Hi Nora 30.2

Enhancing Patient Safety in Various Sedation Techniques

5° EBSO

ENCONTRO BRASILEIRO DE SEDAÇÃO EM ODONTOLOGIA

Jason Brady, DMD
Dentist Anesthesiologist

October 24, 2024

SOBRASO Sociedade Brasileira de Anestesia e Sedação em Odontologia

I have not received compensation or have no financial interest in any equipment, materials or medications discussed within this lecture.

About me

Jason Brady, DMD

Dentist Anesthesiologist

President, International Federation of Dental Anesthesiology Societies (IFDAS)

Vice-President, American Dental Society of Anesthesiology (ADSA)

Past President, American Dental Board of Anesthesiology (ADBA)

Board Member and Advisor
- Anesthesia regulation updates in Mississippi and Arizona

Developer of Ten Minutes Saves a Life! App
- Emergency response app used by dental professionals globally

Enhancing Patient Safety in Various Sedation Techniques

Overview

1. Levels of Sedation
   - Minimal
   - Moderate
   - Deep
   - General Anesthesia

2. Provider Models
   - Operator-Anesthetist (OA)
   - Separate Sedation Provider

3. How do we enhance safety in each model?

4. A U.S. perspective on increasing safety

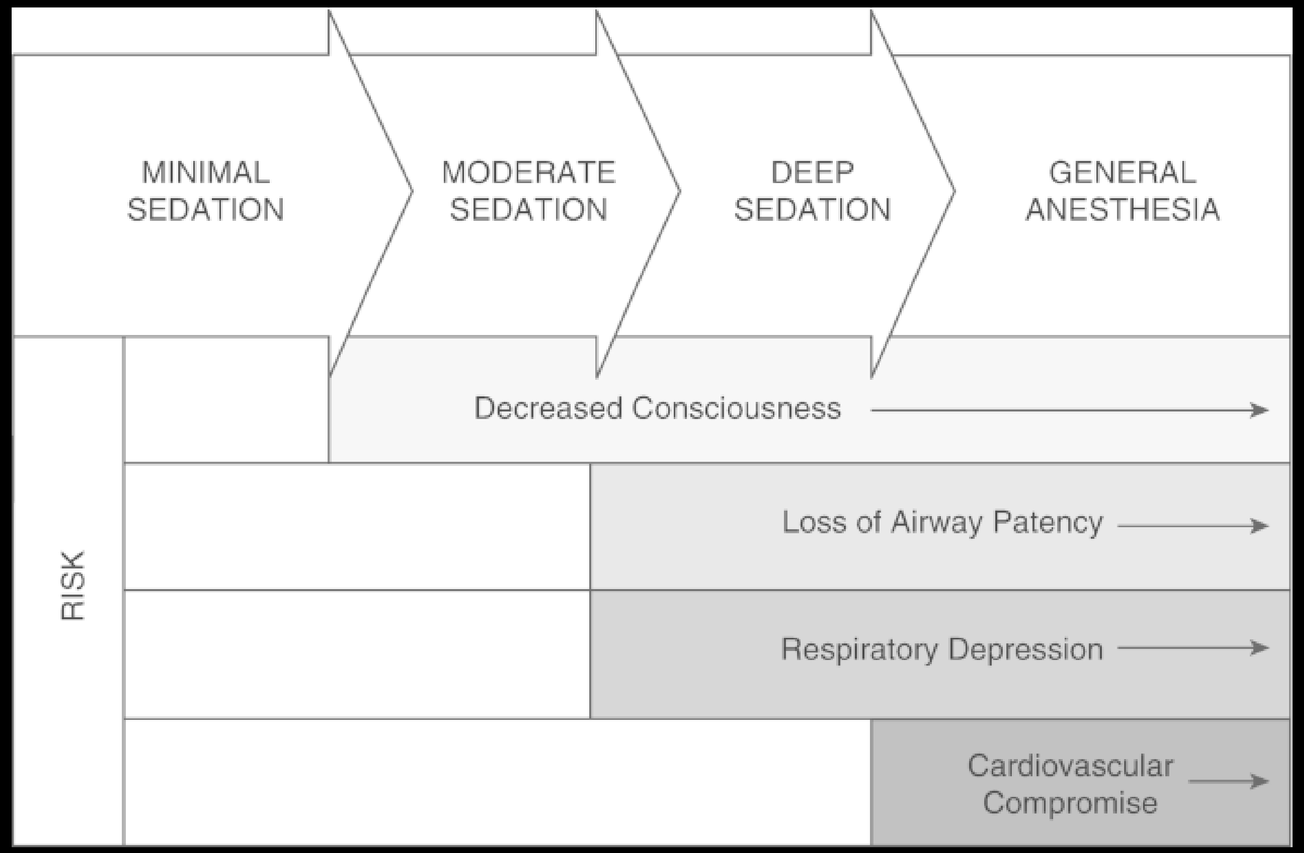
5. Enhancing sedation safety in Brazil

Levels of Sedation

Minimal, Moderate, Deep, and General Anesthesia

Sedation is a continuum -

Transition between
sedation levels
is fluid



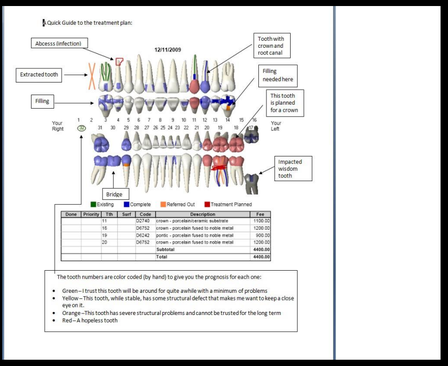
Levels of Sedation

SAFELY Choosing the Correct Level of Sedation

Consider:

- Patient Anxiety Level
- Complexity of Procedure
- * Medical History *

Start low and move up if needed



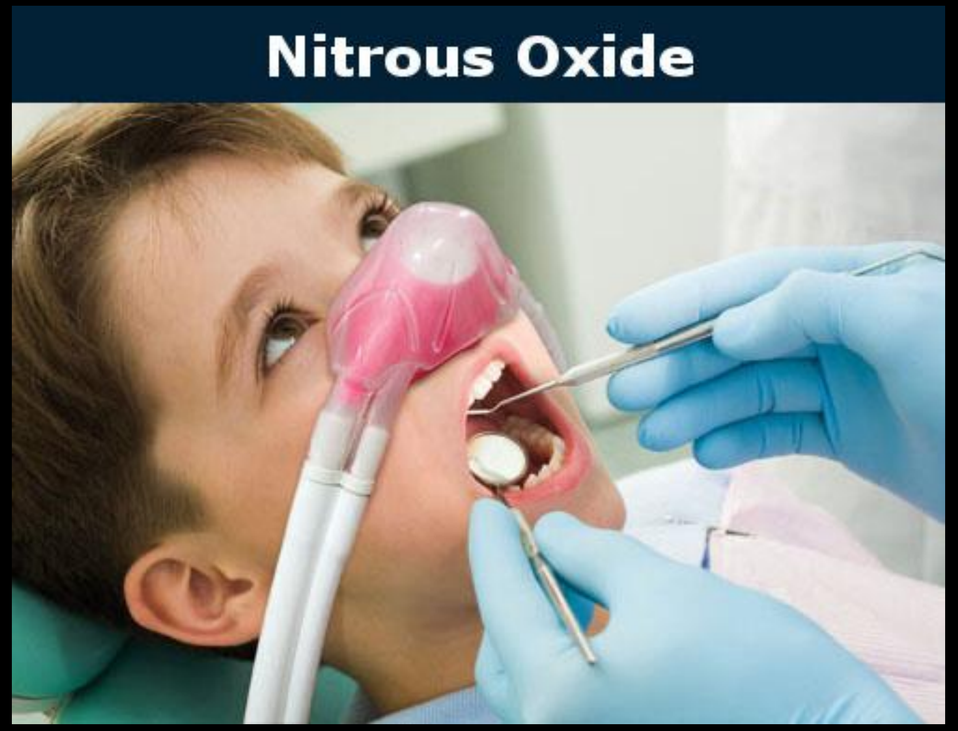
Levels of Sedation

Minimal Sedation

Patient feels relaxed and calm, but remains fully awake

Techniques:
- Nitrous Oxide
- Oral Sedatives
- Low-dose IV Sedatives

How to Increase Safety:
- Titrate carefully
- Follow recommended guidelines
- Avoid combined sedation
- Continually observe
- Recovery, discharge, and after-care



Levels of Sedation

Moderate Sedation: "Conscious Sedation"

Patient is awake, but feels deeply relaxed and drowsy
May need physical/verbal stimulation

Techniques:

- Benzodiazepines - Midazolam
- Opioids - Fentanyl
- IV / Oral / Inhalation / IM

How to Increase Safety:

- AIRWAY!
- Observe level of sedation
- Vital signs
- Require longer recovery

EXPERIENCE

MATTERS

Levels of Sedation

Deep Sedation

Patient is almost unconscious
Can respond to repeated/painful stimulation

Techniques:
- IV / Propofol

How to Increase Safety:
- AIRWAY!
- Oxygen / Ventilation
- Monitor the heart
- Advanced monitors

EXPERIENCE

MATTERS

Levels of Sedation

General Anesthesia

Patient is completely unconscious & unresponsive
Unable to maintain their airway or protective reflexes
Does not respond to painful stimulation

Complete loss of:

- Awareness
- Memory
- Muscle tone

Techniques:

- IV
- Inhalational
- Combination

EXPERIENCE

MATTERS

Levels of Sedation

General Anesthesia

How to Increase Safety:

- Highly trained providers only
- Anesthesia team
- Advance Airway capability
- IV access
- Advanced monitoring

EXPERIENCE

MATTERS

Levels of Sedation

Managing the Continuum

Signs the patient is getting too deeply sedated:

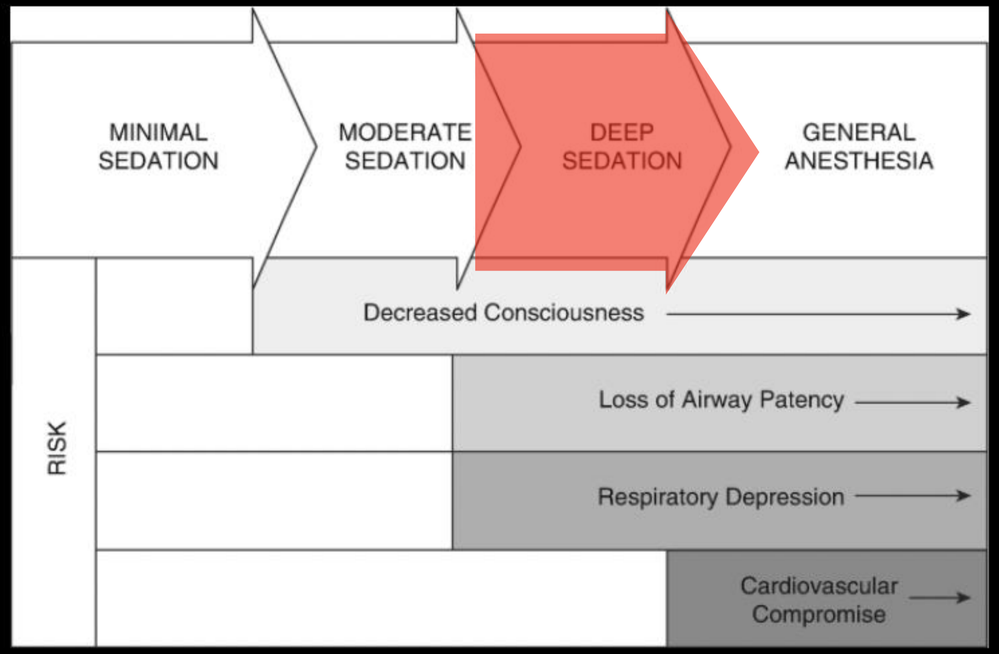
- Loss of responsiveness to verbal commands
- Minimal or no response to painful stimulation
- Airway compromise
    - Snoring, gurgling, silence
    - Inability to cough, swallow, or gag
- Decreased respiratory effort

Decrease in:

Oxygen saturation

Heart rate

Blood pressure



Levels of Sedation

Immediate Steps to Correct Over-Sedation

Stop or reduce sedative
Stimulate the patient
Reposition the airway
- Head tilt chin lift
- Jaw thrust maneuver
- Suction if needed

