small business is defined as “a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.”

Costs and Other Effects

Most dentists work for dental practices, virtually all of which would qualify as small businesses. The proposal increases costs for those practices that offer conscious/moderate sedation or deep sedation/general anesthesia and do not already have a capnograph.

Alternative Method that Minimizes Adverse Impact

There is no apparent alternative that will reduce the adverse impact while still meeting the intended policy goal of a large reduction in potential health risk.

Adverse Impacts:**Businesses:**

The proposed amendment increases cost for those practices that offer conscious/moderate sedation or deep sedation/general anesthesia and do not already have a capnograph.

Localities:

The proposed amendment does not adversely affect localities.

Other Entities:

The proposed amendment does not adversely affect other entities.

Legal Mandates

General: The Department of Planning and Budget has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia (Code) and Executive Order Number 17 (2014). Code § 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the report should include but not be limited to: (1) the projected number of businesses or other entities to whom the proposed regulatory action would apply, (2) the identity of any localities and types of businesses or other entities particularly affected, (3) the projected number of persons and employment positions to be affected, (4) the projected costs to affected businesses or entities to implement or comply with the regulation, and (5) the impact on the use and value of private property.

Adverse impacts: Pursuant to Code § 2.2-4007.04(C): In the event this economic impact analysis reveals that the proposed regulation would have an adverse economic impact on businesses or would impose a significant adverse economic impact on a locality, business, or entity particularly affected, the Department of Planning and Budget shall advise the Joint Commission on Administrative Rules, the House Committee on Appropriations, and the Senate Committee on Finance within the 45-day period.

If the proposed regulatory action may have an adverse effect on small businesses, Code § 2.2-4007.04 requires that such economic impact analyses include: (1) an identification and estimate of the number of small businesses subject to the proposed regulation, (2) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents, (3) a statement of the probable effect of the proposed regulation on affected small businesses, and (4) a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation. Additionally, pursuant to Code § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules shall be notified.

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