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DO, HAS, AT
AUG 09 2013

REPLY TO: TALLAHASSEE

August 9, 2013

Susan Foster, Executive Director
Board of Dentistry
4052 Bald Cypress Way, Bin C-08
Tallahassee, FL 32399-3258

Re: Proposed Rule 64B5-14.0038 (Direct Supervision of Qualified Anesthetist)

Dear Ms. Foster:

We represent the Florida Association of Nurse Anesthetists (FANA), an organization that represents more than 3,000 Certified Registered Nurse Anesthetists (CRNAs) licensed in Florida. FANA is committed to ensuring the highest standards of anesthesia care and patient safety in all clinical settings. FANA would like to provide the following comments on the above-referenced proposed Rule.

CRNA Record of Safety

Our members object to the imposition of limitations to their practice, where anesthesiologists are not similarly limited. Under Rule 64B5-14.0032, which provides for the use of anesthesiologists in the dental office, the level of sedation is not restricted to the level of the permit held by the treating dentist. The rule will directly affect the practice of CRNAs as it creates an environment where it is more economical and convenient for a dentist to use the services of an anesthesiologist for general anesthesia, than it is to obtain the credentials necessary to use the services of a CRNA for general anesthesia (a practice specifically authorized under Florida law).

As there is no practical difference between an anesthesiologist administering anesthesia and a CRNA administering anesthesia; the rule is arbitrary in this regard. There are volumes of studies demonstrating the indistinguishable patient safety records of the two practices. This is even

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more significant considering CRNAs outnumber anesthesiologists, and in a number of jurisdictions, CRNAs require no direct supervision.

In 2010, the Research Triangle Institute (RTI) conducted a research study of nearly 500,000 Medicare cases between 1999-2005 to examine patient safety when Certified Registered Nurse Anesthetists (CRNAs) administer anesthesia care without supervision by a physician. In August 2010, the findings of the study were published in an article in Health Affairs titled "No Harm Found When Nurse Anesthetists Work Without Supervision by Physicians." The study found no evidence of increased death or complications in the states that opted out of the federal Medicare rule requiring physician supervision of CRNAs. Specifically, the RTI study found:

- No evidence that the administration of anesthesia by CRNAs without physician supervision resulted in increased patient deaths or complications.
- No evidence was found to suggest an increase in patient risk associated with anesthesia provided by a CRNA.
- After careful study of various anesthesia care delivery models, no evidence was found that patient safety was ever compromised by the opt-out policy.
- Every state should be allowed to opt-out of the federal oversight requirement of CRNAs.
- Allowing CRNAs to engage as solo practitioners would lead to more cost effective care.

In another relevant study, the Lewin Group examined the cost effectiveness of having CRNAs independently administer anesthesia care. The findings of the study were published in a 2010 article in NURSING ECONOMICS titled: "Cost Effectiveness Analysis of Anesthesia Providers." This peer-reviewed research study found that CRNAs provide high-quality effective patient care and allowing CRNAs to be independent in their profession is the most cost effective method to anesthesia care and key to containing health care costs while maintaining quality care. Among the findings in this study are the following:

- CRNAs provide high-quality and effective patient care.
- Allowing Certified Registered Nurse Anesthetists (CRNAs) to practice independently is the most cost effective method and key to containing health care costs.
- CRNAs can safely perform anesthesia services including relatively rare and difficult procedures, such as open heart surgeries and organ transplantations, pediatric procedures and similar medically complex procedures.
- CRNAs are critical to the safe, efficient provision of anesthesia services.
- As the demand for health care continues to grow, increasing the number of CRNAs and permitting them to practice in the most efficient delivery models will be key to containing costs while maintaining quality care.

These studies are merely a sample of the myriad empirical evidence of the safety of CRNAs. The evidence consistently demonstrates that there is no difference in patient safety outcomes

based on whether anesthesia is administered by a nurse anesthetist or a physician anesthesiologist. Patient safety is put at risk when no qualified anesthesia provider is present and this circumstance becomes more likely when the cost of anesthesia is increased. There is little doubt that the cost of anesthesia increases when the presence of an anesthesiologist is required in the dental office.

Legal Objections to Proposed Rule

CRNAs in Florida are expressly permitted under section 464.012, to administer anesthesia, up to and including general anesthesia under a protocol with a dentist. The practice of a CRNA is not specifically restricted by statute if the CRNA is practicing under the supervision of a dentist. To the extent that the proposed rule would prevent or restrain the practice of a nurse anesthetist, it constitutes an invalid exercise of delegated legislative authority.

The proposed rule appears to be in conflict with the statutory language in section 466.002(2), which provides that nothing in the dental practice act shall apply to a "qualified anesthetist" giving an anesthetic for a dental operation under the direct supervision of a licensed dentist. Although this provision was cited in *Florida Association of Nurse Anesthetists v. Department of Professional Regulation*, 500 So. 2d 324 (Fla. 1st DCA 1986), a more recent case may determine the issue.

A very similar issue was addressed more recently by the 4th District Court of Appeal in *Ortiz v. Board of Medicine*, 882 So. 2d 402 (Fla. 4th DCA 2004). Section 120.52(8), Florida Statutes provides that a rule is invalid when "[t]he agency exceed[s] its grant of rulemaking authority, citation to which is required," § 120.52(8)(b), or "[t]he rule enlarges, modifies, or contravenes the specific provisions of law implemented." § 120.52(8)(c). Section 458.303(2), Florida Statutes (the Medical Practice Act) states in relevant part:

Nothing ... shall be construed to prohibit any service rendered by a registered nurse or a licensed practical nurse, if such service is rendered under the direct supervision and control of a licensed physician who provides specific direction for any service to be performed and gives final approval to all services performed...

In *Ortiz*, the Board of Medicine adopted a Rule which included the following language: "If the anesthesia provider is not an anesthesiologist, there must be a licensed M.D., or D.O., anesthesiologist, other than the surgeon, to provide direct supervision of the administration and maintenance of the anesthesia." This language, requiring supervision beyond what was contained in the Nurse Practice Act, was struck down as an invalid exercise of delegated legislative authority. While the Board of Medicine had statutory rulemaking authority to develop standards of practice for particular practice settings, the Court held that Section 458.303 prevented use of Board's rulemaking authority to prohibit provision of services by a registered nurse when supervised by a licensed physician.

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As in *Ortiz*, the present rule attempts to enlarge the supervision requirements for CRNAs. In invalidating the Rule, the court correctly noted that if an anesthesiologist was present, then there was no need for a CRNA, "as they both do essentially the same things." By making it economically impractical to utilize a CRNA for certain levels of anesthesia, especially general anesthesia, the Rule will have the effect of precluding a practice that is expressly permitted under Florida law. The Court in *Ortiz* further stated:

While the Board says that its rule does not control the actions of CRNAs, it has done indirectly what it cannot do directly. Instead of simply prohibiting CRNAs from administering anesthesia under the supervision of the surgeon, the Board provides grounds for disciplining the surgeon if he supervises the CRNA. Either way, section 458.303(2) prevents the use of rulemaking authority for this purpose.

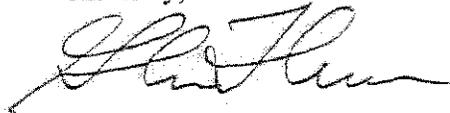
Ortiz, at 406.

Conclusion

While FANA is willing to assist the Anesthesia Committee and Board of Dentistry in their efforts to enhance the safety of dental patients receiving anesthesia, we are also understandably apprehensive when agency rulemaking implements unwarranted restrictions on CRNA practice. We are optimistic that the Board will do everything in its power to assure patient safety in Florida's dental offices based on scientific research, while promulgating no rules that will have the effect of restricting CRNA practice in Florida.

Please review the enclosed materials. I will be attending the August 22 meeting in Orlando and will be available to answer any questions you may have concerning the practice of CRNAs in Florida.

Sincerely,



Glenn E. Thomas

A GUIDE FOR THE USE OF SEDATION IN THE PRACTICE OF DENTISTRY:

THE VERY BASICS

- PART ONE: FLORIDA DENTISTRY SEDATION PERMIT TYPES
- PART TWO: DENTISTS WITH SEDATION PERMITS USING PHYSICIAN ANESTHESIOLOGIST
- PART THREE: USING DENTIST WITH GENERAL ANESTHESIA PERMITS
- PART FOUR: DENTISTS WITHOUT SEDATION PERMITS TREATING SEDATED PATIENTS

In the past several months, the Florida Board of Dentistry has made substantial changes to the Chapter of the *Florida Administrative Code*, which governs the use of anesthesia. These changes have contributed or are expected to contribute to increased access to sedation services for dental patients while also contributing to an overall net increase in patient safety. The increased safety and access are also expected to have a positive economic benefit to business while decreasing costs of sedation services to patients.

Based on multiple questions received by the board office and board counsel and through discussion at public meetings, it is important for all dentists to review each rule for themselves and if they have questions or concerns, the dentist should seek clarity through the Board of Dentistry or via the use of private counsel.

This guide is intended to be a basic outline covering a select few areas of sedation, in particular, areas that have been recently updated by rule. This guide has absolutely no legal authority and has not been, nor will be, adopted or ratified by the board. This guide should not be relied upon in lieu of the actual rule. Importantly, the guide does not cover all requirements or information that is contained in each rule. The guide does not reflect the position of the board, the Department of Health or the position of the author's employer.

David D. Flynn, Esquire
Assistant Attorney General
Counsel to the Board of Dentistry
Former Prosecutor for the Board of Dentistry

PART ONE
FLORIDA DENTISTRY SEDATION PERMIT TYPES

GENERALLY

Generally, a dentist may not use, employ the use of, or administer general anesthesia, deep sedation, conscious sedation or pediatric conscious sedation without first obtaining a permit,ⁱ properly equipping the outpatient dental office,ⁱⁱ and passing a board inspection.ⁱⁱⁱ

TYPES OF PERMITS

The Board of Dentistry has established three types of sedation permits: 1) A General Anesthesia Permit; 2) A Conscious Sedation Permit; and 3) A Pediatric Conscious Sedation Permit.^{iv} Each type of permit requires a very specific type of training and education before the permit will be issued.^v Each type of permit has specific allowances and limitations.

ALLOWANCES AND LIMITATIONS OF EACH PERMIT

Each type of sedation permit authorizes the permit holder to use, employ, or administer specific types of sedation, and may prohibit the use of specific drugs. The type of permit may also limit the permit holder to treatment of a specific class of patients.

A. General Anesthesia Permit Holder:

- a. *Type of Sedation:* A dentist with a general anesthesia permit may use, employ the use of, or administer general anesthesia, deep sedation, conscious sedation, and pediatric sedation.^{vi}
- b. *Type of Anesthetic Drug:* The general anesthesia permit holder is not limited in the type of anesthetic drug that may be utilized.^{vii}
- c. *Type of Patient:* A general anesthesia permit holder may employ the use of anesthesia on any dental patient. This includes adult patients, special needs patients of all ages, and pediatric patients.

PART ONE
FLORIDA DENTISTRY SEDATION PERMIT TYPES

B. Conscious Sedation Permit Holder:

- a. *Type of Sedation:* A conscious sedation permit holder may use, employ the use of, or administer conscious sedation and pediatric conscious sedation.^{viii}
- b. *Type of Anesthetic Drug:* A conscious sedation permit holder may not use, employ the use of or administer propofol, methohexital, thiopental, etomidate, or ketamine.^{ix}
- c. *Type of Patient:* A conscious sedation permit holder may employ the use of conscious sedation on any dental patient. This includes adult patients, special needs patients of all ages, and pediatric patients.

C. Pediatric Conscious Sedation Permit:

- a. *Type of Sedation:* A pediatric conscious sedation permit holder may use, employ the use of, or administer pediatric conscious sedation.^x
- b. *Type of Anesthetic Drug:* A pediatric conscious sedation permit holder may not employ or administer propofol, methohexital, thiopental, etomidate, or ketamine.^{xi}
- c. *Type of Patient:* A pediatric conscious sedation permit holder may only employ the use of pediatric conscious sedation on pediatric patients and special needs patients regardless of age.^{xii} A pediatric or child patient is defined as anyone less than 18 years of age and a special needs patient is any person who has a physical or mental impairment that substantially limits one or more life activities.^{xiii}

ⁱ Fla. Admin. Code R. 64B5-14.002 (Aug. 5, 2012).
ⁱⁱ Fla. Admin. Code R. 64B5-14.003 (Aug. 16, 2013); Fla. Admin. Code R. 64B5-14.008 (Oct. 24, 2011); Fla. Admin. Code R. 64B5-14.009 (Oct. 26, 2011); Fla. Admin. Code R. 64B5-14.010 (Oct. 26, 2011).
ⁱⁱⁱ Fla. Admin. Code R. 64B5-14.007 (Jun. 11, 2007).
^{iv} Fla. Admin. Code R. 64B5-14.003 (Aug. 16, 2012).
^v Fla. Admin. Code R. 64B5-14.003 (Aug. 16, 2012).
^{vi} Fla. Admin. Code R. 64B5-14.003(1) (Aug. 16, 2012).
^{vii} Fla. Admin. Code R. 64B5-14.002(8) (Aug. 5, 2012).
^{viii} Fla. Admin. Code R. 64B5-14.003(2)(g) (Aug. 16, 2012); Fla. Admin Code R. 64B5-14.003(3)(d) (Aug 16, 2012).
^{ix} Fla. Admin. Code R. 64B5-14.002(8) (Aug. 5, 2012).
^x Fla. Admin. Code R. 64B5-14.003(3)(c) (note: all permit holders may administer nitrous-oxide inhalation sedation. Nitrous-oxide is not the subject on this general overview).
^{xi} Fla. Admin. Code R. 64B5-14.002(8) (Aug. 5, 2012).
^{xii} Fla. Admin. Code R. 64B5-14.003(3) (Aug. 16, 2012); Fla. Admin. Code R. 64B5-14.001(5) (Aug. 5,

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FLORIDA DENTISTRY SEDATION PERMIT TYPES

xiii 2012).
Fla. Admin. Code R. 64B5014.001(5) (Aug. 5, 2012).



PART TWO
DENTIST WITH SEDATION PERMITS USING PHYSICIAN ANESTHESIOLOGIST
GENERALLY

In an outpatient dental office, the general rule is that a dentist may not allow another health care practitioner to perform the administration of general anesthesia, deep sedation, conscious sedation or pediatric conscious sedation for dental patients.ⁱ However, if the dentist possesses a general anesthesia permit, a conscious sedation permit, or a pediatric conscious sedation permit, the board has recently promulgated rules which establish exceptions to the general rule.ⁱⁱ

EXCEPTION

A dentist with a sedation permit may utilize a physician anesthesiologist in an outpatient dental office.ⁱⁱⁱ This exception involves the physician anesthesiologist performing the anesthesia services while the dentist with the sedation permit performs the dental treatment.

ALLOWANCES AND LIMITATIONS OF EACH PERMIT

Depending on the specific type of permit held by the dentist, there are limitations or differences to the specific class of patient that may be treated by a particular type of dentist. **Please note**, the specific class of patient and the particular type of dentist limitations **do not always** coincide with the specific class of patient limitations that are applicable when the permitted dentist is not utilizing a physician anesthesiologist (*Compare Part One with Part Two*).^{iv} Regardless of the type of sedation permit the dentist has, when utilizing a physician anesthesiologist, the level of sedation is not restricted; the level of sedation may be any level necessary for the safe and effective treatment of the patient.^v **Please note**, any sedation permit holder utilizing a physician anesthesiologist is required to meet the supply, equipment, and facility requirements that are mandated for a dentist who holds a general anesthesia permit.^{vi}

A. General Anesthesia Permit Holder:

- a. *Type of Patient:* A general anesthesia permit holder can treat any patient sedated by the physician anesthesiologist. This includes adult patients, special needs patients of all ages, and pediatric patients.
- b. *Type of Dentist:* The specific type or specialty of the dentist is not relevant for a general anesthesia permit holder when a physician anesthesiologist is utilized.

PART TWO
DENTIST WITH SEDATION PERMITS USING PHYSICIAN ANESTHESIOLOGIST

B. Conscious Sedation Permit Holder:

- a. *Type of Patient:* A conscious sedation permit holder can only treat adult and adult special needs patients when the patient is sedated by the physician anesthesiologist.^{vii} An adult patient is anyone 18 years of age or older.^{viii} An adult special needs patient is any patient who is 18 years of age or older and has a physical or mental impairment that substantially limits one or more major life activities.^{ix} **Please note**, the type of patient that may be treated when using a physician anesthesiologist is more restrictive than the type of patient that may be treated when the dentist administers the sedation and performs the dental treatment pursuant to the conscious sedation permit only (*Compare Part One with Part Two*).^x
- b. *Type of Dentist:* The specific type or specialty of dentist is not relevant for a conscious sedation permit holder when a physician anesthesiologist is utilized.

C. Pediatric Conscious Sedation Permit:

- a. *Type of Patient:* A pediatric conscious sedation permit holder can only treat pediatric and special needs dental patients when the patient is sedated by the physician anesthesiologist.^{xi} A pediatric or child patient is defined as anyone less than 18 years of age and a special needs patient is any person who has a physical or mental impairment that substantially limits one or more life activities.^{xii} The type of patient that may be treated when using a physician anesthesiologist is the same type of patient that may be treated when the dentist administers the sedation and performs the dental treatment pursuant to the pediatric conscious sedation permit only (*Compare Part One with Part Two*).^{xiii}
- b. *Type of Dentist:* A pediatric conscious sedation permit holder **must be** a pediatric dentist as recognized by the American Dental Association when treating pediatric or special needs dental patients who have been sedated by a physician anesthesiologist.^{xiv}

ⁱ Fla. Admin. Code R. 64B5-14.005 (Aug. 5, 2012) (A health care practitioner is defined as any person licensed pursuant to Chapters 457 through 468 and Chapters 478; 480; 483; 484; 486; 490 and 491. §456.001, Fla. Stat. (2012)).