Oxygen or ventilation

Administer reversal agents if appropriate
- Naloxone - reverses opioid effects
- Flumazenil - for benzodiazepine overdose

Call for additional help

Levels of Sedation

Preventing Over-Sedation

- Titrate drugs carefully
- Understand patient variability
- Use advanced monitoring to detect changes early

Dental Anesthesia Provider Models

Definitions

Dentist Anesthesiologist:

A separate anesthesia provider administers general anesthesia, the dentist performs the dental procedure

Operator-Anesthetist:

The same dentist or oral surgeon performs both the dental procedure and administers deep sedation or general anesthesia

Operator-Sedationist:

The dentist performs the dental procedure and administers minimal or moderate sedation

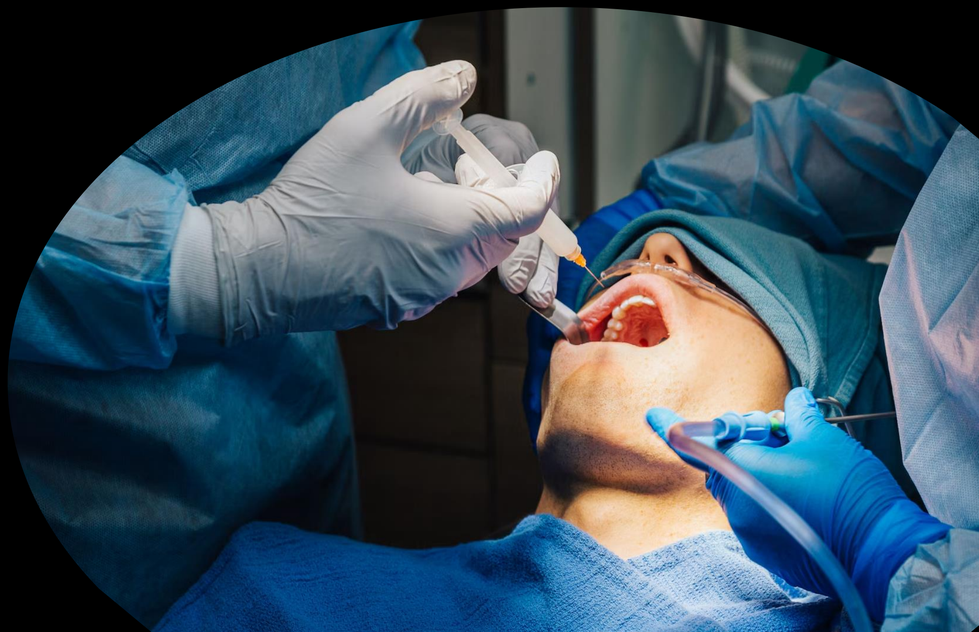
Anesthesia Team:

A trained anesthesia team manages the anesthesia while the dentist or oral surgeon performs the dental procedure

Anesthesia Provider Models

Operator Anesthetist vs. Separate Anesthesia Provider

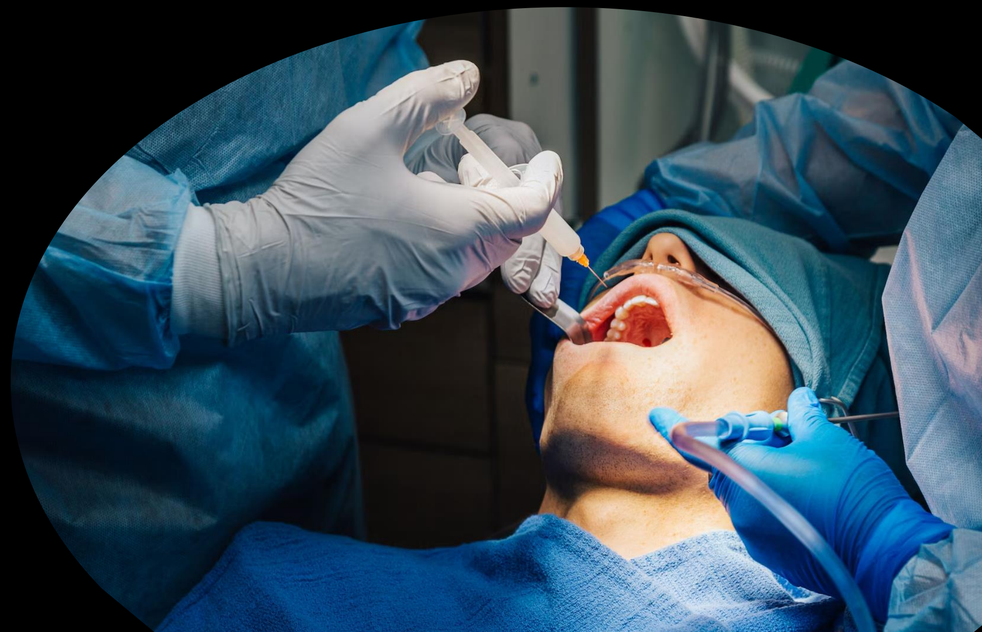
Pros:	Cons:
Lower cost	Higher risk??
Fewer personnel required	Divided attention
Efficient for smaller practices	Monitoring, especially in complex cases
Access to care	



Anesthesia Provider Models

Operator Anesthetist vs. Separate Anesthesia Provider

Pros:	Cons:
Relative risk reduction??	Increased costs
Focus monitoring sedation levels	Logistical complexity
Additional response to emergencies	Decreased access to care



Enhancing Safety in Each Provider Model

Dentist Anesthesiologist

Advantages:

- Enhanced patient safety
- The anesthesia provider focuses only on the anesthesia
- The dentist focuses only on the dentistry

Limitations:

- Possible higher costs
- Scheduling logistics
- Availability
- Unfamiliarity with environment

How to Increase Safety:

- Team training & communication

Enhancing Safety in Each Provider Model

Operator-Anesthetist

Advantages

- Less expensive for the patient
- More convenient for the patient
- More control for the provider

Disadvantages:

- Increased risk!
    - No CONTINUOUS monitoring of patient vital signs
    - Missing early signs
    - Longer response time

How to Increase Safety:

- Switch to Operator-Sedationist or Anesthesia Team model

Enhancing Safety in Each Provider Model

Operator-Sedationist

Advantages:

- Lower cost
- Often effective for managing mild anxiety

Disadvantages:

- Requires the provider to do sedation and procedure
- May not be effective in all patients