PART TWO
DENTIST WITH SEDATION PERMITS USING PHYSICIAN ANESTHESIOLOGIST

- ii Fla. Admin. Code R. 64B5-14.0032 (Feb. 21, 2013).
- iii Fla. Admin. Code R. 64B5-14.0032 (Feb. 21, 2013) (note: there are other exceptions but this general overview involves the physician anesthesiologist exception only).
- iv *Compare* Fla. Admin. Code R. 64B5-14.003 (Aug. 16, 2012) *with* Fla. Admin. Code R. 64B5-14.0032 (Feb. 21, 2013).
- v Fla. Admin. Code R. 64B5-14.0032 (Feb. 21, 2013).
- vi Fla. Admin. Code R. 64B5-14.0032 (Feb. 21, 2013).
- vii Fla. Admin. Code R. 64B5-14.0032 (3) (Feb. 21, 2013).
- viii *See* Fla. Admin. Code R. 64B5-14.001(5) (Aug. 5, 2012).
- ix *See* Fla. Admin. Code R. 64B5-14.001(5) (Aug. 5, 2012).
- x *Compare* Fla. Admin Code R. 64B5-14.003 (2) (Aug. 16, 2012) *with* 64B5-14.0032 (3) (Feb. 21, 2013).
- xi Fla. Admin. Code R. 64B5-14.0032 (2) (Feb. 21, 2013).
- xii Fla. Admin. Code R. 64B5-14.001(5) (Aug. 5, 2012).
- xiii *Compare* Fla. Admin Code R. 64B5-14.003(3) *with* Fla. Admin. Code R. 64B5-14.0032(2)(Feb. 21, 2013).
- xiv Fla. Admin. Code R. 64B5-14.0032(2) (Feb. 21, 2013).

PART THREE
USING DENTIST WITH GENERAL ANESTHESIA PERMIT

GENERALLY

In an outpatient dental office, the general rule is that a dentist may not allow another dentist to perform the administration of general anesthesia, deep sedation, conscious sedation or pediatric conscious sedation for dental patients.ⁱ However, if the dentist possesses a general anesthesia permit, a conscious sedation permit, or a pediatric conscious sedation permit, the board has recently promulgated rules which establish exceptions to the general rule.ⁱⁱ

EXCEPTION

A dentist with any level of a sedation permit may utilize a dentist who holds a general anesthesia permit in an outpatient dental office.ⁱⁱⁱ This exception involves the general anesthesia permit holder performing the anesthesia services while the dentist with any level of a sedation permit performs the dental treatment.

ALLOWANCES AND LIMITATIONS

- A. *Type of Patient:* The newly enacted rule does not impose any limitation on the specific class of patient that may be treated based on the treating dentist's level of sedation permit.^{iv}
- B. *Level of Sedation:* Regardless of the type of sedation permit the treating dentist has, when utilizing a dentist with a general anesthesia permit, the level of sedation is not restricted. The level of sedation may be any level necessary for the safe and effective treatment of the patient.^v
- C. *Location of Treatment:* If the treating dentist and the sedating dentist both hold a general anesthesia permit, the patient may be treated and sedated at either general anesthesia permit holder's office.^{vi} The sedation and treatment may take place at the office of the treating dentist who holds a conscious or pediatric conscious sedation permit.^{vii} **Take note,** if the treatment and sedation take place at the dental office of the conscious or pediatric conscious sedation permit holder's office, the dental office supply, equipment and facility requirements must be brought up to the level required by that of a general anesthesia permit holder.^{viii}

ⁱ Fla. Admin. Code R. 64B5-14.005 (Aug. 5, 2012).

ⁱⁱ Fla. Admin. Code R. 64B5-14.0034 (Mar. 14, 2013)(note: there are other exceptions but this part of the general overview involves the use of a dentist with a general anesthesia permit).

ⁱⁱⁱ Fla. Admin. Code R. 64B5-14.0034 (Mar. 14, 2013) (note: there are others exceptions).

^{iv} Fla. Admin. Code R. 64B5-14.0034 (Mar. 14, 2013).

^v Fla. Admin. Code R. 64B5-14.0034 (Mar. 14, 2013).

^{vi} Fla. Admin. Code R. 64B5-14.0034(1) (Mar. 14, 2013).

^{vii} Fla. Admin. Code R. 64B5-14.0034(2) (Mar. 14, 2013).

^{viii} Fla. Admin. Code R. 64B5-14.0034(2)(b) (Mar. 14, 2013).

PART FOUR
DENTISTS WITHOUT SEDATION PERMITS USING SEDATION

GENERALLY

A dentist without a sedation permit may not use, employ the use of, or administer general anesthesia, deep sedation, conscious sedation or pediatric conscious sedation.ⁱ Furthermore, in an outpatient dental office, a dentist without a sedation permit may not treat a dental patient if the patient is under general anesthesia, deep sedation, conscious sedation or pediatric conscious sedation.ⁱⁱ This means that a dentist is required to have a sedation permit even when another health care practitioner administers and is responsible for the sedation of a dental patient in an outpatient dental office.ⁱⁱⁱ

EXCEPTION

Although there is not an exception to the rule that a dentist without a sedation permit cannot administer general anesthesia, deep sedation, conscious sedation, or pediatric conscious sedation, there is one exception wherein a dentist without a sedation permit may treat a sedated patient in an outpatient dental office.^{iv} This exception involves the sedation services being performed by a dentist with a sedation permit in his or her dental office while the dentist without the sedation permit performs the dental treatment.^v

ALLOWANCES AND LIMITATIONS

There are limitations on the location of where the sedation can take place, and there are mandatory education requirements for the dentist who does not hold a sedation permit. Additionally, the permit holder has additional sedation restrictions.

- A. Location: The sedation services must take place only at the dental office of the permitted dentist.^{vi}
- B. Education:
 - a. Prior to treating any sedated patient, the dentist who does not hold a sedation permit must take four (4) hours of continuing education in airway management.^{vii}
 - b. The treating dentist must repeat the airway management course every four (4) years.^{viii}
 - c. The board has recently approved language which explains that the four hours in airway management must include two hours in didactic training in providing dentistry on sedated patient with compromised airways, and two hours must include hands-on training in airway management of a sedated patient.^{ix} The proposed amendment also gives the treating dentist until March 1, 2014, before the course must be completed.^x The amendments are not in effect at this time.^{xi}

PART FOUR
DENTISTS WITHOUT SEDATION PERMITS USING SEDATION

C. Permit Holder Restrictions:

- a. The dentist performing the sedation services must remain with the sedated patient throughout the entire anesthesia procedure from onset of administration until discharge.^{xii} Moreover, the dentist may not induce or begin the performance of anesthesia on any other patient while performing sedation services for a dentist without a sedation permit.^{xiii}

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- i Fla. Admin. Code R. 64B5-14.002(1)-(3) (Aug. 5, 2012).
- ii Fla. Admin. Code R. 64B5-14.005(1) (Aug. 5, 2012).
- iii Fla. Admin. Code R. 64B5-14.005(1) (Aug. 5, 2012).
- iv Fla. Admin. Code R. 64B5-14.0036 (Mar. 14, 2013).
- v Fla. Admin. Code R. 64B5-14.0036 (Mar. 14, 2013).
- vi Fla. Admin. Code R. 64B5-14.0036 (1) (Mar. 14, 2013).
- vii Fla. Admin. Code R. 64B5-14.0036(4) (Mar. 14, 2013).
- viii Fla. Admin. Code R. 64B5-14.0036 (4) (Mar. 14, 2013).
- ix Notice of Proposed Rule for Rule Fla. Admin. Code R. 64B5-14.0036 (on file with the Board of Dentistry or available at https://www.flrules.org/Gateway/View_Notice.asp?ID=13138473).
- x Notice of Proposed Rule for Rule Fla. Admin. Code R. 64B5-14.0036 (on file with the Board of Dentistry or available at https://www.flrules.org/Gateway/View_Notice.asp?ID=13138473).
- xi The amendments to the rule are going through the required process mandated by Chapter 120, Florida Statutes, before the rule amendments can become adopted and effective. Chapter 120 requires, absent an exception, a rule to be adopted within 90 days of the publication of the proposed rule notice. The rule notice has been published and the 90 day deadline is September 18, 2013.
- xii Fla. Admin. Code R. 64B5-14.0036(2) (Mar. 14, 2013).
- xiii Fla. Admin. Code R. 64B5-14.0036(3)(Mar. 14, 2013).

Ritter, Cynthia

From: mensch47 [mensch47@aol.com]
Sent: Sunday, June 23, 2013 6:30 PM
To: Ritter, Cynthia
Cc: Foster, Sue
Subject: [Spam:***** SpamScore] Pediatric Conscious Sedation 64B5-14.010

Attachments: Pediatric Conscious Sedation - track changes.docx; Pediatric Conscious Sedation. - clean edited changes.docx; ATT8094596.txt



Pediatric Conscious Pediatric Conscious ATT8094596.txt
Sedation -... Sedation. ...

Dear Cindy and Sue,

Per our conversation at the BOD June 18, 2013 Anesthesia Committee meeting, I am enclosing a document with track changes and a clean copy with the changes that would make our rules more complete and contemporary and congruent with the AAPD and AAP national sedation guidelines.

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BEGIN-ANTISPAM-VOTING-LINKS

Teach CanIt if this mail (ID 0eJPWudwo) is spam:
Spam: <https://antispam.doh.ad.state.fl.us/canit/b.php?i=0eJPWudwo&m=c4a8fb8ad2b9&t=20130623&c=s>
Not spam: <https://antispam.doh.ad.state.fl.us/canit/b.php?i=0eJPWudwo&m=c4a8fb8ad2b9&t=20130623&c=n>
Forget vote: <https://antispam.doh.ad.state.fl.us/canit/b.php?i=0eJPWudwo&m=c4a8fb8ad2b9&t=20130623&c=f>

END-ANTISPAM-VOTING-LINKS

64B5-14.010 Pediatric Conscious Sedation.

Pediatric Conscious Sedation Permit applicants or permit holders must comply with the following requirements at each location where anesthesia procedures are performed. The requirements must be met and equipment permanently maintained and available at each location.

(1) Facility

The operatory where the sedated child patient is to be treated as well as the pre-op holding / recovery room (if one is utilized) must:

- (a) Be of adequate size and design to permit physical access of emergency equipment and personnel and to permit effective emergency management;
- (b) Be equipped with a chair or table adequate for emergency treatment, including a CPR board or chair suitable for CPR;
- (c) Have sufficient light to provide emergency treatment

The pre-op holding / recovery room must be situated so that the patient can be observed by the dentist or an office team member at all times.

(2) Equipment

The following equipment must be readily available to the operatory and pre-op holding / recovery room and maintained in good working order:

- (a) A positive pressure oxygen delivery system and a backup system, including bag-mask-valve resuscitation equipment for the infant, child and adult;
- (b) Oropharyngeal and/ or nasopharyngeal airways of all available sizes and surgical lubricant;
- (c) Manual sphygmomanometer, blood pressure cuffs (pediatric and adult sizes), and stethoscope and/or automated blood pressure unit;
- (d) Primary suction equipment and a portable backup, including Yankauer suction tips;
- (e) A pulse oximeter;
- (f) A scale for weighing;
- (g) Thermometer;
- (h) Appropriate intravenous set-up, including appropriate hardware, tourniquet, tape and fluids; or IO needle or delivery device

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- Deleted: (1)
- Deleted: (c) Be equipped with suction and backup suction equipment, also including tonsil suction and suction catheters.¶
- Deleted: (2) If a recovery room is present, it shall be equipped with suction and backup suction equipment, positive pressure oxygen and sufficient light to provide emergency treatment. The recovery room shall also be of adequate size and design to allow emergency access and management.
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- (i) Assorted syringes (1, 3, and 5 mL;
- (j). AED with pediatric and adult pads
- (k) Hemostat and/or McGill forceps
- (l) LMAs of assorted sizes
- (m) Larynoscope and blades
- (n) Paper bag, lunch size
- (o) Nasal cannula (pediatric and adult sizes) and tubing
- (p) Non-rebreathing mask (pediatric and adult sizes) and tubing
- (q) Precordial/ pretracheal stethoscope or capnometer
- (3) Drugs

The following drugs or type of drugs with a current shelf life must be maintained and easily accessible from the operatory and recovery room:

- (a) Epinephrine;
- (b) Atropine;
- (c) Lidocaine;
- (d) Narcotic (e.g., Naloxone HCl) and benzodiazepine (e.g., Flumazenil) antagonists, if these agents are used;
- (e) An antihistamine (e.g., Diphenhydramine HCl);
- (f) A corticosteroid (e.g., Hydrocortisone);
- (g) Nitroglycerine;
- (h) A bronchodilator (e.g., Albuterol inhaler / nebulizer);
- (i) An antihypoglycemic (e.g., 50% glucose);
- (j) A vasopressor;
- (k) An anticonvulsant;
- (l) An antihypertensive;

- duplicate of (g)(m) An anticholinergic;

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(n) An antiemetic; and

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(o) Amiodarone.

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(6) The applicant or permit holder shall provide written emergency protocols, and shall provide training to familiarize office personnel in the treatment of the following clinical emergencies:

(a) Laryngospasm;

(b) Bronchospasm;

(c) Emesis and aspiration;

(d) Airway blockage by foreign body;

(e) Cardiac arrhythmias; (note: item is missing under Conscious Sedation Permit requirements)

(f) Hypertension/Hypotension;

(g) Hypertensive crisis;

(h) Allergic and toxicity reactions;

(i) Convulsions;

(j) Hyperventilation/Hypoventilation;

(k) Syncope;

(l) Seizures;

(m) Cardiac arrest;

(n) Intra-arterial injection; (note: define intention, what is the outcome that is be managed?)

(o) Angina pectoris; and

(p) Myocardial infarction.

The applicant or permit holder shall maintain for inspection a permanent record which reflects the date, time, duration and type of training provided to named personnel.

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(4) Record Documentation

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The following information must be recorded and reviewed as part of the post-operative evaluation;

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(a) The patient's past medical history, including known diseases and abnormalities, history of previous surgery, sedation and anesthesia, history of snoring/ sleep apnea and respiratory difficulties

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(b) The patient's current health status, including history of present illnesses;

(c) Current medications, including dose and frequency of administration

(d) Name and contact information of child's primary care provider, including date of last examination and any consultation notes obtained

(e) the patient's age, weight, and height (if BMI determination is to be made for obesity)

(f) Calculation of MRD for local anesthetic agent to be given.

(g) Focused physical evaluation including airway patency, tonsil size, breath sound, jaw hyperplasia, and respiratory function

(h) Risk assessment (e.g., ASA classification);

(i) Baseline vital signs, including pulse and respiratory rates, percent hemoglobin oxygen saturation, blood pressure, when possible based upon child's cooperation. If baseline vital signs are unobtainable, failed attempt must be recorded.

(j) Compliance to dietary restrictions and hours NPO

(k) Informed consent signed by parent/guardian

The following information must be recorded intraoperatively during the procedural sedation:

(a) Periodic records, at appropriate intervals, for patient's vital signs from the monitors being employed, level of responsiveness, breath sounds, and exhibited behavior. Continuous monitoring with pulse oxymetry must be initiated with early signs of conscious sedation and continued until the patient is alert. A precordial, pretracheal stethoscope or capnometer must be available to assist interoperatively in the monitoring of heart and respiratory rates. A sphygmomanometer shall be immediately available.

(b) Drugs, including all sedative agents, local anesthetics, nitrous oxide/oxygen administered, including route, dosage, and time of administration. Drugs for moderate sedation must be administered in a dental office and the patient must be observed by a qualified office staff member.

The following information must be recorded post-operatively

(a) Duration of the procedure;

(b) Any complications or morbidity, including intervention applied,

(c) Status of patient upon discharge (AAPD/AAP Discharge Criteria met), time discharged and to whom discharged.

(d) Names of participating personnel.

Rulemaking Authority 466.004, 466.017 FS. Law Implemented 466.017 FS. History--New 8-8-96, Formerly 59Q-14.010, Amended 8-2-00, 5-20-01, 3-23-06, 10-26-11.

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64B5-14.010 Pediatric Conscious Sedation.

Pediatric Conscious Sedation Permit applicants or permit holders must comply with the following requirements at each location where anesthesia procedures are performed. The requirements must be met and equipment permanently maintained and available at each location.

(1) Facility

The operatory where the sedated child patient is to be treated as well as the pre-op holding / recovery room (if one is utilized) must:

- (a) Be of adequate size and design to permit physical access of emergency equipment and personnel and to permit effective emergency management;
- (b) Be equipped with a chair or table adequate for emergency treatment, including a CPR board or chair suitable for CPR;
- (c) Have sufficient light to provide emergency treatment

The pre-op holding / recovery room must be situated so that the patient can be observed by the dentist or an office team member at all times.