How to Increase Safety:

- Limit sedation to minimal or moderate
- Proper training for additional staff members

Enhancing Safety in Each Provider Model

Anesthesia Team

Advantages:

- Safer than operator-anesthetist model
- Anesthesia team focuses on monitoring patient vital signs
- Dentist can focus on procedure

Disadvantages:

- Higher cost
- Requires additional training

How to Increase Safety:

- Team training and communication

The U.S. Approach to Sedation and Anesthesia

How We Enhance Patient Safety

1. State Dental Boards
2. Educational Standards
3. Professional Organizations
4. Guidelines and Standards
5. Emergency Preparedness
6. Data Reporting

The U.S. Approach to Safety in Sedation and Anesthesia

State Dental Boards

- State boards regulate the administration of sedation & anesthesia in dental practices

- Perform office inspections and safety assessments

- Issue sedation permits
  - Minimal
  - Moderate
  - Deep Sedation/General Anesthesia
  - Facility

- Revoke permits as needed

- State requirements can vary based on needs of the state

The U.S. Approach to Safety in Sedation and Anesthesia

Educational Standards

Goal: To ensure Competency in anesthesia techniques

The Commission on Dental Accreditation (CODA)

Sets the regulations for:

- General Anesthesia Residency Programs
- Oral Surgery Residency Programs

To obtain a General Anesthesia Permit, a dentist must complete a CODA accredited residency program

The U.S. Approach to Safety in Sedation and Anesthesia

Educational Standards

CODA Standards:

1. Institutional and Program Effectiveness
2. Educational Program
3. Faculty and Staff
4. Educational Support Services
5. Facilities and Resources
6. Research

AMBULATORY GENERAL ANESTHESIA AND DEEP SEDATION

4-9 The off-service rotation in anesthesia must be supplemented by longitudinal and progressive experience throughout the training program in all aspects of pain and anxiety control. The clinical practice of ambulatory oral and maxillofacial surgery requires familiarity, experience and capability in ambulatory techniques of general anesthesia. The outpatient surgery experience must ensure adequate training in both general anesthesia and deep sedation for oral and maxillofacial surgery procedures on adult and pediatric patients. This includes competence in managing the airway.

4-9.1 For each authorized final year student/resident position, students/residents must administer general anesthesia/deep sedation to a minimum of 100 ambulatory oral and maxillofacial surgery patients per year, a substantial number of which must be general anesthetics.

The U.S. Approach to Safety in Sedation and Anesthesia

Educational Standards

CODA Standards for Oral and Maxillofacial Surgery

Comprehensive Anesthesia Training
- ≥ four years of full-time study
- 20 weeks dedicated to anesthesia rotations
  - Minimum of 300 anesthesia cases
  - 50 cases involving patients under the age of 13

Patient Safety and Emergency Management
- Must demonstrate their ability to manage anesthesia-related emergencies

Commission on Dental Accreditation (CODA). Accreditation Standards for Advanced Specialty Education Programs in Oral and Maxillofacial Surgery. 2023. Available at: ADA.org

The U.S. Approach to Safety in Sedation and Anesthesia

Educational Standards

CODA Standards for Dental Anesthesiology

Comprehensive Anesthesia Training
- Minimum of 36 months
- 300 intubated general anesthetics
  - 50 nasal intubations and 25 advanced airway techniques
- 125 pediatric cases for children under 7
- 75 cases for patients with special needs

Hospital Anesthesia Experience
- 12 months in a hospital-based anesthesia service

Outpatient Anesthesia Experience
- 100 cases must be completed in outpatient anesthesia

Commission on Dental Accreditation (CODA). Accreditation Standards for Advanced Specialty Education Programs in Dental Anesthesiology. 2023. Available at: ADA.org

The U.S. Approach to Safety in Sedation and Anesthesia

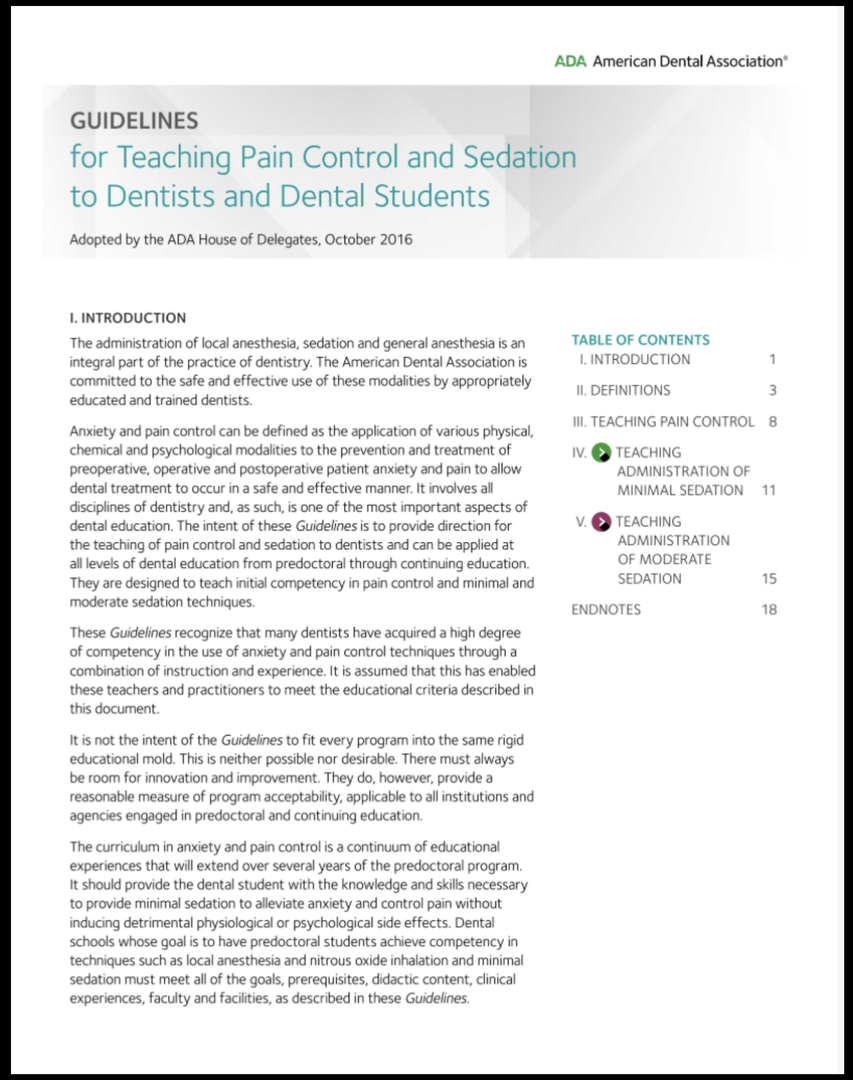
Educational Standards

Guidelines for Moderate Sedation Training Programs

- American Dental Association (ADA)
  - Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students