(2) Equipment

The following equipment must be readily available to the operatory and pre-op holding / recovery room and maintained in good working order:

- (a) A positive pressure oxygen delivery system and a backup system, including bag-mask- valve resuscitation equipment for the infant, child and adult;
- (b) Oropharyngeal and/ or nasopharyngeal airways of all available sizes and surgical lubricant
- (c) Manual sphygmomanometer, blood pressure cuffs (pediatric and adult sizes), and stethoscope and/or automated blood pressure unit
- (d) Primary suction equipment and a portable backup, including Yankauer suction tips ;
- (e) A pulse oximeter;
- (f) A scale for weighing ;
- (g) Thermometer;
- (h) Appropriate intravenous set-up, including appropriate hardware, tourniquet, tape and fluids; or IO needle or delivery device

(j) Assorted syringes (1, 3, and 5 mL;

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Deleted: (c) Tourniquet and tape; and

(j) AED with pediatric and adult pads

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(k) Hemostat and/or McGill forceps

(l) LMAs of assorted sizes

(m) Larynoscope and blades

(n) Paper bag, lunch size

(o) Nasal cannula (pediatric and adult sizes) and tubing

(p) Non-rebreathing mask (pediatric and adult sizes) and tubing

(q) Precordial/ pretracheal stethoscope or capnometer

(3) Drugs

The following drugs or type of drugs with a current shelf life must be maintained and easily accessible from the operatory and recovery room:

Deleted: (5)

(a) Epinephrine;

(b) Atropine;

(c) Lidocaine;

(d) Narcotic (e.g., Naloxone HCl) and benzodiazepine (e.g., Flumazenil) antagonists, if these agents are used;

(e) An antihistamine (e.g., Diphenhydramine HCl);

(f) A corticosteroid (e.g., Hydrocortisone);

(g) Nitroglycerine;

(h) A bronchodilator (e.g., Albuterol inhaler / nebulizer);

(i) An antihypoglycemic (e.g., 50% glucose);

(j) A vasopressor;

(k) An anticonvulsant;

(l) An antihypertensive;

- duplicate of (g)(m) An anticholinergic;

(n) An antiemetic; and

(o) Amiodarone.

(6) The applicant or permit holder shall provide written emergency protocols, and shall provide training to familiarize office personnel in the treatment of the following clinical emergencies:

(a) Laryngospasm;

(b) Bronchospasm;

(c) Emesis and aspiration;

(d) Airway blockage by foreign body;

(e) Cardiac arrhythmias; (note: item is missing under Conscious Sedation Permit requirements)

(f) Hypertension/Hypotension;

(g) Hypertensive crisis;

(h) Allergic and toxicity reactions;

(i) Convulsions;

(j) Hyperventilation/Hypoventilation;

(k) Syncope;

(l) Seizures;

(m) Cardiac arrest;

(n) Intra-arterial injection; (note: define intention, what is the outcome that is be managed?)

(o) Angina pectoris; and

(p) Myocardial infarction.

The applicant or permit holder shall maintain for inspection a permanent record which reflects the date, time, duration and type of training provided to named personnel.

(4) Record Documentation

The following information must be recorded and reviewed as part of the post-operative evaluation :

(a) The patient's past medical history, including known diseases and abnormalities, history of previous surgery, sedation and anesthesia, history of snoring/ sleep apnea and respiratory difficulties

- (b) The patient's current health status, including history of present illnesses;
- (c) Current medications, including dose and frequency of administration
- (d) Name and contact information of child's primary care provider, including date of last examination and any consultation notes obtained
- (e) the patient's age, weight, and height (if BMI determination is to be made for obesity)
- (f) Calculation of MRD for local anesthetic agent to be given.
- (g) Focused physical evaluation including airway patency , tonsil size, breath sound, jaw hyperplasia, and respiratory function
- (h) Risk assessment (e.g., ASA classification);
- (i) Baseline vital signs, including pulse and respiratory rates, percent hemoglobin oxygen saturation, , blood pressure, when possible based upon child's cooperation. If baseline vital signs are unobtainable, failed attempt must be recorded.
- (j) Compliance to dietary restrictions and hours NPO
- (k) Informed consent signed by parent/guardian

The following information must be recorded intraoperatively during the procedural sedation:

- (a) Periodic records, at appropriate intervals, for patient's vital signs from the monitors being employed, level of responsiveness, breath sounds, and exhibited behavior. Continuous monitoring with pulse oxymetry must be initiated with early signs of conscious sedation and continued until the patient is alert. A precordial, pretracheal stethoscope or capnometer must be available to assist interoperatively in the monitoring of heart and respiratory rates. A sphygmomanometer shall be immediately available..
- (b) Drugs, including all sedative agents, local anesthetics, nitrous oxide/oxygen administered, including route, dosage, and time of administration. Drugs for moderate sedation must be administered in a dental office and the patient must be observed by a qualified office staff member.

The following information must be recorded post-operatively

- (a) Duration of the procedure;
- (b) Any complications or morbidity, including intervention applied
- (c) Status of patient upon discharge (AAPD/AAP Discharge Criteria met), time discharged and to whom discharged.
- (d) Names of participating personnel.

Rulemaking Authority 466.004, 466.017 FS. Law Implemented 466.017 FS. History—New 8-8-96, Formerly 59Q-14.010, Amended 8-2-00, 5-20-01, 3-23-06, 10-26-11.

Hector Vila Jr. M.D.

Diplomat American Board of Anesthesiology

4304 AZEELE STREET, TAMPA, FLORIDA 33609

Boards of 491, DN,
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Members of the Board of Dentistry

First let me thank you for your service to the patients of the state of Florida. I am well aware of the countless hours of sacrifice that is required to serve as a board member.

I am an Anesthesiologist that for the last 5 years has devoted most of my time to providing office based dental anesthesia for children and special needs patients.

My Background includes years of dedication to patient safety including serving as a department of Health inspector for medical offices and as an expert witness for the Board of Medicine. I am past Chair of the American Society of Anesthesiologist's Ambulatory Surgery Committee and oversaw most of the outpatient surgery anesthesia guidelines in use today. I am currently the chair of the Standards Committee for the AAAASF (American Association for Accreditation of Ambulatory Surgical Facilities) and review outcomes from thousands of ambulatory facilities and revise standards to improve patient safety.

1. I am sure you are aware of the nationwide shortage of a number of medications including many of the code drug medications. In my years of reviewing thousands of adverse incidents from outpatient cases, I have never reviewed a case where there was a need for the acute administration of amiodarone, vasopressin, or Adenosine in the office. We are now faced with acute shortages of these medications in hospitals yet I see many dozens of these vials wasted each year from offices where they would never be used. The available studies certainly provide support that the likelihood of a primary cardiac event in a pedo office is almost zero. The more likely events involves airway and respiratory drive and the Board of Dentistry has appropriately placed more emphasis in this area.

So that critical emergency drugs can be more available on ambulances and in hospitals I **propose that the board temporarily suspend the requirement for amiodarone, vasopressin, and adenosine in offices where pediatric sedation is administered orally.** Offices where any form of intravenous sedation is used, should continue to have these medications present.

2. I support your proposed rewording of the language in anesthesia rule 64B5-14.0032 Itinerate/Mobile Anesthesia, regarding the use of a risk manager inspection of the of the EKG/End tidal carbon dioxide monitor to be more consistent with the intent to avoid excessive cost/burden of the rule by using Florida licensed risk managers.

Hector Vila Jr. M.D.

Diplomat American Board of Anesthesiology

4304 AZEELE STREET, TAMPA, FLORIDA 33609

A dentist may comply with the electrocardiograph and end tidal carbon dioxide monitor equipment standards set by Rule 64B5- 14.008, F.A.C., by utilizing mobile or non-fixed equipment if the dentist meets the following conditions:

- (a) During the required board inspection, the equipment is available for inspection, and **or** the dentist supplies documentation of an inspection of the equipment, which a licensed health care risk manager performed. A licensed health care risk manager inspection is valid for a period of twelve months; and*
- (b) The dentist shall make the inspected equipment available during all required inspections if specifically requested in advance of the inspection and the equipment must be immediately available for an adverse incident inspection.*

I anticipate being present at the workshop and will be happy to discuss if requested

Please do not hesitate to contact me if I may be of further assistance.

Very truly yours,

Hector Vila Jr. M.D.

Ritter, Cynthia

From: bdklement@aol.com
Sent: Friday, August 09, 2013 10:35 AM
To: Ritter, Cynthia
Subject: Anesthesia Committee discussion re Minimal Sedation requirements/guidelines

Cindy,

I would like to have the Anesthesia Committee consider creating guidelines for the use of minimal sedation. I am not suggesting a permit. The ADA has a list of such guidelines which are incorporated in a separate email to you to follow.

Presently licensees are using a variety of enteral agents, often prescribed for a patient to take before coming to the office, administered to a patient preoperatively with the patient then left in the reception room unsupervised, or administered to the patient in an operatory and then left there unsupervised until time for the actual procedure to begin. Although the present rule is clear that the dosage of the single enteral agent given cannot exceed the maximum recommended dose (MDR) of a drug that can be prescribed for unmonitored home use, the patient may be routinely taking other drugs that can potentiate the sedative effect of the enteral agent employed.

Additionally, when nitrous oxide /oxygen is used in combination with the single enteral agent, the sedative effect is potentiated further.

An even greater sedative effect is probable if the licensee adds a narcotic analgesic during the procedure as currently allowed within the rule.

My concern is that we maintain the highest level of patient safety possible. Many other other state boards have adopted or are adopting a minimal sedation guideline.

There are a significant number of Florida dentists who already follow the ADA guidelines, having completed an appropriate course either within a pre-doctoral dental education curriculum or in a post-doctoral continuing competency course.

I am planning to be at both the Thursday meeting and part of Friday morning, and look forward to seeing you there. If you have any questions about what I have sent, please email or call (904-887-2211) me.

Thanks,

Betty Klement

--
BEGIN-ANTISPAM-VOTING-LINKS

Teach CanIt if this mail (ID 03KaCzqWO) is spam:
Spam: <https://antispam.doh.ad.state.fl.us/canit/b.php?i=03KaCzqWO&m=78478fa97891&t=20130809&c=s>
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END-ANTISPAM-VOTING-LINKS

MINIMAL SEDATION GUIDELINES FOR FLORIDA DENTISTS

Patient Evaluation

Patients considered for minimal sedation must be suitably evaluated prior to the start of any sedative procedure. In healthy or medically stable individuals (ASA I, II) this may consist of a review of their current medical history and medication use. However, patients with significant medical considerations (ASA III, IV) may require consultation with their primary care physician or consulting medical specialist.

Pre-Operative Preparation

- The patient, parent, guardian or care giver must be advised regarding the procedure associated with the delivery of any sedative agents and informed consent for the proposed sedation must be obtained.
- Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
- Baseline vital signs must be obtained unless the patient's behavior prohibits such determination.
- A focused physical evaluation must be performed as deemed appropriate.
- Preoperative dietary restrictions must be considered based on the sedative technique prescribed.
- Pre-operative verbal and written instructions must be given to the patient, parent, escort, guardian or care giver.

Personnel and Equipment Requirements

Personnel:

- At least one additional person trained in Basic Life Support for Healthcare Providers must be present in addition to the dentist.

Equipment:

- A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available.
- When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.
- An appropriate scavenging system must be available if gases other than oxygen or air are used.

Monitoring and Documentation

Monitoring: A dentist, or at the dentist's direction, an appropriately trained individual, must remain in the operatory during active dental treatment to monitor the patient continuously until the patient meets the criteria for discharge to the recovery area. The appropriately trained individual must be familiar with monitoring techniques and equipment. Monitoring must include:

- Oxygenation:
 - Color of mucosa, skin or blood must be evaluated continually.
 - Oxygen saturation by pulse oximetry may be clinically useful and should be considered.
- Ventilation:
 - The dentist and/or appropriately trained individual must observe chest excursions continually.
 - The dentist and/or appropriately trained individual must verify respirations continually.
- Circulation:
 - Blood pressure and heart rate should be evaluated pre-operatively, post-operatively and intra-operatively as necessary (unless the patient is unable to tolerate such monitoring).

Documentation: An appropriate sedative record must be maintained, including the names of all drugs administered, including local anesthetics, dosages, and monitored physiological parameters.

Recovery and Discharge

- Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.
- The qualified dentist or appropriately trained clinical staff must monitor the patient during recovery until the patient is ready for discharge by the dentist.
- The qualified dentist must determine and document that level of consciousness, oxygenation, ventilation and circulation are satisfactory prior to discharge.

MINIMAL SEDATION GUIDELINES FOR FLORIDA DENTISTS

- Post-operative verbal and written instructions must be given to the patient, parent, escort, guardian or care giver.

Emergency Management

If a patient enters a deeper level of sedation than the dentist is qualified to provide, the dentist must stop the dental procedure until the patient returns to the intended level of sedation. The qualified dentist is responsible for the sedative management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of minimal sedation and providing the equipment and protocols for patient rescue.

Management of Children

For children 12 years of age and under, the American Dental Association supports the use of the American Academy of Pediatrics/American Academy of Pediatric Dentists *Guidelines for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures*.

Enteral and/or Combination Inhalation-Enteral Minimal Sedation Course Duration: Participants must be able to document current certification in Basic Life Support for Healthcare Providers and have completed a nitrous oxide competency course to be eligible for enrollment in this course. While length of a course is only one of the many factors to be considered in determining the quality of an educational program, the course should include a minimum of *16 hours*, plus clinically-oriented experiences during which competency in enteral and/or combined inhalation-enteral minimal sedation techniques is demonstrated. Clinically-oriented experiences may include group observations on patients undergoing enteral and/or combination inhalation-enteral minimal sedation. Clinical experience in managing a compromised airway is critical to the prevention of life-threatening emergencies. The faculty should schedule participants to return for additional clinical experience if competency has not been achieved in the time allotted. The educational course may be completed in a pre-doctoral dental education curriculum or a postdoctoral continuing education competency course. These Guidelines are not intended for the management of enteral and/or combination inhalation-enteral minimal sedation in children, which requires additional course content and clinical learning experience.

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Nitrous Oxide Administration

- Author: Nili N Alai, MD, FAAD; Chief Editor: Rick Kulkarni, MD more...

Updated: Jan 30, 2012

Overview

Nitrous oxide (N_2O), commonly known as laughing gas or happy gas, was first discovered in 1793 by the English scientist Joseph Priestly and has been used for more than 150 years. It has remained one of the most widely used anesthetics in both dental and medical applications.^[1]

Nitrous oxide is small inorganic chemical molecule and may also be known as dinitrogen oxide or dinitrogen monoxide. It is a colorless and nonflammable gas with a slightly sweet odor.^[2]

Nitrous oxide also has some illicit recreational uses and abuse potential. It is widely used in multiple nonmedical areas. Some of the nonmedical uses of nitrous oxide include the semiconductor industry, car racing, and food processing.^[1]

Nitrous oxide is administered by inhalation, absorbed by diffusion through the lungs, and eliminated via respiration. The elimination half life of nitrous oxide is approximately 5 minutes.^[3] It is excreted essentially unchanged (ie, nonmetabolized) via the lungs; less than 0.004% is actually metabolized in humans.

As a general anesthetic, it is very weak and is generally not used as a single agent. It may be used as a carrier gas with oxygen in combination with more potent general inhalational gases for surgical anesthesia.^[3] In dentistry, it is commonly used as a single agent (with oxygen) for partial sedation, most commonly in pediatric dental populations.

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Oral Health Topics

Nitrous Oxide

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Dental offices can safely use nitrous oxide to control patient pain and anxiety by adopting some general work practices.¹ Here are some recommendations for incorporating nitrous oxide into your practice:

- Every nitrous oxide delivery system should be equipped with a scavenging system. A flow meter (or equivalent measuring device) should be easy to see and well maintained to ensure accuracy. The system also should have a vacuum pump with the capacity for up to 45 liters of air per minute per workstation. The system also should come with masks in various sizes to ensure a proper fit for individual patients.
- Vent the vacuum and ventilation exhaust fumes outside (for example, through a vacuum system). Do not place exhaust system in the vicinity of the fresh-air intake vents. Ensure that the general ventilation provides good room-air mixing. Chronic occupational exposure—several hours a week—to unscavenged nitrous oxide has been associated with adverse health effects.²
- Test the pressure connections for leaks every time the nitrous system is first turned on and each time a gas cylinder is changed. High-pressure line connections can be tested for leaks quarterly. You can use a soap solution applied to the lines and connections to test for leaks. Alternatively, you can purchase a portable infrared spectrophotometer to test these connections.
- Before the initial use of the system for the day, inspect all of the system components—reservoir bag, tubings, masks, connectors—for wear, cracks, holes or tears. Replace any damaged pieces.
- Once all of the components have passed inspection, you can connect the mask to the tubing and turn on the vacuum pump. Ensure that the flow rate is correct—up to 45L/minute or according to the manufacturer's recommendation.
- The mask should be properly fitted to each patient. Check that the reservoir bag does not over- or underinflate while the patient is breathing oxygen, before the nitrous is administered.
- Ask the patient to limit talking during administration of the nitrous and to try to breathe through his or her nose—avoid breathing through the mouth if possible.
- During administration, watch for changes in the tidal volume of the reservoir bag also keep an eye on the vacuum pump flow rate.
- After the procedure, deliver 100 percent oxygen to the patient for 5 minutes before removing the mask. This will purge the system, and the patient, of any residual nitrous oxide.
- Periodically, personnel—particularly those who work with the nitrous oxide delivery—can be assessed for exposure. This can be done by asking the staff members to wear personal dosimetry badges or by placing an infrared spectrophotometer in the room.