- State Dental Boards
  - Minimum standards
    - Didactic hours
    - Clinical experience
    - Emergency management

To obtain a Moderate Sedation Permit, dentists must attend a state-approved course



ADA American Dental Association®

GUIDELINES

for Teaching Pain Control and Sedation to Dentists and Dental Students

Adopted by the ADA House of Delegates, October 2016

I. INTRODUCTION

The administration of local anesthesia, sedation and general anesthesia is an integral part of the practice of dentistry. The American Dental Association is committed to the safe and effective use of these modalities by appropriately educated and trained dentists.

Anxiety and pain control can be defined as the application of various physical, chemical and psychological modalities to the prevention and treatment of preoperative, operative and postoperative patient anxiety and pain to allow dental treatment to occur in a safe and effective manner. It involves all disciplines of dentistry and, as such, is one of the most important aspects of dental education. The intent of these *Guidelines* is to provide direction for the teaching of pain control and sedation to dentists and can be applied at all levels of dental education from predoctoral through continuing education. They are designed to teach initial competency in pain control and minimal and moderate sedation techniques.

These *Guidelines* recognize that many dentists have acquired a high degree of competency in the use of anxiety and pain control techniques through a combination of instruction and experience. It is assumed that this has enabled these teachers and practitioners to meet the educational criteria described in this document.

It is not the intent of the *Guidelines* to fit every program into the same rigid educational mold. This is neither possible nor desirable. There must always be room for innovation and improvement. They do, however, provide a reasonable measure of program acceptability, applicable to all institutions and agencies engaged in predoctoral and continuing education.

The curriculum in anxiety and pain control is a continuum of educational experiences that will extend over several years of the predoctoral program. It should provide the dental student with the knowledge and skills necessary to provide minimal sedation to alleviate anxiety and control pain without inducing detrimental physiological or psychological side effects. Dental schools whose goal is to have predoctoral students achieve competency in techniques such as local anesthesia and nitrous oxide inhalation and minimal sedation must meet all of the goals, prerequisites, didactic content, clinical experiences, faculty and facilities, as described in these *Guidelines*.

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The U.S. Approach to Safety in Sedation and Anesthesia

Educational Standards

ADA Guidelines for Moderate Sedation Training:

- 60 hours of didactic
  - Pharmacology, physiology, and patient assessment
- 20 supervised clinical cases involving moderate sedation
- Life support certification (BLS/ACLS)

20

American Dental Association (ADA). *Guidelines for the Use of Sedation and General Anesthesia by Dentists*. 2016. Available at: ADA.org

The U.S. Approach to Safety in Sedation and Anesthesia

Educational Standards

Staff Training and Certification Requirements:

- Basic Life Support (BLS)
  Required for ALL staff members

- Advanced Cardiac Life Support (ACLS)
  - Required for moderate sedation or deeper

- Pediatric Advanced Life Support (PALS)
  - Required when working with pediatric patients

- Emergency Preparedness Training

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Professional Organizations

BENEFITS:

- Policies and Standards
- Education
- Politics
- Guidelines

ADA American Dental Association®

American Society of Anesthesiologists™

ASDA

THE AMERICAN ACADEMY OF PEDIATRICS

AMERICAN ACADEMY OF PEDIATRIC DENTISTRY

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

Essential Guidelines:

ADA
- Guidelines for the Use of Sedation and General Anesthesia by Dentists (2016)
  - Established in 1971
  - Set the standards for safe sedation by dentists

AAP-AAPD
- Guidelines for Monitoring and Management of Pediatric Patients Before, During, and After Sedation for Diagnostic and Therapeutic Procedur (2016)

AAPD
- Use of Anesthesia Providers in the Administration of Office-based Deep Sedation/General Anesthesia to the Pediatric Dental Patient (2018)
- Policy for Selecting Anesthesia Providers for the Delivery of Office-based Deep Sedation/General Anesthesia (2018)

ASA
- Statement on Sedation & Anesthesia Administration in Dental Office-Based Settings (2017)
- Standards for Basic Anesthetic Monitoring (2015)
- Guidelines for Office-Based Anesthesia (2014)

ASDA
- Parameters of Care (2018)

AAMOS
- Office Anesthesia Evaluation Manual: 8th Edition

ASA, AAMOS, ACR, ADA, ASDA, SIR
- Practice Guidelines for Moderate Procedural Sedation and Analgesia (2018)