NIOSH research has shown that controls including system maintenance, proper ventilation and good work practices can effectively reduce N₂O concentrations in dental

operatories to approximately 25 ppm (45 milligrams per cubic meter) during analgesia administration.³ This is the exposure limit recommended by NIOSH. Nitrous oxide can be a valuable agent in helping you make your patients comfortable. Like any other resource, nitrous oxide can be safely and effectively incorporated into your practice with proper preparation and equipment maintenance.

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Endnotes

1. Adapted from: ADA Council on Scientific Affairs, Council on Dental Practice. Association Report: Nitrous Oxide in the Dental Office. JADA 1997;128(3):364-5.
2. Howard WR. Nitrous Oxide in the Dental Environment: Assessing the Risk, Reducing the Exposure. JADA 1997;128(3):356-60.
3. National Institute for Occupational Safety and Health. NIOSH Alert: Controlling Exposures to Nitrous Oxide During Anesthetic Administration. Accessed 7/17/13.

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Additional Resources

- ADA Guidelines for the use of Sedation and General Anesthesia by Dentists
- For the Dental Patient: Anesthesia for the Dental Visit
- Nitrous Oxide Monitoring Device and Scavenging System Vendor List
- National Institute for Occupational Safety and Health tear sheet, which can be distributed and/or posted in the office. NIOSH Alert. Controlling Exposures to Nitrous Oxide During Anesthetic Administration. 1994. Accessed 1/28/11.
- National Institute for Occupational Safety and Health. Control of Nitrous Oxide in Dental Operatories. 1998. Accessed 7/17/13.

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**Nitrous oxide–oxygen administration
When safety features no longer are safe**

Mark Donaldson, PharmD, FACHE

David Donaldson, BDS, FDSRCS, MDS, FADSA

Fred C. Quarnstrom, DDS, FADSA, FAGD

Author Affiliations

Abstract

Background. Nitrous oxide–oxygen sedation is used widely in dentistry because of its relative safety and efficacy. The most important safety consideration is the prevention of hypoxia. Safety features have been designed to prevent hypoxia by ensuring a minimal oxygen flow, thus limiting the amount of nitrous oxide that can be administered.

Methods. The authors review the 12 safety features used to ensure the safety and efficacy of nitrous oxide–oxygen sedation. They provide examples of safety feature failures, as well as steps to follow to help prevent negative outcomes.

Conclusions. Nitrous oxide–oxygen delivery systems typically are limited to a maximum of 70 percent nitrous oxide and 30 percent oxygen delivery, which ensures that the patient is receiving at least 9 percent more oxygen than found in ambient air. Other safety features stop the delivery of nitrous oxide if oxygen flow stops. The pin–index safety system prevents the accidental attachment of a nonoxygen tank to the oxygen attachment portal, and diameter–index systems help ensure that the appropriate gas flows through the appropriate tubing. Although these safety features are in place, dentists have reported incidents of hypoxia involving incorrect equipment installation or equipment damage.

Practice implications. If a safety feature failure is suspected during administration of nitrous oxide–oxygen sedation, the clinician should remove the face mask from the patient immediately.

Nitrous oxide

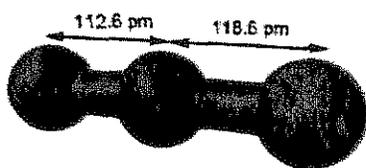
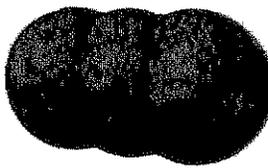
From Wikipedia, the free encyclopedia

Nitrous oxide, commonly known as **laughing gas**,^[1] is a chemical compound with the formula N₂O. It is an oxide of nitrogen. At room temperature, it is a colourless, non-flammable gas, with a slightly sweet odour and taste. It is used in surgery and dentistry for its anaesthetic and analgesic effects. It is known as "laughing gas" due to the euphoric effects of inhaling it, a property that has led to its recreational use as a dissociative anaesthetic. It is also used as an oxidizer in rocketry and in motor racing to increase the power output of engines. At elevated temperatures, nitrous oxide is a powerful oxidizer similar to molecular oxygen.

Nitrous oxide gives rise to NO (nitric oxide) on reaction with oxygen atoms, and this NO in turn reacts with ozone. As a result, it is the main naturally occurring regulator of stratospheric ozone. It is also a major greenhouse gas and air pollutant. Considered over a 100-year period, it has 310^[2] times more impact per unit weight (global warming potential) than carbon dioxide according to the Environmental Protection Agency (EPA).

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Nitrous oxide	
$\text{N}\equiv\overset{+}{\text{N}}-\overset{-}{\text{O}} \longleftrightarrow \overset{-}{\text{N}}=\overset{+}{\text{N}}=\text{O}$	
	
	
IUPAC name	
Dinitrogen monoxide	
Other names	
Laughing gas, sweet air	
Identifiers	
CAS number	10024-97-2 [✓]
PubChem	948
ChemSpider	923 [✓]
UNII	K50XQU1029 [✓]
UN number	1070 (compressed) 2201 (liquid)
KEGG	D00102 [✓]
ChEBI	CHEBI:17045 [✓]
ChEMBL	CHEMBL1234579 [✗]
RTECS number	QX1350000
ATC code	N01AX13 (http://www.whocc.no/atc_ddd_index/?code=N01AX13)
Jmol-3D images	Image 1 (http://chemapps.stolaf.edu/jmol/jmol.php?model=N%23%5BN%2B%5D%5BO-%5D)
SMILES	
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Properties	
Molecular formula	N ₂ O
Molar mass	44.013 g/mol
Appearance	colourless gas
Density	1.977 g/L (gas)
Melting point	−90.86 °C (182.29 K)
Boiling point	−88.48 °C (184.67 K)
Solubility in water	0.15 g/100 ml (15 °C)
Solubility	soluble in alcohol, ether, sulfuric acid
log P	0.35
Vapor pressure	5150 kPa (20 °C)
Refractive index (<i>n</i> _D)	1.330

Structure

Molecular shape	linear, C _{∞v}
Dipole moment	0.166 D

Thermochemistry

Std enthalpy of formation $\Delta_f H^\ominus_{298}$	+82.05 kJ/mol
Standard molar entropy S^\ominus_{298}	219.96 JK ^{−1} mol ^{−1}

Pharmacology

Routes of administration	Inhalation
Metabolism	0.004%
Elimination half-life	5 minutes
Excretion	Respiratory

Occurrence

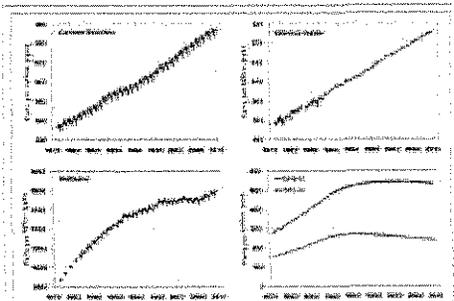
Nitrous oxide is emitted by bacteria in soils and oceans, and thus has been a part of Earth's atmosphere for aeons. Agriculture is the main source of human-produced nitrous oxide: cultivating soil, the use of nitrogen fertilisers, and animal waste handling can all stimulate naturally occurring bacteria to produce more nitrous oxide. The livestock sector (primarily cows, chickens, and pigs) produces 65% of human-related nitrous oxide.^[3] Industrial sources make up only about 20% of all anthropogenic sources, and include the production of nylon, and the burning of fossil fuel in internal combustion engines.

Human activity is thought to account for 30%; tropical soils and oceanic release account for 70%.^[4]

Nitrous oxide reacts with ozone in the stratosphere. Nitrous oxide is the main naturally occurring regulator of stratospheric ozone. Nitrous oxide is a major greenhouse gas. Considered over a 100-year period, it has 298 ^[*citation needed*] times more impact per unit weight than carbon dioxide. Thus, despite its low concentration, nitrous oxide is the fourth largest contributor to these greenhouse gases. It ranks behind water vapour, carbon dioxide, and methane. Control of nitrous oxide is part of efforts to curb greenhouse gas emissions.^[5]

History

The gas was first synthesised by English natural philosopher and chemist Joseph Priestley in 1772, who called it *phlogisticated nitrous*



Greenhouse gas trends.

Production of Factitious Airs (1794). This book was important for two reasons. First, James Watt had invented a novel machine to produce "Factitious Airs" (i.e. nitrous oxide) and a novel "breathing apparatus" to inhale the gas. Second, the book also presented the new medical theories by Thomas Beddoes, that tuberculosis and other lung diseases could be treated by inhalation of "Factitious Airs".^[8]

Pregnancy category	C(US)
Hazards	
MSDS	Ilo.org (http://www.inchem.org/documents/icsc/icsc/eics0067.htm), ICSC 0067
EU Index	Oxidant [O]
NFPA 704	
Flash point	Non-flammable
Related compounds	
Related nitrogen oxides	Nitric oxide Dinitrogen trioxide Nitrogen dioxide Dinitrogen tetroxide Dinitrogen pentoxide
Related compounds	Ammonium nitrate Azide
<div style="display: flex; align-items: center; justify-content: center;"> ✕ (verify) (what is: ✓/✗?) </div> <p>Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa)</p>	
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air (see phlogiston).^[6] Priestley published his discovery in the book *Experiments and Observations on Different Kinds of Air* (1775), where he described how to produce the preparation of "nitrous air diminished", by heating iron filings dampened with nitric acid.^[7]

Early use

The first important use of nitrous oxide was made possible by Thomas Beddoes and James Watt, who worked together to publish the book *Considerations on the Medical Use and on the*

The machine to produce "Factitious Airs" had three parts: A furnace to burn the needed material, a vessel with water where the produced gas passed through in a spiral pipe (for impurities to be "washed off"), and finally the gas cylinder with a gasometer where the gas produced, "air", could be tapped into portable air bags (made of airtight oily silk). The breathing apparatus consisted of one of the portable air bags connected with a tube to a mouthpiece. With this new equipment being engineered and produced by 1794, the way was paved for clinical trials, which began when Thomas Beddoes in 1798 established the "*Pneumatic Institution for Relieving Diseases by Medical Airs*" in Hotwells (Bristol). In the basement of the building, a large-scale machine was producing the gases under the supervision of a young Humphry Davy, who was encouraged to experiment with new gases for patients to inhale.^[8] The first important work of Davy was examination of the nitrous oxide, and the publication of his results in the book: *Researches, Chemical and Philosophical (1800)*. In that publication, Davy notes the analgesic effect of nitrous oxide at page 465 and its potential to be used for surgical operations at page 556.^[9]

Despite Davy's discovery that inhalation of nitrous oxide could relieve a conscious person from pain, another 44 years elapsed before doctors attempted to use it for anaesthesia. The use of nitrous oxide as a recreational drug at "laughing gas parties", primarily arranged for the British upper class, became an immediate success beginning in 1799. While the effects of the gas generally make the user appear stuporous, dreamy and sedated, some people also "get the giggles" in a state of euphoria, and frequently, erupt in laughter.^[10]

Anaesthetic use

Further information: Nitrous oxide and oxygen

The first time nitrous oxide was used as an anaesthetic drug in the treatment of a patient was when dentist Horace Wells, with assistance by Gardner Quincy Colton and John Mankey Riggs, demonstrated insensitivity to pain from a dental extraction on 11 December 1844.^[11] In the following weeks, Wells treated the first 12–15 patients with nitrous oxide in Hartford, and according to his own record only failed in two cases.^[12] In spite of these convincing results being reported by Wells to the medical society in Boston already in December 1844, this new method was not immediately adopted by other dentists. The reason for this was most likely that Wells, in January 1845 at his first public demonstration towards the medical faculty in Boston, had been partly unsuccessful, leaving his colleagues doubtful regarding its efficacy and safety.^[13] The method did not come into general use until 1863, when Gardner Quincy Colton successfully started to use it in all his "Colton Dental Association" clinics, that he had just established in New Haven and New York City.^[8] Over the following three years, Colton and his associates successfully administered nitrous oxide to more than 25,000 patients.^[14] Today, nitrous oxide is used in dentistry as an anxiolytic, as an adjunct to local anaesthetic.

However, nitrous oxide was not found to be a strong enough anaesthetic for use in major surgery in hospital settings. Being a stronger and more potent anaesthetic, sulfuric ether was instead demonstrated and accepted for use in October 1846, along with chloroform in 1847.^[8] When Joseph Thomas Clover invented the "gas-ether inhaler" in 1876, it however became a common practice at hospitals to initiate all anaesthetic treatments with a mild flow of nitrous oxide, and then gradually increase the anaesthesia with the stronger ether/chloroform. Clover's gas-ether inhaler was designed to supply the patient with nitrous oxide and ether at the same time, with the exact mixture being controlled by the operator of the device. It remained in use by many hospitals until the 1930s.^[14] Although hospitals today are using a

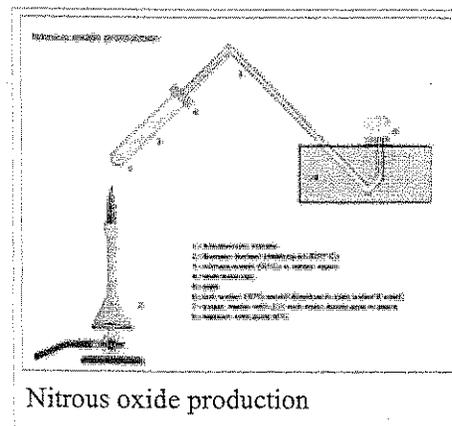
more advanced anaesthetic machine, these machines still use the same principle launched with Clover's gas-ether inhaler, to initiate the anaesthesia with nitrous oxide, before the administration of a more powerful anaesthetic.

Production

Nitrous oxide is most commonly prepared by careful heating of ammonium nitrate, which decomposes into nitrous oxide and water vapour.^[15] The addition of various phosphates favours formation of a purer gas at slightly lower temperatures. One of the earliest commercial producers was George Poe in Trenton, New Jersey.^[16]



This reaction occurs between 170 and 240 °C, temperatures where ammonium nitrate is a moderately sensitive explosive and a very powerful oxidizer. Above 240 °C the exothermic reaction may accelerate to the point of detonation, so the mixture must be cooled to avoid such a disaster. Superheated steam is used to reach reaction temperature in some turnkey production plants.^[17]

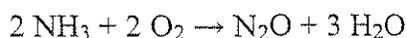


Downstream, the hot, corrosive mixture of gases must be cooled to condense the steam, and filtered to remove higher oxides of nitrogen. Ammonium nitrate smoke, as an extremely persistent colloid, will also have to be removed. The cleanup is often done in a train of three gas washes; namely base, acid and base again. Any significant amounts of nitric oxide (NO) may not necessarily be absorbed directly by the base (sodium hydroxide) washes.

The nitric oxide impurity is sometimes chelated out with ferrous sulfate, reduced with iron metal, or oxidised and absorbed in base as a higher oxide. The first base wash may (or may not) react out much of the ammonium nitrate smoke. However, this reaction generates ammonia gas, which may have to be absorbed in the acid wash.

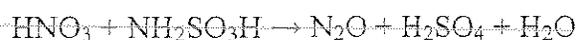
Other routes

The direct oxidation of ammonia may someday rival the ammonium nitrate pyrolysis synthesis of nitrous oxide mentioned above. This capital-intensive process, which originates in Japan, uses a manganese dioxide-bismuth oxide catalyst:^[18]



Higher oxides of nitrogen are formed as impurities. In comparison, uncatalysed ammonia oxidation (i.e. combustion or explosion) goes primarily to N₂ and H₂O.

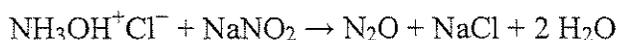
Nitrous oxide can be made by heating a solution of sulfamic acid and nitric acid. Many gases are made this way in Bulgaria.^[citation needed]



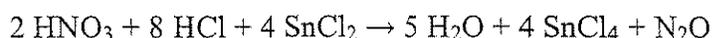
There is no explosive hazard in this reaction if the mixing rate is controlled. However, as usual, toxic higher oxides of nitrogen are formed.

Nitrous oxide is produced in large volumes as a by-product in the synthesis of adipic acid; one of the two reactants used in nylon manufacture.^{[19][20]} This might become a major commercial source, but will require the removal of higher oxides of nitrogen and organic impurities. Currently much of the gas is decomposed before release for environmental protection.

Hydroxylammonium chloride can react with sodium nitrite to produce N₂O as well:



If the nitrite is added to the hydroxylamine solution, the only remaining by-product is salt water. However, if the hydroxylamine solution is added to the nitrite solution (nitrite is in excess), then toxic higher oxides of nitrogen are also formed. Also, HNO₃ can be reduced to N₂O by SnCl₂ and HCl mixture:



Natural production of N₂O occurs through the process of denitrification in oxygen-poor soils and marine environments, in which denitrifying bacteria respire NO₃⁻.

Soil

See also: DayCent

Of the entire anthropogenic N₂O emission (5.7 Tg N₂O-N yr⁻¹), agricultural soils provide 3.5 Tg N₂O-N yr⁻¹.^[21] Nitrous oxide is produced naturally in the soil during the microbial processes of nitrification, denitrification, nitrifier denitrification and others:

- aerobic autotrophic nitrification, the stepwise oxidation of ammonia (NH₃) to nitrite (NO₂⁻) and to nitrate (NO₃⁻) (e.g., Kowalchuk and Stephen, 2001),
- anaerobic heterotrophic denitrification, the stepwise reduction of NO₃⁻ to NO₂⁻, nitric oxide (NO), N₂O and ultimately N₂, where facultative anaerobe bacteria use NO₃⁻ as an electron acceptor in the respiration of organic material in the condition of insufficient oxygen (O₂) (e.g. Knowles, 1982), and
- nitrifier denitrification, which is carried out by autotrophic NH₃-oxidizing bacteria and the pathway whereby ammonia (NH₃) is oxidised to nitrite (NO₂⁻), followed by the reduction of NO₂⁻ to nitric oxide (NO), N₂O and molecular nitrogen (N₂) (e.g., Webster and Hopkins, 1996; Wrage et al., 2001).
- Other N₂O production mechanisms include heterotrophic nitrification (Robertson and Kuenen, 1990), aerobic denitrification by the same heterotrophic nitrifiers (Robertson and Kuenen, 1990), fungal denitrification (Laughlin and Stevens, 2002), and non-biological process chemodenitrification (e.g. Chalk and Smith, 1983; Van Cleemput and Baert, 1984; Martikainen and De Boer, 1993; Daum and Schenk, 1998; Mørkved et al., 2007).

Soil N₂O emissions are reported to be controlled by soil chemical and physical properties such as the availability of mineral N, soil pH, organic matter availability, and soil type, and climate related soil properties such as soil temperature and soil water content (e.g., Mosier, 1994; Bouwman, 1996; Beauchamp, 1997; Yamulki et al. 1997; Dobbie and Smith, 2003; Smith et al. 2003; Dalal et al. 2003).

Properties and reactions

Nitrous oxide is a colourless, non-toxic gas with a faint, sweet odour. It dissolves in water to give a neutral solution. The equilibrium that exists when nitrous oxide is dissolved in water lies far to the left:



Nitrous oxide supports combustion by releasing the dative-bonded oxygen radical, thus it can relight a glowing splint. N₂O is inert at room temperature and has few reactions. At elevated temperatures, its reactivity increases. For example, nitrous oxide reacts with NaNH₂ at 460K to give NaN₃



The above reaction is actually the route adopted by commercial chemical industry to produce azide salts, which is used as a detonator.^[22]

Applications

Rocket motors

Nitrous oxide can be used as an oxidizer in a rocket motor. This has the advantages over other oxidisers in that it is not only non-toxic, but also, due to its stability at room temperature, easy to store and relatively safe to carry on a flight. As a secondary benefit it can be readily decomposed to form breathing air. Its high density and low storage pressure enable it to be highly competitive with stored high-pressure gas systems.

In a 1914 patent, American rocket pioneer Robert Goddard suggested nitrous oxide and gasoline as possible propellants for a liquid-fuelled rocket. Nitrous oxide has been the oxidiser of choice in several hybrid rocket designs (using solid fuel with a liquid or gaseous oxidizer). The combination of nitrous oxide with hydroxyl-terminated polybutadiene fuel has been used by SpaceShipOne and others. It is also notably used in amateur and high power rocketry with various plastics as the fuel.

Nitrous oxide can also be used in a monopropellant rocket. In the presence of a heated catalyst, N₂O will decompose exothermically into nitrogen and oxygen, at a temperature of approximately 1300 °C ^[*citation needed*]. Because of the large heat release, the catalytic action rapidly becomes secondary as thermal autodecomposition becomes dominant. In a vacuum thruster, this can provide a monopropellant specific impulse (*I*_{sp}) of as much as 180 s. While noticeably less than the *I*_{sp} available from hydrazine thrusters (monopropellant or bipropellant with nitrogen tetroxide), the decreased toxicity makes nitrous oxide an option worth investigating.

Nitrous oxide is said to deflagrate somewhere around 600 °C (1,112 °F) at a pressure of 21 atm. It can also easily be ignited using a combination of the two. At 600 psi for example, the required ignition energy is only 6 J, whereas N₂O at 130 psi would not react even with a 2500 J ignition energy input. [23][24][25][26]

Specific impulse (*I*_{sp}) can be improved by blending a hydrocarbon fuel with the nitrous oxide inside the same storage tank, becoming a nitrous oxide fuel blend (NOFB) monopropellant. This storage mixture does not incur the danger of spontaneous ignition, since N₂O is chemically stable. When the nitrous oxide decomposes by a heated catalyst, high temperature oxygen is released and rapidly ignites the hydrocarbon fuel-blend. NOFB monopropellants are capable of *I*_{sp} greater than 300 seconds, while avoiding the toxicity associated with hypergolic propulsion systems.^{[27][28]} The low freezing point of NOFB eases thermal management compared to hydrazine and dinitrogen tetroxide—a valuable property for space storable propellants.

Internal combustion engine

Main article: Nitrous

In vehicle racing, nitrous oxide (often referred to as just "nitrous") allows the engine to burn more fuel by providing more oxygen than air alone, resulting in a more powerful combustion. The gas itself is not flammable at a low pressure/temperature, but it delivers more oxygen than atmospheric air by breaking down at elevated temperatures. Therefore, it is often mixed with another fuel that is easier to deflagrate.

Nitrous oxide is stored as a compressed liquid; the evaporation and expansion of liquid nitrous oxide in the intake manifold causes a large drop in intake charge temperature, resulting in a denser charge, further allowing more air/fuel mixture to enter the cylinder. Nitrous oxide is sometimes injected into (or prior to) the intake manifold, whereas other systems directly inject right before the cylinder (direct port injection) to increase power.

The technique was used during World War II by *Luftwaffe* aircraft with the GM-1 system to boost the power output of aircraft engines. Originally meant to provide the *Luftwaffe* standard aircraft with superior high-altitude performance, technological considerations limited its use to extremely high altitudes. Accordingly, it was only used by specialised planes like high-altitude reconnaissance aircraft, high-speed bombers, and high-altitude interceptor aircraft.

One of the major problems of using nitrous oxide in a reciprocating engine is that it can produce enough power to damage or destroy the engine. Very large power increases are possible, and if the mechanical structure of the engine is not properly reinforced, the engine may be severely damaged or destroyed during this kind of operation. It is very important with nitrous oxide augmentation of internal combustion engines to maintain proper operating temperatures and fuel levels to prevent "preignition", or "detonation" (sometimes referred to as "knock"). Most problems that are associated with nitrous do not come from mechanical failure due to the power increases. Since nitrous allows a much denser charge into the cylinder it dramatically increases cylinder pressures. The increased pressure and temperature can cause problems such as melting the piston or valves. It may also crack or warp the piston or head and cause preignition due to uneven heating.

Automotive-grade liquid nitrous oxide differs slightly from medical-grade nitrous oxide. A small amount of sulfur dioxide (SO₂) is added to prevent substance abuse.^[29] Multiple washes through a base (such as sodium hydroxide) can remove this, decreasing the corrosive properties observed when SO₂ is further oxidised during combustion into sulfuric acid, making emissions cleaner.^[citation needed]

Aerosol propellant

The gas is approved for use as a food additive (also known as E942), specifically as an aerosol spray propellant. Its most common uses in this context are in aerosol whipped cream canisters, cooking sprays, and as an inert gas used to displace oxygen, to inhibit bacterial growth, when filling packages of potato chips and other similar snack foods.

The gas is extremely soluble in fatty compounds. In aerosol whipped cream, it is dissolved in the fatty cream until it leaves the can, when it becomes gaseous and thus creates foam. Used in this way, it produces whipped cream four times the volume of the liquid, whereas whipping air into cream only produces twice the volume. If air were used as a propellant, oxygen would accelerate rancidification of the butterfat; nitrous oxide inhibits such degradation. Carbon dioxide cannot be used for whipped cream because it is acidic in water, which would curdle the cream and give it a seltzer-like "sparkling" sensation.

However, the whipped cream produced with nitrous oxide is unstable and will return to a more liquid state within half an hour to one hour. Thus, the method is not suitable for decorating food that will not be immediately served.

Similarly, cooking spray, which is made from various types of oils combined with lecithin (an emulsifier), may use nitrous oxide as a propellant; other propellants used in cooking spray include food-grade alcohol and propane.

Users of nitrous oxide often obtain it from whipped cream dispensers that use nitrous oxide as a propellant (see above section), for recreational use as a euphoria-inducing inhalant drug. It is not harmful in small doses, but risks due to lack of oxygen do exist (see *Recreational use below*).

Medicine

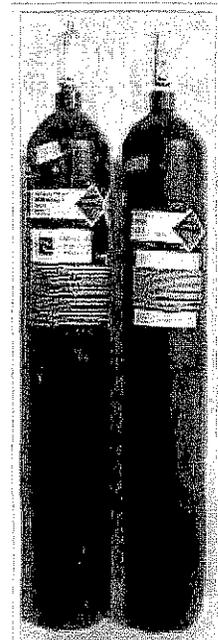
Further information: Nitrous oxide and oxygen

Nitrous oxide has been used for anaesthesia in dentistry since December 1844, where Horace Wells made the first 12–15 dental operations with the gas in Hartford. Its debut as a generally accepted method, however, came in 1863, when Gardner Quincy Colton introduced it more broadly at all the Colton Dental Association clinics, that he founded in New Haven and New York City.^[8] The first devices used in dentistry to administer the gas, known as Nitrous Oxide inhalers, were designed in a very simple way with the gas stored and breathed through a breathing bag made of rubber cloth, without a scavenger system and flowmeter, and with no addition of oxygen/air.^[14] Today these simple and somewhat unreliable inhalers have been replaced by the more modern relative analgesia machine, which is an automated machine designed to deliver a precisely dosed and breath-actuated flow of nitrous oxide mixed with oxygen, for the patient to inhale safely. The machine used in dentistry is designed as a simplified version of the larger anaesthetic machine used by hospitals, as it doesn't feature the additional

anaesthetic vaporiser and medical ventilator. The purpose of the machine allows for a simpler design, as it only delivers a mixture of nitrous oxide and oxygen for the patient to inhale, in order to depress the feeling of pain while keeping the patient in a conscious state.

Relative analgesia machines typically feature a constant-supply flowmeter, which allow the proportion of nitrous oxide and the combined gas flow rate to be individually adjusted. The gas is administered by dentists through a demand-valve inhaler over the nose, which will only release gas when the patient inhales through the nose. Because nitrous oxide is minimally metabolised in humans (with a rate of 0.004%), it retains its potency when exhaled into the room by the patient, and can pose an intoxicating and prolonged exposure hazard to the clinic staff if the room is poorly ventilated. Where nitrous oxide is administered, a continuous-flow fresh-air ventilation system or nitrous scavenger system is used to prevent a waste-gas buildup.

Hospitals administer nitrous oxide as one of the anaesthetic drugs delivered by anaesthetic machines. Nitrous oxide is a weak general anaesthetic, and so is generally not used alone in general anaesthesia. In general anaesthesia it is used as a carrier gas in a 2:1 ratio with oxygen for more powerful general anaesthetic drugs such as sevoflurane or desflurane. It has a minimum alveolar concentration of 105% and a blood/gas partition coefficient of 0.46.



Medical grade N₂O tanks used in dentistry.

The medical grade gas tanks, with the tradename Entonox and Nitronox contain a mixture with 50%, but this will normally be diluted to a lower percentage upon the operational delivery to the patient. Inhalation of nitrous oxide is frequently used to relieve pain associated with childbirth, trauma, oral surgery, and acute coronary syndrome (includes heart attacks). Its use during labour has been shown to be a safe and effective aid for women wanting to give birth without an epidural.^[30] Its use for acute coronary syndrome is of unknown benefit.^[31]

In Britain and Canada, Entonox and Nitronox are commonly used by ambulance crews (including unregistered practitioners) as a rapid and highly effective analgesic gas.

Nitrous oxide has been shown to be effective in treating a number of addictions, including alcohol withdrawal.^[32]

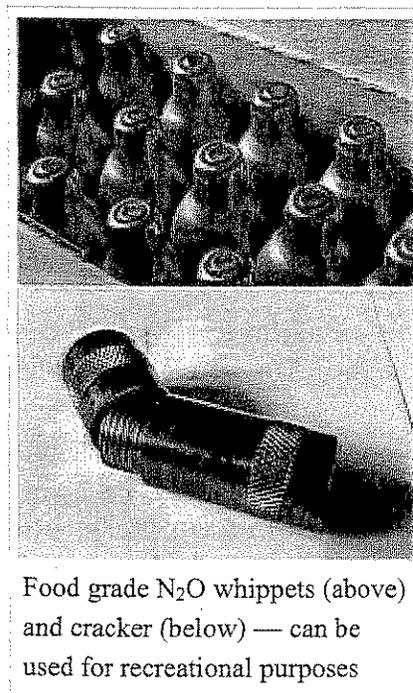
Nitrous oxide is also gaining interest as a substitute gas for carbon dioxide in laparoscopic surgery. It has been found to be as safe as carbon dioxide with better pain relief.^{[33][34]}

Recreational use

Nitrous oxide can cause analgesia, depersonalisation, derealisation, dizziness, euphoria, and some sound distortion.^[35] Research has also found that it increases suggestibility and imagination.^[36] Inhalation of nitrous oxide for recreational use, with the purpose of causing euphoria and/or slight hallucinations, began as a phenomenon for the British upper class in 1799, known as "laughing gas parties". Until at least 1863, a low availability of equipment to produce the gas, combined with a low usage of the gas for medical purposes, meant it was a relatively rare phenomenon that mainly happened among students at medical universities. When equipment became more widely available for dentistry and hospitals, most

countries also restricted the legal access to buy pure nitrous oxide gas cylinders to those sectors. As only medical staff and dentists today are legally allowed to buy the pure gas, the recreational use is also believed to be somewhat limited. A Consumers Union report from 1972, however found that the use of the gas for recreational purpose was [then] still taking place, based upon reports of its use in Maryland 1971, Vancouver 1972, and a survey made by Dr. Edward J. Lynn of its non-medical use in Michigan 1970.^{[10][37]}

It was not uncommon [in the interviews] to hear from individuals who had been to parties where a professional (doctor, nurse, scientist, inhalation therapist, researcher) had provided nitrous oxide. There also were those who work in restaurants who used the N₂O stored in tanks for the preparation of whip cream. Reports were received from people who used the gas contained in aerosol cans both of food and non-food products. At a recent rock festival nitrous oxide was widely sold for 25 cents a balloon. Contact was made with a "mystical-religious" group that used the gas to accelerate arriving at their transcendental-meditative state of choice. Although a few, more sophisticated users employed nitrous oxide-oxygen mixes with elaborate equipment, most users used balloons or plastic bags. They either held a breath of N₂O or rebreathed the gas. There were no adverse effects reported in the more than one hundred individuals surveyed.^[37]



Food grade N₂O whippets (above) and cracker (below) — can be used for recreational purposes

In Australia, nitrous oxide bulbs are known as nangs, possibly derived from the sound distortion perceived by consumers.^[38]

Neuropharmacology

The pharmacological mechanism of action of N₂O in medicine is not fully known. However, it has been shown to directly modulate a broad range of ligand-gated ion channels, and this likely plays a major role in many of its effects. It moderately blocks NMDA and β₂-subunit-containing nACh channels, weakly inhibits AMPA, kainate, GABA_C, and 5-HT₃ receptors, and slightly potentiates GABA_A and glycine receptors.^{[39][40]} It has also been shown to activate two-pore-domain K⁺ channels.^[41] While N₂O affects quite a few ion channels, its anaesthetic, hallucinogenic, and euphoriant effects are likely caused predominantly or fully via inhibition of NMDAR-mediated currents.^{[39][42]} In addition to its effects on ion channels, N₂O may act to imitate nitric oxide (NO) in the central nervous system as well, and this may be related to its analgesic and anxiolytic properties.^[42]

Anxiolytic effect

In behavioural tests of anxiety, a low dose of N₂O is an effective anxiolytic, and this anti-anxiety effect is associated with enhanced activity of GABA_A receptors, as it is partially reversed by benzodiazepine receptor antagonists. Mirroring this, animals which have developed tolerance to the anxiolytic effects of

benzodiazepines are partially tolerant to N₂O.^[43] Indeed, in humans given 30% N₂O, benzodiazepine receptor antagonists reduced the subjective reports of feeling "high", but did not alter psycho-motor performance, in human clinical studies.^[44]

Analgesic effect

The analgesic effects of N₂O are linked to the interaction between the endogenous opioid system and the descending noradrenergic system. When animals are given morphine chronically they develop tolerance to its pain-killing effects, and this also renders the animals tolerant to the analgesic effects of N₂O.^[45] Administration of antibodies which bind and block the activity of some endogenous opioids (not β-endorphin) also block the antinociceptive effects of N₂O.^[46] Drugs which inhibit the breakdown of endogenous opioids also potentiate the antinociceptive effects of N₂O.^[46] Several experiments have shown that opioid receptor antagonists applied directly to the brain block the antinociceptive effects of N₂O, but these drugs have no effect when injected into the spinal cord.

Conversely, α₂-adrenoceptor antagonists block the antinociceptive effects of N₂O when given directly to the spinal cord, but not when applied directly to the brain.^[47] Indeed, α_{2B}-adrenoceptor knockout mice or animals depleted in norepinephrine are nearly completely resistant to the antinociceptive effects of N₂O.^[48] Apparently N₂O-induced release of endogenous opioids causes disinhibition of brain stem noradrenergic neurons, which release norepinephrine into the spinal cord and inhibit pain signalling.^[49] Exactly how N₂O causes the release of endogenous opioid peptides is still uncertain.