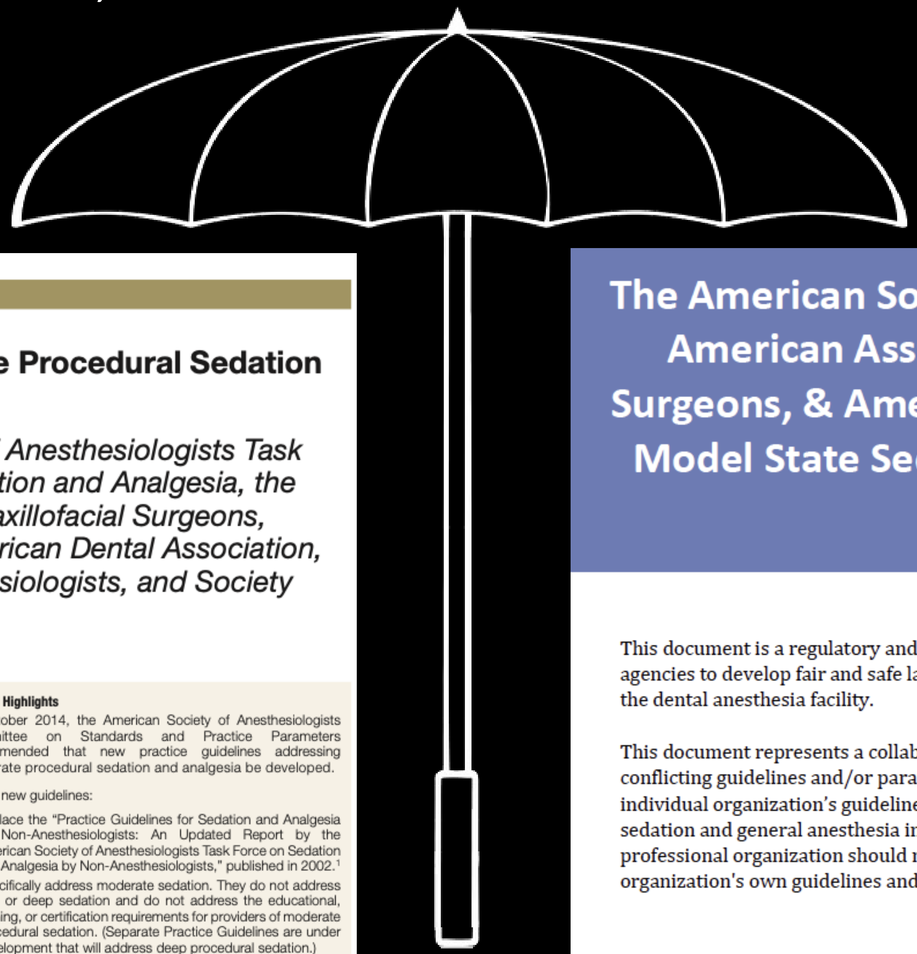
Scan to Download

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

ASA, AAMOS, ACR, ADA, ASDA, SIR

Guidelines, Policies, and Parameters of Care



PRACTICE PARAMETERS

Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018

*A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology**

PRACTICE guidelines are systematically developed recommendations that assist the practitioner and patient in making decisions about health care. These recommendations may be adopted, modified, or rejected according to clinical needs and constraints and are not intended to replace local institutional policies. In addition, these practice guidelines are not intended as standards or absolute requirements, and their use cannot guarantee any specific outcome. Practice guidelines are subject to revision as warranted by the evolution of medical knowledge, technology, and practice. They provide basic recommendations that are supported by a synthesis and analysis of the current literature, expert and practitioner opinion, open forum commentary, and clinical feasibility data.

This document replaces the "Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists: An Updated Report by the American Society of Anesthesiologists (ASA) Task Force on Sedation and Analgesia by Non-Anesthesiologists," adopted in 2001 and published in 2002.[1]

Update Highlights

In October 2014, the American Society of Anesthesiologists Committee on Standards and Practice Parameters recommended that new practice guidelines addressing moderate procedural sedation and analgesia be developed.

These new guidelines:

- Replace the "Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists: An Updated Report by the American Society of Anesthesiologists Task Force on Sedation and Analgesia by Non-Anesthesiologists," published in 2002.[1]
- Specifically address moderate sedation. They do not address mild or deep sedation and do not address the educational, training, or certification requirements for providers of moderate procedural sedation. (Separate Practice Guidelines are under development that will address deep procedural sedation.)
- Differ from previous guidelines in that they were developed by a multidisciplinary task force of physicians from several medical and dental specialty organizations with the intent of specifically addressing moderate procedural sedation provided by any medical specialty in any location.

New recommendations include:

- Patient evaluation and preparation.
- Continual monitoring of ventilatory function with capnography to supplement standard monitoring by observation and pulse

Methodology

Definition of Procedural Moderate Sedation and Analgesia

The American Society of Dentist Anesthesiologists, American Association of Oral & Maxillofacial Surgeons, & American Academy of Periodontology Model State Sedation/General Anesthesia Rules

This document is a regulatory and rules template to be used as a framework for legislators and regulatory agencies to develop fair and safe laws to provide oversight to sedation and general anesthesia being provided in the dental anesthesia facility.

This document represents a collaboration amongst multiple organizations with different and sometimes conflicting guidelines and/or parameters of care. While portions of this legislative template may differ from an individual organization's guidelines and/or parameters of care, it is intended to improve the margin of safety for sedation and general anesthesia in the dental anesthesia facility. Support of this document by an individual professional organization should not be interpreted as endorsement of those points which conflict with that organization's own guidelines and/or parameters of care.

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

Goal: Focus on Patient Safety to Minimize Risk

Guidlines cover:

- Patient Evaluation
- Sedation Techniques
- Monitoring Standards
- Recovery
- And more

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

Patient Evaluation

Establish pre-procedure standards:

Medical history
Airway evaluation
ASA classification
Informed consent

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

- Sedation Techniques

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

Monitoring Standards

Determine monitoring standards:

- Pulse oximetry
- Blood pressure monitoring
- Electrocardiography (ECG)
- Temperature
- Capnography

The U.S. Approach to Safety in Sedation and Anesthesia

Guidelines and Standards

Recovery

Post-Procedure Standards:

- Defined recovery area
- Appropriate monitoring equipment
- Discharge criteria
    - ensure patient has returned to baseline cognitive and physical function

The U.S. Approach to Safety in Sedation and Anesthesia

Emergency Preparedness

Emergency Equipment Requirements:

- Accessible emergency cart
  - Airway management tools
  - Oxygen
  - Defibrillator
  - Emergency medication

- Protocols for Managing Complications

- Regular Drills

The U.S. Approach to Safety in Sedation and Anesthesia

Emergency Preparedness

Most Common Emergencies:

Syncope	15,407 (50.3%)
Mild Allergy	2,583 (8.4%)
Angina Pectoris	2,552 (8.3%)
Postural Hypotension	2,475 (8.1%)
Seizure	1,595 (5.2%)
Asthmatic Attack	1,392 (4.5%)
Hyperventilation	1,326 (4.3%)
Epinephrine Rxn	913 (3.0%)
Hypoglycemia	890 (2.9%)
Cardiac Arrest	331 (1.1%)
Anaphylaxis	304 (1.0%)
Myocardial Infarction	289 (0.9%)
L.A. Overdose	204 (0.7%)

Malamed SF. Managing medical emergencies, J Am Dent Assoc; 1993 Aug; 124(8):40-53.

The U.S. Approach to Safety in Sedation and Anesthesia

Emergency Preparedness

Special Considerations for Pediatric and Special Needs Patients

- Unique Risks
    - Sensitivity
    - Airway
    - Anatomical features

- Stricter monitoring and recovery standards
- Tailored sedation plans
- Additional support staff
- Pediatric endorsement

The U.S. Approach to Safety in Sedation and Anesthesia

Data Reporting

What is Data Reporting?