Euphoric effect

In rats, N₂O stimulates the mesolimbic reward pathway via inducing dopamine release and activating dopaminergic neurons in the ventral tegmental area and nucleus accumbens, presumably through antagonisation of NMDA receptors localised in the system.^{[50][51][52][53]} This action has been implicated in its euphoric effects, and notably, appears to augment its analgesic properties as well.^{[50][51][52][53]}

However, it is remarkable that in mice, N₂O blocks amphetamine-induced carrier-mediated dopamine release in the nucleus accumbens and behavioural sensitisation, abolishes the conditioned place preference (CPP) of cocaine and morphine, and does not produce reinforcing (or aversive) effects of its own.^{[54][55]} Studies on CPP of N₂O in rats is mixed, consisting of reinforcement, aversion, and no change.^[56] In contrast, it is a positive reinforcer in squirrel monkeys,^[57] and is well known as a drug of abuse in humans.^[58] These discrepancies in response to N₂O may reflect species variation or methodological differences.^[55] Though, it is noteworthy that in human clinical studies, N₂O was found to produce mixed responses similarly to rats, reflecting high subjective individual variability.^{[59][60]}

Neurotoxicity

Similarly to some other NMDA antagonists, N₂O has been demonstrated to produce neurotoxicity in the form of Olney's lesions (damage to the posterior cingulate and retrosplenial cortices of the brain) in rodents upon prolonged (e.g., several hour) exposure.^{[61][62][63][64]} However, it also simultaneously exerts widespread neuroprotective effects via inhibiting glutamate-induced excitotoxicity, and it has been argued that on account of its very short duration under normal circumstances, N₂O may not share the neurotoxicity of other NMDA antagonists.^[65] Indeed, in rodents, short-term exposure results in only

mild injury that is rapidly reversible, and permanent neuronal death only occurs after constant and sustained exposure.^[61] Moreover, Olney's lesions have never been observed in primates (including humans). However, Olney's lesions must be observed within a few hours of death, which may explain why they have not been observed in primates. After a few hours, depending on dose, the vacuoles that have appeared in the neurons resolve. If the dose is large enough to kill neurons, glial cells fill in any spaces left by the dead neurons within a short time, making it impossible to tell that neurons were even there.^{[66][67]}

Safety

The major safety hazards of nitrous oxide come from the fact that it is a compressed liquefied gas, an asphyxiation risk, and a dissociative anaesthetic. Exposure to nitrous oxide causes short-term decreases in mental performance, audiovisual ability, and manual dexterity.^[68] Long-term exposure can cause vitamin B₁₂ deficiency, numbness, reproductive side effects (in pregnant females), and other problems (see *Recreational use* and *Biological* factors in this article).

The National Institute for Occupational Safety and Health recommends that workers' exposure to nitrous oxide should be controlled during the administration of anaesthetic gas in medical, dental, and veterinary operators.^[69]

Chemical/physical

At room temperature (20 °C) the saturated vapour pressure is 58.5 bar, rising up to 72.45 bar at 36.4 °C — the critical temperature. The pressure curve is thus unusually sensitive to temperature.^[70] Liquid nitrous oxide acts as a good solvent for many organic compounds; liquid mixtures may form shock sensitive explosives.^[citation needed]

As with many strong oxidisers, contamination of parts with fuels have been implicated in rocketry accidents, where small quantities of nitrous/fuel mixtures explode due to "water hammer"-like effects (sometimes called "dieseling" — heating due to adiabatic compression of gases can reach decomposition temperatures).^[71] Some common building materials such as stainless steel and aluminium can act as fuels with strong oxidisers such as nitrous oxide, as can contaminants, which can ignite due to adiabatic compression.^[72]

There have also been accidents where nitrous oxide decomposition in plumbing has led to the explosion of large tanks.^[26]

Biological

Nitrous oxide inactivates the cobalamin form of vitamin B₁₂ by oxidation. Symptoms of vitamin B₁₂ deficiency, including sensory neuropathy, myelopathy, and encephalopathy, can occur within days or weeks of exposure to nitrous oxide anaesthesia in people with subclinical vitamin B₁₂ deficiency.^[citation needed] Symptoms are treated with high doses of vitamin B₁₂, but recovery can be slow and incomplete.^[73] People with normal vitamin B₁₂ levels have stores to make the effects of nitrous oxide

insignificant, unless exposure is repeated and prolonged (nitrous oxide abuse).^[*citation needed*] Vitamin B₁₂ levels should be checked in people with risk factors for vitamin B₁₂ deficiency prior to using nitrous oxide anaesthesia.

A study of workers^[74] and several experimental animal studies^{[75][75][76][77]} indicate that adverse reproductive effects for pregnant females may also result from chronic exposure to nitrous oxide.

Environmental

N₂O is a greenhouse gas with tremendous global warming potential (GWP). When compared to carbon dioxide (CO₂), N₂O has 310 times the ability per molecule of gas to trap heat in the atmosphere.^[78] N₂O is produced naturally in the soil during the microbial processes of nitrification and denitrification.^[79]

The United States of America signed and ratified the United Nations Framework Convention on Climate Change (UNFCCC (<http://unfccc.int/2860.php>)) in 1992, agreeing to inventory and assess the various sources of greenhouse gases that contribute to climate change.^[80] The agreement requires parties to "develop, periodically update, publish and make available... national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies..."^[81] In response to this agreement, the U.S. is obligated to inventory anthropogenic emissions by sources and sinks, of which agriculture is a key contributor. In 2008, agriculture contributed 6.1% of the total U.S. greenhouse gas emissions and cropland contributed nearly 69% of total direct nitrous oxide (N₂O) emissions. Additionally, estimated emissions from agricultural soils were 6% higher in 2008 than 1990.^[80]

According to 2006 data from the United States Environmental Protection Agency, industrial sources make up only about 20% of all anthropogenic sources, and include the production of nylon, and the burning of fossil fuel in internal combustion engines. Human activity is thought to account for 30%; tropical soils and oceanic release account for 70%.^[82] However, a 2008 study by Nobel Laureate Paul Crutzen suggests that the amount of nitrous oxide release attributable to agricultural nitrate fertilizers has been seriously underestimated, most of which would presumably come under soil and oceanic release in the Environmental Protection Agency data.^[83] Atmospheric levels have risen by more than 15% since 1750.^[84] Nitrous oxide also causes ozone depletion. A new study suggests that N₂O emission currently is the single most important ozone-depleting substance (ODS) emission and is expected to remain the largest throughout the 21st century.^{[85][86]}

Legality

In the United States, possession of nitrous oxide is legal under federal law and is not subject to DEA purview.^[87] It is, however, regulated by the Food and Drug Administration under the Food Drug and Cosmetics Act; prosecution is possible under its "misbranding" clauses, prohibiting the sale or distribution of nitrous oxide for the purpose of human consumption.

Many states have laws regulating the possession, sale, and distribution of nitrous oxide. Such laws usually ban distribution to minors or limit the amount of nitrous oxide that may be sold without special license.^[*citation needed*] For example, in the state of California, possession for recreational use is prohibited and qualifies as a misdemeanor.^[88]

In New Zealand, the Ministry of Health has warned that nitrous oxide is a prescription medicine, and its sale or possession without a prescription is an offence under the Medicines Act.^[89] This statement would seemingly prohibit all non-medicinal uses of the chemical, though it is implied that only recreational use will be legally targeted.

In India, for general anaesthesia purposes, nitrous oxide is available as Nitrous Oxide IP. India's gas cylinder rules (1985) permit the transfer of gas from one cylinder to another for breathing purposes. This law benefits remote hospitals, which would otherwise suffer as a result of India's geographic immensity. Nitrous Oxide IP is transferred from bulk cylinders (17,000 litres capacity gas) to smaller pin-indexed valve cylinders (1,800 litres of gas), which are then connected to the yoke assembly of Boyle's machines. Because India's Food & Drug Authority (FDA-India) rules state that transferring a drug from one container to another (refilling) is equivalent to manufacturing, anyone found doing so must possess a drug manufacturing license.

See also

- Whipped-cream charger
- Diffusion hypoxia
- Nitrous oxide fuel blend

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FLORIDA DEPARTMENT OF HEALTH – BOARD OF DENTISTRY

	APPLICATION FOR CREDENTIALS REVIEW FOR GRADUATES FROM NON-ACCREDITED DENTAL COLLEGES OR SCHOOLS DENTAL HYGIENE LICENSURE (Client 702)	DO NOT WRITE IN THIS SPACE FOR OFFICE USE ONLY	
1. APPLICANT PROFILE DATA ➤ Please print or type or Application will be returned			
Name:	Last First Middle	Primary Telephone: Area Code ()	Business Telephone: Area Code ()
Mailing Address	Street and No. Apt. No.	Email Address (optional)	
	City State Zip	Place of Birth:	(City, State, Country)
We are required to ask that you furnish the following information as part of your voluntary compliance with Section 2, Uniform Guidelines on Employee Selection Procedure (1978) 43 FR38296 (August 25, 1978). This information is gathered for statistical and reporting purposes only and does not in any way affect your candidacy for licensure.			
RACE: Caucasian African-American Hispanic Asian Native American Other		SEX: Male Female	DATE OF BIRTH / /
2. DENTAL EDUCATION DATA			
Name of Dental School you attended:		Date of Graduation _____	
Degree: DDS DMD BDS (Circle one)			
Location	City	State	Country
3. NATIONAL BOARD EXAMINATION			
Please indicate the examination taken:			
_____ National Board Dental Examination		_____ National Board Dental Hygiene Examination	
Date of Examination _____			
4. APPLICANT AFFIRMATION			
I understand that this review is solely for the purpose of approval to sit for the ADEX dental hygiene licensing examination and does not guarantee licensure as a dental hygienist in the state of Florida or any other state.			
Applicant Signature		Date	

DH-MQA 1253, Rev. 8/13, Rule 64B5-2.0144, FAC

Board of Dentistry
 4052 Bald Cypress Way, Bin C-08 • Tallahassee, Florida 32399-3258
 Phone: (850) 245-4474 • Fax: (850) 921-5389 • <http://www.floridasdentistry.gov>

For Office Use Only

Reviewer Name and Position _____

Date of Review _____

Additional Documentation Required Yes No

Approval for Examination Yes No

Approver Signature _____

**THE FOLLOWING DOCUMENTS ARE REQUIRED FOR REVIEW AND SHOULD BE
MAILED TO THE ADDRESS LISTED**

1. Credentials Evaluation – Subject Analysis Evaluation Report completed by the Educational Credentials Evaluators Inc. (ECE).
2. Proof of completion of dental degree in accordance with s. 466.007(3), Florida Statutes and Rule 64B5-2.0144, Florida Administrative Code (transcripts and copies of dental diploma; all documents must be translated)
3. Proof of successful completion of the National Board Dental Examination (Part I and II) or National Board Dental Hygiene Examination. The documentation must be mailed to our office directly from the American Dental Association.

64B5 - Public Comment.

The Board of _____ invites and encourages all members of the public to provide comment on matters or propositions before the Board or a committee of the Board. The opportunity to provide comment shall be subject to the following:

(1) Members of the public will be given an opportunity to provide comment on subject matters before the Board after an agenda item is introduced at a properly noticed board meeting.

(2) Members of the public shall be limited to ___ minutes to provide comment. This time shall not include time spent by the presenter responding to questions posed by Board members, staff or board counsel. The chair of the Board may extend the time to provide comment if time permits.

(3) Members of the public shall notify board staff in writing of his or her interest to be heard on a proposition or matter before the Board. The notification shall identify the person or entity, indicate support, opposition, or neutrality, and identify who will speak on behalf of a group or faction of persons consisting of ___ or more persons. Any person or entity appearing before the Board may use a pseudonym if he or she do not wish to be identified.

CHAPTER 2013-227

Committee Substitute for
Committee Substitute for Senate Bill No. 50

An act relating to public meetings; creating s. 286.0114, F.S.; defining "board or commission"; requiring that a member of the public be given a reasonable opportunity to be heard by a board or commission before it takes official action on a proposition; providing exceptions; establishing requirements for rules or policies adopted by the board or commission; providing that compliance with the requirements of this section is deemed to have occurred under certain circumstances; providing that a circuit court has jurisdiction to issue an injunction under certain circumstances; authorizing a court to assess reasonable attorney fees in actions filed against a board or commission; providing that an action taken by a board or commission which is found in violation of this section is not void; providing that the act fulfills an important state interest; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Section 286.0114, Florida Statutes, is created to read:

286.0114 Public meetings; reasonable opportunity to be heard; attorney fees.—

(1) For purposes of this section, "board or commission" means a board or commission of any state agency or authority or of any agency or authority of a county, municipal corporation, or political subdivision.

(2) Members of the public shall be given a reasonable opportunity to be heard on a proposition before a board or commission. The opportunity to be heard need not occur at the same meeting at which the board or commission takes official action on the proposition if the opportunity occurs at a meeting that is during the decisionmaking process and is within reasonable proximity in time before the meeting at which the board or commission takes the official action. This section does not prohibit a board or commission from maintaining orderly conduct or proper decorum in a public meeting. The opportunity to be heard is subject to rules or policies adopted by the board or commission, as provided in subsection (4).

(3) The requirements in subsection (2) do not apply to:

(a) An official act that must be taken to deal with an emergency situation affecting the public health, welfare, or safety, if compliance with the requirements would cause an unreasonable delay in the ability of the board or commission to act;

(b) An official act involving no more than a ministerial act, including, but not limited to, approval of minutes and ceremonial proclamations;

(c) A meeting that is exempt from s. 286.011; or

(d) A meeting during which the board or commission is acting in a quasi-judicial capacity. This paragraph does not affect the right of a person to be heard as otherwise provided by law.

(4) Rules or policies of a board or commission which govern the opportunity to be heard are limited to those that:

(a) Provide guidelines regarding the amount of time an individual has to address the board or commission;

(b) Prescribe procedures for allowing representatives of groups or factions on a proposition to address the board or commission, rather than all members of such groups or factions, at meetings in which a large number of individuals wish to be heard;

(c) Prescribe procedures or forms for an individual to use in order to inform the board or commission of a desire to be heard; to indicate his or her support, opposition, or neutrality on a proposition; and to indicate his or her designation of a representative to speak for him or her or his or her group on a proposition if he or she so chooses; or

(d) Designate a specified period of time for public comment.

(5) If a board or commission adopts rules or policies in compliance with this section and follows such rules or policies when providing an opportunity for members of the public to be heard, the board or commission is deemed to be acting in compliance with this section.

(6) A circuit court has jurisdiction to issue an injunction for the purpose of enforcing this section upon the filing of an application for such injunction by a citizen of this state.

(7)(a) Whenever an action is filed against a board or commission to enforce this section, the court shall assess reasonable attorney fees against such board or commission if the court determines that the defendant to such action acted in violation of this section. The court may assess reasonable attorney fees against the individual filing such an action if the court finds that the action was filed in bad faith or was frivolous. This paragraph does not apply to a state attorney or his or her duly authorized assistants or an officer charged with enforcing this section.

(b) Whenever a board or commission appeals a court order that has found the board or commission to have violated this section, and such order is affirmed, the court shall assess reasonable attorney fees for the appeal against such board or commission.

(8) An action taken by a board or commission which is found to be in violation of this section is not void as a result of that violation.

Section 2. The Legislature finds that a proper and legitimate state purpose is served when members of the public have been given a reasonable opportunity to be heard on a proposition before a board or commission of a state agency or authority, or of an agency or authority of a county, municipal corporation, or political subdivision. Therefore, the Legislature determines and declares that this act fulfills an important state interest.

Section 3. This act shall take effect October 1, 2013.

Approved by the Governor June 28, 2013.

Filed in Office Secretary of State June 28, 2013.

DRAFT

BOARD OF DENTISTRY
COUNCIL ON DENTAL HYGIENE
VIA TELEPHONE CONFERENCE CALL
AUGUST 6, 2013
6:00 P.M. EDT

Call In Number (888) 670-3525, Participant Pass Code: 5805370981

CALL TO ORDER/ROLL CALL

Members present:

Cathy Cabanzon, R.D.H, Chair
Dr. Robert Perdomo
Ms. Maria Delacruz, R.D.H
Ms. Irene Stavros, R.D.H.
Dr. Carol Stevens, Advisor

Members absent:

Ms. Elizabeth Behrens, R.D.H.
Tim Pyle, Advisor

Staff present:

David Flynn, Esq., Board Counsel
Sue Foster, Executive Director
Cindy Ritter, Program Administrator

Others present:

Dr. Gesek, Board Chair
Dr. Thomas, Board Member
Dr. Britten, Board Member
Anthony Martino, Board Member
Angela Sissine, Board Member
Jackie Burt-McDonough, FDHA
Helen Douglas, FDHA
Mary Pellitier
Ron Watson, FDA
Don Illka, FDA
Dr. Haddix, University of Florida
Laura Justice
Elvira Chicarelli
Mark, LeeCom

Ms. Cabanzon requested that two letters from St. Petersburg College be added to the agenda and the request was approved by the Council members.

REVIEW OF DECEMBER 17, 2012 MINUTES

The December minutes were reviewed and following review, the following action was taken by the Council:

Motion: by Dr. Perdomo to approve as presented
Second: by Ms. Stavros
Vote: unanimous

ITEMS FOR TOPIC DISCUSSION

Non-sedated patient

1. Email from Alexander Van Ovost, DDS, Indian River State College
2. Letter from Florida Dental Association
3. Letter from Florida Dental Hygiene Association (FDHA)

The FDHA submitted a letter with proposed changes to rules 64B5-14.001, 14.003 and 16.006, FAC.

The Council members received input from associations, board members and other interested parties.

Council on Dental Hygiene Minutes
August 6, 2013
Page 1 of 2

DRAFT

The position of the Florida Dental Association is that the statute s. 466.017, F.S., is clear in that it says "non-sedated patient". There was discussion on whether the use of nitrous oxide is considered a sedative. Following discussion, the Council took the following action:

Motion: by Dr. Perdomo to accept the proposed rule from the FDHA identifying nitrous oxide as an analgesic and not a sedative for the purpose of local anesthetic administration by a certified registered dental hygienist.

Second: by Ms. Stavros

Vote: unanimous

Local Anesthesia Curriculum – Didactic Methods Presentation by Mr. Sid Beitler, Director of E-Learning at Palm Beach State College/E-Learning Policies and Procedures

Letter from Florida Allied Dental Educators

Motion: by Ms. Cabanzon to allow the original motion to stand that was taken at the full board meeting on August 12, 2012.

Second: by Dr. Perdomo

Vote: unanimous

This motion would allow the statute to govern the curriculum, the schools could determine their own breakdown using the statutory guidelines, and the board would not need to promulgate additional rules regarding the local anesthesia coursework for dental hygienists.

FOR YOUR INFORMATION

A copy of s. 466.017, F.S. was included in the agenda materials for reference.

OLD BUSINESS

None

NEW BUSINESS

None

ADJOURNMENT

The meeting was adjourned at 7:06 p.m.

Ritter, Cynthia

From: Rhina Delgado [rhina_delgado@yahoo.com]
Sent: Monday, August 05, 2013 9:21 PM
To: rhina delgado; zzzz Feedback, MQA_Dentistry
Subject: Re: RE: Contact via Florida | Board of Dentistry - Request for a waiver to allow current international dentist working in USA but that has not graduated from a dental school in USA, to present the florida board

Cindy

I know is a process but so you know

Representative Neil combee

Along with his secretary Lory Allen

Congressman Dennis Ross

Have received my letters and Lory informed me on Friday 8/2 that they will be reviewing my request

All I need is for the board to read again, review it, accept my waiver, Consider it and then forward that to the Florida Legislature and Congress for approval.

Thanks

CINDY keep me posted

Sent from Yahoo! Mail on Android

From: MQA_Dentistry@doh.state.fl.us <MQA_Dentistry@doh.state.fl.us>;
To: <Rhina_Delgado@yahoo.com>;
Subject: RE: Contact via Florida | Board of Dentistry - Request for a waiver to allow current international dentist working in USA but that has not graduated from a dental school in USA, to present the florida board
Sent: Mon, Aug 5, 2013 8:00:56 PM

Dear Ms. Delgado,

Thank you for your email. The Board of Dentistry cannot waive a statute. This email, along with others you have sent will be placed in the August agenda for the board's review.

Please let me know if you have any questions.

Cindy

From: rhina Delgado [mailto:Rhina_Delgado@yahoo.com]
Sent: Thursday, July 25, 2013 9:10 PM
To: info@floridasdentistry.gov
Subject: Contact via Florida | Board of Dentistry - Request for a waiver to allow current international dentist working in USA but that has not graduated from a dental school in USA, to present the florida board

From:
rhina Delgado - Rhina_Delgado@yahoo.com

Subject: *Request for a waiver to allow current international dentist working in USA but that has not graduated from a dental school in USA, to present the florida board*

Message Body:

786-385-7888
rhina_delgado@yahoo.com

Send a Reply ->

--

*This mail is sent via the Contact Form on Florida Board of Dentistry
www.FloridasDentistry.gov*

Ritter, Cynthia

From: on behalf of zzzz Feedback, MQA_Dentistry
To: Rhina Delgado
Subject: RE: RE: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca

Dear Ms. Delgado,

Thank you for your email. The Board of Dentistry is unable to waive the statute. I will place this email in the board material for the August 23 meeting.

Sincerely,

Sincerely,

Cindy Ritter, Program Administrator, Board of Dentistry
Department of Health-Medical Quality Assurance
850/245-4463-telephone
850/921-5389-fax
www.floridasdentistry.gov

How am I communicating? Please contact my manager Sue Foster @ sue_foster@doh.state.fl.us.

"There have been changes to the license renewal process. Please visit www.CEAatRenewal.com to learn more."

Learn more about MQA's online services by visiting us at www.flhealthsource.com

Mission: To protect, promote and improve the health of all people in Florida through integrated state, county and community efforts.

Vision: Healthiest State in the Nation

Values: ICARE

Innovation: We search for creative solutions and manage resources wisely.

Collaboration: We use teamwork to achieve common goals and solve problems.

Accountability: We perform with integrity and respect.

Responsiveness: We achieve our mission by serving our customers and engaging our partners.

Excellence: We promote quality outcomes through learning and continuous performance improvement.

Please note: Florida has a very broad public records law. Most written communications to or from state officials regarding state business are public records available to the public and media upon request. Your e-mail communications may therefore be subject to public disclosure.

From: Rhina Delgado [mailto:rhina_delgado@yahoo.com]
Sent: Wednesday, July 31, 2013 1:57 PM
To: zzzz Feedback, MQA_Dentistry; Rhina
Subject: Re: RE: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca

Dear Mrs. Ritter

I would like to thank you, for everything, as you can see this is a serious matter for my family, and I would like to make sure that I am heard and given an opportunity. I want to make sure that my request is clear and they can understand my petition, I

had sent an email via the Florida Dental board website and its basically a letter given the members of the board who Dr. Delgado is, including some of his dental background past and present. I would like for the board to review both emails and see that there is potential to review this case and make a request to our Florida legislature to consider this waiver. Below please review and read what I had sent via email.

My name is Rhina Delgado, I have written several letters requesting a waiver for international dentist currently working in the USA, Such waiver will allow them to present the Florida Dental Board instead of taking two years at a dental school.

My petition is for a waiver:

a waiver to allow international Dentist currently working the in the USA but who have not graduated from a dental school in the USA to take the Florida Dental Board.

I would like to introduce you to

Dr. Carlos Delgado
California Lic# 60094

Graduated from Cayetano Heredia University in Lima, Peru. There he went thru a five year dental program and gained a strong philosophy of GENERAL DENTISTRY, PEDIATRIC DENTISTRY, PERIO, ENDO AND PROSTHETICS.

He came to the USA IN 2001

worked for Town Care Dental for more than 5 years as an Endo assistant. He became Dr. Williams Posner right handed endo Assistant.

Now, Currently working as a Genenral Dentist D.D.S in California, Dr Delgado is proficient in Endo, Perio, Pedro, and Prostho.

Dr. Delgado provides dental care in a digital all ceramic oriented office with a well established hygiene program. He is proficient with cerec and has completed an implant course with Dr. Arun K. Garg in San Francisco.

He has worked for Pacific Dental and currently working with Access Dental. He attends seminar often to be up to speed with the technology.

I don't think it will be fair for him and our family to be hold back for two years when he has this much experiences and it is currently working in the USA.

American Soil!!! with that said, California is no different than Florida and Dentistry is the same in Florida and in California and throughout the USA.

I am arguing the difference of a Dentist who is currently working in the USA versus one that comes to the USA. Indeed, they may have the same experience but those coming straight to the USA may not have the requirements call by the USA versus one that it is currently working in the USA.

Dr. Delgado has demonstrated to be current with the technology in dentistry and has participated in many courses and understands the standard required in dentistry by the dental board.

As many new laws has passed this year, many conquering what was impossible, I am requesting, asking to evaluate this and make this as a new law for international dentist currently working in the USA, and like Dr. Delgado there are many Dentist in

the USA who would like to enjoy that freedom and waiver and work anywhere in states.

I m adding also references that can be inquire thru Town care Dental, Access Dental

Mike Bileca

Dr. Dan Nichols

Dr. Juan Arroyo

Dr. Federico Diez

Dr. William Posner

Dr. Arun K. Garg

Please evaluate my previous email along with this email and Understand that Florida Dental Board needs to reevaluate its law and make changes.

Please inform me via email or call.

Sincerely yours,

Rhina Delgado

rhina_delgado@yahoo.com

786-385-7888

From: Rhina Delgado <rhina_delgado@yahoo.com>

To: "MQA_Dentistry@doh.state.fl.us" <MQA_Dentistry@doh.state.fl.us>

Sent: Wednesday, July 24, 2013 8:06 AM bELL

Subject: Re: RE: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca

Thank you so much Cindy

You have a great day

Thanks

Rhina

Sent from Yahoo! Mail on Android

From: MQA_Dentistry@doh.state.fl.us <MQA_Dentistry@doh.state.fl.us>; **To:** <rhina_delgado@yahoo.com>;

Subject: RE: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca **Sent:** Wed, Jul 24, 2013 1:20:47 PM

Dear Ms. Delgado,

We are unable to provide access to the meeting by telephone, however a voice recording of the meeting will be available on the website, <http://www.floridasdentistry.gov/>, the following Monday or Tuesday. I will also advise you of the board's discussion.

Thanks.

Cindy

From: Rhina Delgado [mailto:rhina_delgado@yahoo.com]

Sent: Tuesday, July 23, 2013 6:23 PM

To: zzzz Feedback, MQA_Dentistry; Rhina

Subject: Re: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca

Dear Ms. Ritter

~~Hope you are had a wonderful day! I thank you so much for forwarding my letter. I~~

would like to know if I will be inform of any decision from my request, or if I could participate from the meeting via phone. I would love to be present but I don't know if I would be able for this meeting. I just want for someone to advice me further since I have not heard anything from my previous letter or request. However, I will continue to persist on my request.

I thank you so much for your help.

Thanks

Rhina Delgado

From: "MQA_Dentistry@doh.state.fl.us" <MQA_Dentistry@doh.state.fl.us>

To: rhina_delgado@yahoo.com

Sent: Tuesday, July 23, 2013 12:36 PM

Subject: RE: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca

Dear Ms. Delgado,

Thank you for your email. I will place the email in the upcoming board agenda. The next meeting is scheduled for August 22-23, 2013 in Orlando.

Please let us know if you have any questions.

Sincerely,

Cindy Ritter, Program Administrator, Board of Dentistry Department of Health-Medical Quality Assurance 850/245-4463-telephone 850/921-5389-fax www.floridasdentistry.gov

How am I communicating? [Please contact my manager Sue Foster @ sue_foster@doh.state.fl.us.](#) **"There have been changes to the license renewal process. Please visit www.CEAtRenewal.com to learn more."** Learn more about MQA's online services by visiting us at www.flhealthsource.com **Mission:** To protect, promote and improve the health of all people in Florida through integrated state, county and community efforts.

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From: Rhina Delgado [mailto:rhina_delgado@yahoo.com]

Sent: Thursday, July 18, 2013 1:21 PM

To: info@floridasdentistry.gov

Subject: Contact via Florida | Board of Dentistry - waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca

From: Rhina Delgado - rhina_delgado@yahoo.com

Subject: *waiver to work as a dentist in Florida for international dentist currently working as a dentist in Ca*

Message Body: Dear Board Members and President Mr. Daniel Gesek

I would like to take this opportunity to write about a situation that it is important to me and my family. I would for the board members to please consider my petition that goes as follow:

My petition is one that I don't know if the state of Florida had considered before. However, if they have or not, I am one more voice and I am here to plead for support and a change. My petition consist of no other but to request a waiver For active Doctor of Dental medicine currently practicing In another state other than FL and finally request freedom of reciprocity for Dentist around the USA.

My Husband Dr. Carlos Delgado Lic# Ca 60094 is a dentist currently working In the state of Ca. We are both from FL, both of our families, and friends lived in FL. We moved to California because the state of FL would Only allow my husband to work if he was to do two years at a school of

dentistry. Although, Dr. Delgado did consider attending, an unexpected offer had us to take a different approach hoping that the Florida Laws will change one day.

The state of California has giving Dr. Delgado the opportunity to practice as a Dentist. He is currently working as a DDS in California. Our dream and hope its to go back home and be closer to our families. The USA has undergone many changes, many that has changed many life's for the good. It is important to mention that Changes are good and are necessary, obviously Dentistry needs to consider changing many of their laws.

Dentistry is the same in Ca and Fl So why not request a waiver and a freedom of reciprocity?

So I have two petitions:

My first and most important request applies to Dr. Delgado...1-Im requesting for a waiver This waiver will work for only active international dentist currently working in the USA but who have not graduated from a dental school in the USA I want to request a waiver in which will allow only international dentist currently working in the USA to be able to take the Florida Dental boards... only those with a legit clean license whom has demonstrated to be of a great access to the USA. I believe that we live in a new era who is full of changes and many updates are need it in the Florida dental board and consider the old rules...

2- I am pleading to have the same rules as medical doctors. In which they can move freely from one state to another. So I want to request freedom of reciprocity for Dentist In which in the near future taking the boards will not be necessary.

If the board consider this will be of a great benefits to FL and many others states. I strongly believe this will help decrease those Dentist from opening illegal offices and will increase having many dental Doctors helping in rural and needy communities. With that said accepting these dentist to work in FL The board can have them not only working anywhere but most importantly in rural areas and help those in needs, as a bonus...I'd worked in the dental field and I know of patients who will commute long distance to see a dentist. Dentistry is as important as any other issues in the world. I feel that being a Dentist shouldn't have any boundaries and they should be free to move from one state to another. Families shouldn't be separate because of a rule it should be a choice. Dentistry its a beautiful field and should be respected. I am in need for your help. I am pleading for your attention I need the boards to re evaluate the rules

My family its in need of a change for freedom...Please help don't ignore my plead I need your guidance and support

Thanks

RHINA DELGADO

RHINA_DELGADO@YAHOO.COM

786 385 7888

Send a Reply ->

--This mail is sent via the Contact Form on Florida Board of Dentistry
<http://floridasdentistry.gov/>

Ritter, Cynthia

From: Rhina Delgado [rhina_delgado@yahoo.com]
Sent: Thursday, March 21, 2013 6:01 PM
To: Ritter, Cynthia; Rhina
Subject: [Spam:***** SpamScore] Freedom of reciprocity for Dentist in FL

Hello Cynthia, thanks for having the time to speak to me, please forward this email to the board.

To whom it may concern;

Dr. Daniel Gesek, D.M.D and the rest of the board members, please take a few moments to read my email, please do not ignore, as you may have plenty of issues to go over, but this one its as important as the others. My name is Rhina Delgado, the wife of Dr. Carlos Delgado D.M.D; I am pleading for freedom on reciprocity in the State of FL for Dentist. We are leaving in a new era of changes, and changes are made with the intetion to break a cycle and to improve for the better.

I will begin by writing that my husband is an international D.D.S. We don't agree with the licensure requirement for internatonal dentist to the fullest, and I explain my reason throughout this email.After going over what will be best for us, we'd decided the challenging decision to move to Ca so he can practice. Dr. Delgado has succesfully passed the western board exam and is actively working in the state of CA. proving that he can practice not only in his country but also here in the United State. Dr. Delgado has earned the respect of the company, the patients and Dr's, not only because of his professionalism, but also by the quality of his work. With said, I believe that the Florida dental board should consider reviewing the Licensure requierement for international dentist actively working in the USA.

I want to argue the fact that not every international Dentist should be label in the category of doing the two years. I believe that the qualification described by the Florida Board could be enhance for those Drs. like Dr Delgado who are actively working within the USA and have a good standing Dental license and a respectful reputation.

As you know being a dentist takes love, passion and dedication, and many dentist who have graduated from accredited university lack that factor and still practice, and that's pretty upsetting. However, what's more upsetting is to find out about the many obstacles given to those Dr's who are honest, and can be of a great access to the system. Nevertheless,Completing two years in a dental program, in which will require to be in debt with the state and have no income for two years its not a smart decision to those who don't fit on that bucket. I strongly encourage the Florida Dental Board to re-evaluate the rules and regulations in the next board meeting. Why not? nothing is impossible! The system can always be change and others methods can be apply, I think if you are an international dentist who have work in another state for more than three years, license in good standing and actively practicing, then those

international Dentist should be granted the opportunity to take the board in the state of FL., because at the end of the day, dentistry is the same in every state.

Furthermore, why the state of FL wants to be different?

I believe Dentist should have the same freedom as Medical Doctors.

I strongly encourage for the board members who are experiences Dental Doctors, and maybe immigrants to strongly supports freedom of movement through licensure by credentials. Nevertheless, with all my respect, the requirement to do the two year program should be only for those dentist who prefer to move directly to Florida and have no experience in this country.

I have a recommendation for the Florida Board of Dentistry to please reconsider the old rules.

My recommendation to the Florida Board of Dentistry is to enact a community service license law which will allows only those international dentist who are actively working in the USA, with a good standing license, no complaints or disciplinary actions to be able to come to Florida to work in a federally qualified health center, and also complete a post-secondary dental training program while working and also getting some income, I strongly believe that will substitute the two years. As you may know, there is a shortage of dentist in rural areas, and this requires a lot of patients to travel considerably long distance to get treatment. The Florida Board should Authorize those dentists to work in rural areas in which will help expand dental services in under-served areas and at the same time, the board will ensure the dentist received FL specific training (Believe not need it but as proof for FL) while avoiding the delay and huge expenses of a two- year education program. Please Dr. Gesek you may have heard this request for many years, we are living in a new era and we need to be heard, we need freedom, we live in a land of a free. Not allowing those Dentist who have work in another state to take the Florida board its discriminatory.