The documentation and communication of any unintended or harmful outcomes that occur during or after a sedation or anesthesia procedure.

The U.S. Approach to Safety in Sedation and Anesthesia

Data Reporting

What is a Patient Safety Organization (PSO)?

A federally recognized organization created to improve the quality and safety of healthcare by collecting, analyzing, and sharing data on patient safety events.

Key Functions of a PSO:

- Data collection & analysis
- Confidentiality
- Risk identification
- Education

The U.S. Approach to Safety in Sedation and Anesthesia

Data Reporting

Incidents: Safety events that reach the patient, even if no harm was involved

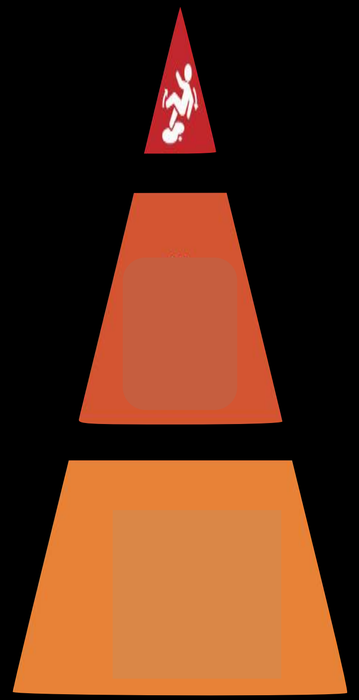
Near misses (close calls): Safety events that do not reach the patient

Unsafe Conditions: Circumstances that increase the probability of the occurrence of an incident or near miss

The U.S. Approach to Safety in Sedation and Anesthesia

Data Reporting

Heinrich's Pyramid



1 Major Injury / Fatality

10 Near Miss Events

Low Frequency/High Severity
Event Pyramid

The U.S. Approach to Safety in Sedation and Anesthesia

Data Reporting

Benefits of Data Reporting:

- Collect and Share Data
- Recognize Trends
- Learn from Others
- Anonymous & Confidential

Dr. Brady suggested adding this language:

"Following complaint investigations, in determining the appropriate disciplinary action under section 32-1263.02, the board may consider whether a report was filed by the licensee with a board-approved Patient Safety Organization (PSO). The board considers the filing of a report with a PSO to indicate that future violations are less likely. Accordingly, neither a civil penalty nor disciplinary action will be imposed if:

1. The violation was inadvertent and not deliberate;

2. The violation did not involve a criminal offense, accident, or action which discloses a lack of qualification or competency;

3. The violation did not result in a patient's death;

4. The licensee has not been found in any prior dental board enforcement action to have committed a violation as defined in section 32-1201 for a period of 5 years prior to the date of the occurrence; and

5. The licensee proves that, within 10 days after the violation, or the date when the licensee became aware or should have been aware of the violation, the licensee completed and submitted a written report of the incident or occurrence to a board-approved PSO."

Monthly Report Intake

(January 1981 – December 2017)

Safe Sedation in Brazil

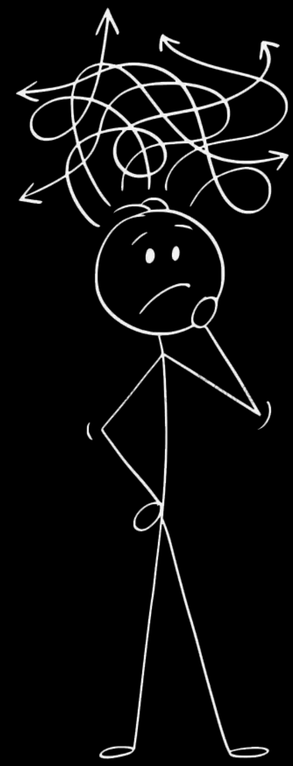
Current Challenges in Brazil

Brazilian Society of Anesthesiology Lawsuit
- Goal: Restrict dentists from using sedation techniques beyond nitrous oxide

Court Ruling
- Dentists can continue to use sedation, but must follow medical safety standards

Need for Clear Guidelines
- “Demonstrably Qualified” for sedation techniques
- The need for dental-specific regulations

SBA Sociedade Brasileira de Anestesiologia



Safe Sedation in Brazil

A Comparison Between the U.S. and Brazil

Safety and Education in Anesthesia

Brazil's Current State

- Regulations are more restrictive AND with less guidelines
- Confusion about qualifications and safety protocols
  - especially with sedation techniques beyond nitrous oxide

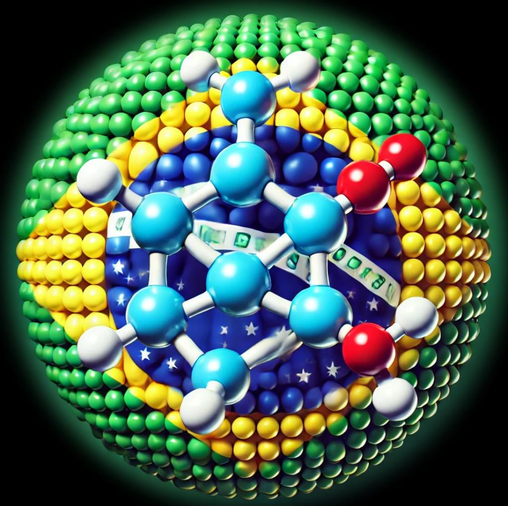
Safe Sedation in Brazil

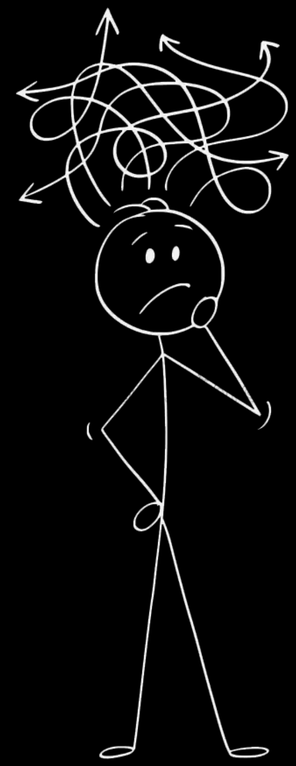
Current Challenges in Brazil's Anesthesia Regulations