Please re evaluate, take in consideration those who have truly demonstrated to be good dentist. At the end of the day if an international dentist is practicing in the USA is because that Dentist has truly demonstrated to fulfill all of the requirements by working legally as the rule states. I don't believe that the rules should be different, Nevertheless, CA is part of the USA and should NOT be treat it differently because that would be discriminatory. If Medical Doctors do have that freedom why not dentist? So I strongly suggest for the Florida board to advice on this matter on the next board meeting and respond as soon as possible.

Hoping Dr. Gesek that you can re-evaluate this changes, not only will make a huge positive impact but it will also demonstrate that the Florida board cares.

Hope to hear from you and or the board, and maybe have a conversation as well.

Thanks,
Rhina Delgado
786-385-7888

Spam

Ritter, Cynthia

From: Ritter, Cynthia
Sent: Friday, January 11, 2013 2:09 PM
To: 'rhina_delgado@yahoo.com'
Subject: FW: Assignment: 130394

Thank you for your follow-up email. We will place your emails in the agenda materials for the next Board of Dentistry general business meeting scheduled for February 22, 2013 for their information.

Please let us know if you have any questions.

Sincerely,

Cindy Ritter, Program Administrator, Board of Dentistry
Department of Health-Medical Quality Assurance
850/245-4463-telephone
850/921-5389-fax
www.doh.state.fl.us/mqa/dentistry

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From: Rhina Delgado [mailto:rhina_delgado@yahoo.com]
Sent: Wednesday, January 09, 2013 7:06 PM
To: zzzz Feedback, MQA
Subject: Re: Assignment: 130394

Hello Susan,

I wanted to thank you for responding to my email. I will begin by writing that my husband is a D.D.S. in the state of CA. He is very well respected by the patients and Dr's., not only because of his professionalism but also by the quality of his work. I believe that the qualification described below will very well fit to a dentist with lack of experiences and who has never practice in any other state, but when you have a professional dedicated dentist who has

demonstrated his ability to work and can be prove in many ways; then the requiremets should be different.

As you know being a dentist takes love, passion and dedication, and many dentist who have graduated from accredited university lack that factor and still practice, and that's pretty upsetting. However, whats more upsetting is to find out about the many obstacle given to those Dr's who are honest, and can be of a great access to the system. Nevertheless, Completing two year dental program, in which will require to be in debt with the state and have no income for two years its not a smart decision to those who don't fit on that bucket.

I strongly encourage the ADA to re-evaluate the rules and regulations. Why not? nothing is impossible!

The system can always be change and others methods can be apply, I think if you are dentist who have work in another state for more than three years, licensed in good standing and actively practicing, then the Dr should be granted the opportunity to take the board in the state of FL., because at the end of the day, dentistry is the same in every state. Furthermore, why my state, my home town FL wants to be different?

If the American Dental Association (ADA) strongly supports freedom of movement through licensure by credentials in others state what's the difference with FL?

I have a recommendation to those who are opposed to the idea, in which with all my respect, the reason may not be strongly supported and are only taken by the idea of everyone wants to move to Fl and thats really sad. My recommendation suggest to the state of Florida to enact a community service license law which allows dentist with goods standing license with no complaint or disciplinary actions to come to Florida to work in a federally qualified health center, and probably under the supervision of a FL senior Dentist, and also complete a post-secondary dental training program while getting some income. As you may know there is a shortage of dentist in rural areas, and this requires a lot of patients to travel considerably long distance to get treatment. The ADA should Authorize those dentists to work in rural areas in which will help expand dental services in under-served areas and at the same time will ensure the dentist received Fl specific training (Believe not need it but as proof for Fl) while avoiding the delay and huge expense of a two- year education program. Please Susan I know many Drs have pleaded for a change, and we need to heard, we need freedom, we live in a land of a free. Please re evaluate, take in consideration those who have truly demonstrated to be good dentist. Please advice on this matter and respond as you as possible.

I will do everything possible to achieve my goal of having this FL law to be re-evaluated. I would like to hear from you and your president, and maybe have a conversation with both.

Thanks,
Rhina Delgado
786-385-7888

From: "MedicalQualityAssurance@doh.state.fl.us" <MedicalQualityAssurance@doh.state.fl.us>

To: Rhina_delgado@yahoo.com
Sent: Wednesday, January 9, 2013 9:51 AM
Subject: Assignment: 130394

Dear Ms. Delgado,

Thank you for your email to Governor Scott regarding licensure requirements to practice as a dentist in Florida. I have been asked to respond to your inquiry as I serve as the Executive Director of the Board of Dentistry.

At this time, the law requires that graduates of a dental college or school not accredited by the American Dental Association Commission on Dental Accreditation must complete at least 2 consecutive academic years at a full-time supplemental general dentistry program accredited by the American Dental Association Commission on Dental Accreditation. This program must provide didactic and clinical education at the level of a D.D.S. or D.M.D. program accredited by the American Dental Association Commission on Dental Accreditation. National reciprocity or licensure by credentials is not available.

Again, thank you for sharing your concerns and suggestions. Please contact my office if you have any questions.

Sincerely,

Susan J. Foster, Executive Director
Department of Health-Medical Quality Assurance
850/245-4474-telephone
850/921-5389-fax

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Please consider the environment before printing this e-mail.

From: DOH COMMUNICATIONS OFFICE
Sent: Friday, August 09, 2013 1:33 PM
Subject: DOH Release: JOINT INVESTIGATION LEADS TO ARRESTS IN MARTIN COUNTY

FOR IMMEDIATE RELEASE
August 9, 2013

Contact: Ashley Carr
(850) 245-4111

JOINT INVESTIGATION LEADS TO ARRESTS IN MARTIN COUNTY

TALLAHASSEE— The Florida Department of Health's (DOH) West Palm Beach-Unlicensed Activity (ULA) Unit announced the arrest of Lynnette Blake of the Back to Eden Wellness Center in Stuart. A joint investigation with the Martin County Sheriff's Office (MCSO) arrested Blake on twelve counts: five for the unlicensed practice of a health care profession, five for the unlicensed practice of naturopathy, and two counts for the unlicensed practice of dentistry. Each of these is a third degree felony and punishable by up to five years in prison. Additionally, DOH issued cease and desist orders to Blake for the unlicensed practice of medicine, naturopathy and dentistry. DOH also issued Blake three uniform unlicensed activity citations.

On August 6th, a search warrant was executed by MCSO for Back to Eden Wellness Center, where Blake told members of DOH and MCSO that she was a naturopathy doctor practicing naturopathic medicine. Blake claimed that as a member of the Pastoral Medical Association, she was exempt from Florida laws requiring licensing for health care professions. Several arriving patients were also interviewed. Two of the patients stated Blake had performed dental services on them, including placing teeth bleaching substances into their mouths.

The joint operation began after several victims filed complaints with DOH alleging Blake practiced health care professions without a license. One such complaint claimed that while under Blake's supervision, a clinic employee took numerous vials of blood, causing the patient to nearly faint. The patient requested ambulatory transfer to an emergency room, at which time Blake and the employee failed to contact medical services and instead gave the patient water and kiwi fruit from their own lunch bags. During the course of the investigation, multiple undercover operations were conducted by DOH and MCSO involving an undercover ULA investigator seeking treatment at the facility.

DOH has several resources to combat unlicensed activity. Consumers are encouraged to use the DOH web site, www.flhealthsource.com, to view licensing information for health care practitioners. Complaints may be filed anonymously by completing and mailing the complaint form on the DOH site, or by calling 1-877-HALT-ULA.

The Florida Department of Health's (DOH) unlicensed activity program protects Florida residents and visitors from the potentially serious and dangerous consequences of receiving health care services from an unlicensed person. The

Division of Medical Quality Assurance (MQA) investigates and refers for prosecution all unlicensed health care activity complaints and allegations. The unlicensed activity unit works in conjunction with law enforcement and the state attorney's offices to prosecute individuals practicing without a license. In many instances, unlicensed activity is a felony level criminal offense. More importantly, receiving health care from unlicensed people is dangerous and could result in further injury, disease or even death.

DOH protects, promotes and improves the health of all people in Florida through integrated state, county and community efforts.

Follow us on Twitter at [@HealthyFla](#) and on Facebook. For news story ideas, interviews, videos and more from DOH Communications visit the DOH Online Newsroom.

Stuart wellness center owner accused of running facility without a license

Posted: 9:48 a.m. Wednesday, Aug. 7, 2013

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Blake

By Alexandra Seltzer - Palm Beach Post Staff Writer

The owner of a Stuart wellness center is in the Martin County Jail today, accused of running the facility without a license, Martin County officials said.

Lynnette R. Blake, 37, was arrested Tuesday on charges of practicing as a health practitioner without a license, unlicensed practice of naturopathy, and unlicensed practice of dentistry.

The Martin County Sheriff's Office and the Martin County Health Department executed a search warrant at Back to Eden Wellness Center at 200 Southwest Albany Avenue and seized boxes of medical records and equipment, and files.

The facility was closed down, a sheriff's spokeswoman said.

Twitter: alexseltzer



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Arrests shed light on practice of unlicensed dentistry in South Florida

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CAPTIONS

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By Tonya Alanez, Sun Sentinel

5:13 a.m. EDT, August 5, 2013

Unemployed, lacking dental insurance and fighting cancer, a **Hallandale Beach** woman turned to an unlicensed dentist who performed oral surgery in her trailer home and accepted cash payments in installments.

As a result, Mirta Pavon suffered a severe infection and loss of a molar. She had to undergo additional surgery to correct the problems created by the house-call dentist.

"My experience is terrible," Pavon, 60, said. "I didn't have dental insurance, and I needed to fix my teeth."

Unlicensed dentists fill **cavities**, fit crowns and perform **root canals** in their homes, laundry rooms and warehouse bays, and — as in Pavon's case — sometimes they even make house calls. Most say they have been dentists in their home countries, such as Brazil, Colombia and Peru. And they frequently turn to the Sunshine State's immigrant community for their clientele.

Broward, Palm Beach and **Miami-Dade** counties account for more than one-third of the more than 200 unlicensed dentistry complaints reported to state health officials during the past four years.

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Officials say the chance to save money could cost patients more in the long run. Aside from infection or permanent disfigurement, patients also risk possible death from improper use of anesthesia.

Pavon's dentist, Jorge Romero-Paredes, of Hollywood, was arrested in June 2012 and exactly one year later on June 6, 2013, reached a plea deal that placed him on 18 months' probation and required that he repay Pavon \$1,000 in monthly \$75 payments.

More recently, two other cases have brought renewed attention to the practice of unlicensed dentistry in South Florida: The July 18 arrest of a Boca Raton man who claimed 6,000 patients and the June 18 arrest of a woman practicing unlicensed dentistry in a Davie home — nine months after her ex-husband was busted on the same charge in a Davie warehouse.

The state Department of Health is in the early stages of developing a media campaign — posters, bus ads and public-service announcements — to heighten awareness about the dangers of treatment by unlicensed dentists, doctors and nurses.

"We'd like to receive more complaints, especially these serious ones reporting unlicensed dentistry or medicine," said Susan Love, chief of enforcement for Florida Department of Health's medical quality assurance bureau.

Statewide, officials say, there's been an increase from 39 to 64 complaints of unlicensed dentistry from fiscal year 2011-12 to 2012-13, Love said.

"It's up significantly from last year, possibly due to the economy, people looking for less expensive health care is a possibility," Love said. "It could even be a cultural thing, where somebody may not speak English and might feel more comfortable going to somebody who speaks Spanish."

Cost was the driving factor in Pavon's decision to hire an unlicensed dentist. Because of health problems, she gave up working about six years ago as a live-in nanny and housekeeper and now makes ends meet with a \$300 monthly disability check from her native Argentina.

"I am a poor lady," Pavon said. "You see, I am living here in a trailer park ... When I was looking for this guy for a dentist, I had cancer. I was so sick. I had a big tumor on my neck."

To come up with the money to fix her teeth, Pavon said she cleaned the backyards of her Canadian snowbird neighbors, saving until she had enough.

Pavon said she knew Romero-Paredes was unlicensed, but went to him on the recommendation of friends. After six house calls, Pavon was debilitated by a massive infection, she said.

Romero-Paredes had installed posts and crowns of a type normally used for temporary crowns and primarily used for children, a police report said.

Romero-Paredes, 58, was a licensed dentist in Peru and worked as a dental technician in South Florida, said his defense attorney, Marc Zee.

"You do see a lot of it down here," Zee said. "People who were licensed in South American countries, their professional licenses don't transfer over when they come here, so they just kind of open up shop."

And their patients are usually immigrants, as well, Zee said.

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Arrests shed light on practice of unlicensed dentistry in South Florida

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"Most of the clientele, generally, from what I've seen, are from another country, too," Zee said. "I guess word spreads amongst the community."

Such was the case with Ubaldo Bittencourt, whose "makeshift dental office" was crammed into the laundry room of his Boca Raton bungalow, deputies say.

Bittencourt, 62, who boasted 6,000 patients and says he was a dentist in Brazil, would care only for fellow Brazilians who spoke Portuguese, according to a Palm Beach sheriff's arrest report.

Bittencourt was arrested July 18 after a Portuguese-speaking undercover detective posed as a patient. Bittencourt allegedly told the detective that he could fit her with a dental bridge for \$2,500 cash.

In a separate case in Davie, John Collazos specialized in exploiting the fears of his illegal-immigrant clientele, police say.

Davie police say that next door to a pesticide company, upholsterer and tire shop, Collazos, 49, ran a phony dental practice out of a bay in a warehouse district on State Road 7.

"For lack of a better word, he was preying on people whose immigration status was questionable and had nowhere else to go," Capt. Dale Engle, of the Davie Police Department, said when Collazos was arrested in September. "He was exploiting that to his advantage."

Although Collazos is originally from Colombia it is unclear if he was licensed to practice dentistry there.

Collazos' ex-wife, Luz Angela Maria Rios-Ossa, 49, was charged June 18 with running a bogus dental office out of a home on Southwest 49th Street in Davie, records show.

The patient who reported Rios-Ossa told police that Rios-Ossa donned rubber gloves and used a dental pick and hand-held mirror and informed her that she had cavities in need of fillings, a metal cap that needed to be replaced and a gap between her front teeth that ought to be closed, a police report said.

When Rios-Ossa began to prepare a syringe with anesthesia, the patient got scared and left, the report said.

The unlicensed practice of dentistry is a third-degree felony, punishable by up to five years in prison.

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"Let us investigate," Love said. "We are able to issue a cease-and-desist agreement and a citation and turn it over to law enforcement so that it doesn't happen to anybody else."

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Check your dentists' credentials

To ensure your dentist is licensed, health officials suggest visiting FLHealthsource.com

The state Department of Health also operates a hotline, 1-877-425-8852, which anybody can call to report suspected unlicensed health-care practices.

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By [kathymfoster](#) July 29, 2013

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UNLICENSED ACTIVITY INVESTIGATIONS LEAD TO SOUTH FLORIDA ARRESTS

TALLAHASSEE— The Florida Department of Health's (DOH) West Palm Beach and Miami Unlicensed Activity Units conducted investigations in partnership with local law enforcement that have resulted in arrests for the unlicensed practice of dentistry. Rosa Maldonado of Miami was arrested on July 3, 2013 and Ubaldo Bittencourt of Boca Raton was arrested July 18, 2013. The unlicensed practice of a health care profession is a third degree felony punishable by up to five years in prison.

"Unlicensed practice of a health care profession reflects a complete disregard for the wellbeing and safety of Florida's families," said Dr. John Armstrong, State Surgeon General and Secretary of Health. "These arrests show our resolve to identify and stop unlicensed activity, so that the people of Florida are protected."

An investigation into the activities of Rosa Maldonado, part owner and employee at Risa Dental Center, was initiated after North Miami Beach Police Department received information from a colleague who discovered she was practicing dentistry when he left the office. On July 3, 2013, a joint operation resulted in the arrest of Maldonado on three counts of the practice of unlicensed dentistry.

The joint DOH and Palm Beach Sheriff's Office Multi-Agency Diversion Taskforce operation that led to the arrest of Ubaldo Bittencourt was prompted by an anonymous source alleging Bittencourt offered dental services from his Boca Raton home. An undercover visit was conducted in which Bittencourt performed an oral dental examination and offered to perform a dental procedure for a monetary fee. His residence had a dental chair, medical records, a dental x-ray machine and numerous medications.

DOH has several resources to combat unlicensed activity:

Consumers are encouraged to use DOH's Web site www.flhealthsource.com where they can conveniently view the license information of their health care practitioner.

Complaints may be filed anonymously by completing and mailing the complaint form on the DOH Web site or calling 1-877-HALT-ULA or 1-888-419-3456.

The unlicensed activity program protects Florida residents and visitors from the potentially dangerous consequences of receiving health care services from an unlicensed person. The Division of Medical Quality Assurance (MQA) investigates and refers for prosecution all unlicensed health care activity complaints and allegations. The unlicensed activity unit works in conjunction with law enforcement and the state attorney's offices to prosecute individuals practicing without a license. Receiving health care from unlicensed people is dangerous and could result in further injury, disease or even death.

The Florida Department of Health works to protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts.

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