Limited Regulations for Sedation

Legal Disputes
- Challenged dentists' ability to perform certain sedation techniques

Following Medical Safety Standards
- Dentists must adhere to broader medical safety standards





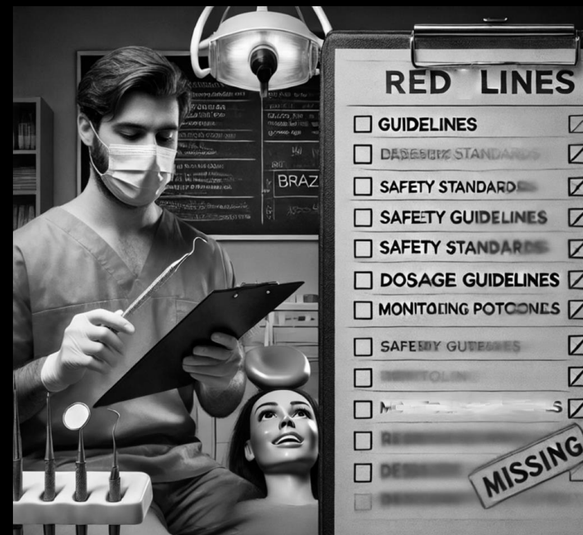
Safe Sedation in Brazil

What is Missing in Brazil's Regulations?

Lack of Specific Guidelines for Sedation
- Beyond nitrous oxide
- Puts patient safety at risk

No Established Educational Pathways
- No specific educational guidelines for dentists to become "qualified" to administer sedation
- Inconsistencies in the level of training and competence

Inconsistent Enforcement
- The absence of clear, enforceable guidelines means that safety standards vary across practices, increasing the potential for complications



Safe Sedation in Brazil

What's Next?

Aligning with Global Standards and Enhancing Patient Safety

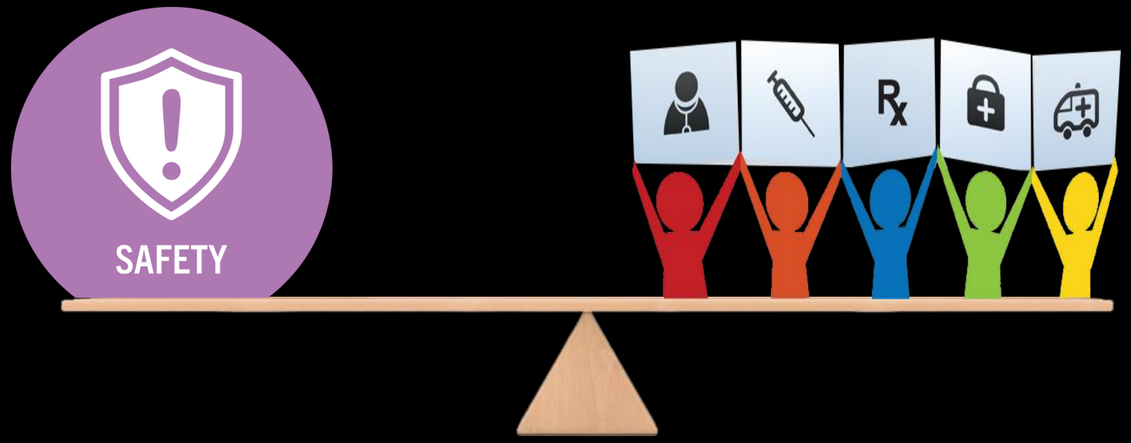
- Adopt Comprehensive Regulations
- Develop National Training Programs
- Establish Data Collection
  - Mandatory reporting and data collection
- Third Party Evaluators

Safe Sedation in Brazil

A Comparison Between the U.S. and Brazil

Safety and Education in Anesthesia

Why This Matters
- Patient safety could be at risk
- Access to care



Safe Sedation in Brazil

A Global Perspective: England's Restrictions

Patient Safety Concerns:

- 1990s, multiple adverse events and fatalities
- Lack adequate equipment and trained personnel
- Carmel Sheehan, a 10-year-old girl

Doctor guilty after girl, 10, dies at dentist

Jeremy Laurance • Saturday 13 June 1998 00:02 BST • Comments

A CONSULTANT anaesthetist was yesterday found guilty of serious professional misconduct after a 10-year-old girl died at a dentist's surgery.

Dr Tapas Kumar Basu failed to follow basic guidelines in a routine operation on Katie Dougal and made inadequate attempts to resuscitate her when she collapsed, the General Medical Council said.

The verdict will renew patients' fears about the safety of general anaesthetics given outside hospitals. Guidelines for dentists were tightened after a series of deaths in which dentists, acting as their own anaesthetists, failed to monitor the heart rate and breathing of their patient as they operated.

Dr Basu was a consultant anaesthetist called to assist at an operation on Katie, of Breaston, in Derbyshire, in January 1996 after a school playground fall in which she broke two front teeth. Her mother took her to the dental surgery in Long Eaton, Derbyshire immediately after the accident and was told by her dentist, Mark Duckmanton, to bring her back the next day.

Dr Basu, who attended the surgery to give her a general anaesthetic, said it would be no more than a "cat's scratch". But he failed to monitor her heart rate on an electrocardiogram (ECG) and failed to use a capnograph to monitor carbon dioxide levels, because it was broken.

There was a working capnograph in the practice's second surgery, which was not in use. The GMC heard that he had also ignored three sets of dental anaesthetic guidelines with which he had failed to familiarise himself.

https://www.independent.co.uk/news/doctor-guilty-after-girl-10-dies-at-dentist-1164552.html

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Introduction of Regulatory Reforms:
- Significant reforms in the late 1990s
- The General Dental Council (GDC) and other regulatory bodies limited the use of general anesthesia to hospital settings

Safe Sedation in Brazil

A Global Perspective: U.S. Restructure

Tony Protopappas, Costa Mesa, California

Gloria Ramirez: Died on December 7, 1980
Rebecca Medina: Died on April 25, 1982
Tamara Ivie: Died on June 11, 1982

1984 - Second degree murder / 15 years

Safe Sedation in Brazil

Recommendations for Brazil's Dental Anesthesia Standards

Establish Clear Regulations for All Sedation Levels

Create Accreditation Standards

Focus on consistency!

Focus
+ Consistency
Success

Thank YOU!!

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