

New Hampshire Anesthesia and Sedation Evaluation Committee

A Committee of the New Hampshire Board of Dental Examiners

Advisory Subcommittee Meeting

Thursday March 21, 2019

5:30 pm

Granite State Oral Surgery

80 Nashua Road

Londonderry, NH 03053

Attending: Dr. Vincent Albert, Dr. Karen Crowley, Dr. Sal Malik, Dr. Mark Scura

Excused: Dr. James Haas

NHASEC ADVISORY SUBCOMMITTEE FIRST QUARTER MEETING

March 21, 2019

AGENDA

OLD BUSINESS

- VOTE on MINUTES OF PREVIOUS MEETING December 13, 2018 (Appendix 1)
- STATUS OF INVITATION TO DR. JOHN HERRIN and DR. JONATHAN WILLIAMS TO JOIN NHASEC

NEW BUSINESS

- ADVISORY SUBCOMMITTEE ATTENDANCE AT NHBODE MONTHLY MEETINGS IN JANUARY, FEBRUARY AND MARCH
- STATUS REPORT ON EVALUATIONS - OVERDUE AND 2019
- PRELIMINARY AGENDA FOR THE ANNUAL NHASEC THURSDAY, MAY 2, 2019 AT THE CENTENNIAL HOTEL (Separate Document) (Draft Minutes 2018 Appendix 3)
- REQUEST FOR VOLUNTEER REPORTS ON HB1577, ADVISORY SUBCOMMITTEE ACTIVITY AND THANK YOU LETTER TO DR. HOCHBERG
- OPIOID AND PAIN MANAGEMENT ISSUES
- SUCCESSION OPTIONS FOR NHASEC ADMINISTRATION

INFORMATIONAL

DENTAL ANESTHESIOLOGY SPECIALTY STATUS

OMSNIC ALERT FOR NH OMS CONSENT FORM (Appendix 2)

NHDS ANNUAL MEETING AND OMSNIC RISK MANAGEMENT COURSE

Discussion on offering other anesthesia lectures in 2020

ACLS AND PALS SIM COURSE APRIL 12,13, 2019 AT PARKLAND MEDICAL CENTER

NHBODE ADMINISTRATOR AND ATTORNEY

PEDIATRICS ARTICLE ON CONCERNS ABOUT SINGLE OPERATOR MODEL (Appendix 4)

JAMA ARTICLE ON ANESTHESIA BILLING (Appendix 5)

Meeting called to order March 21, 2019 at 5:32 PM and agenda approved

Public Session

OLD BUSINESS

- VOTE on MINUTES OF PREVIOUS MEETING December 13, 2018 (Appendix 1)
 - Approved unanimously
- STATUS OF DR. HERRIN'S and DR. WILLIAMS INVITATION TO JOIN NHASEC
 - Contacting them to submit CV to NHBODE with letter of intent
 - Dr. Crowley will call both doctors

NEW BUSINESS

- ADVISORY SUBCOMMITTEE ATTENDANCE AT NHBODE MONTHLY MEETINGS JANUARY, FEBRUARY AND MARCH 2019
 - All agreed that this is beneficial to both entities and will continue
- REPORT FROM DR. HAAS, DR. CROWLEY AND DR. MALIK ON JANUARY, FEBRUARY, MARCH 2019 ATTENDANCE
 - From the website:
 - *Board Meetings*
 - *The Board meets the first Monday of every month. Agenda items for each month's meeting are confirmed 10 days prior to the meeting (for example, if a meeting is on Monday, March 7th, agenda items for that meeting would be confirmed on Thursday, February 25th). Any agenda items received after 10 days prior to the meeting date will be considered by the Board at its next monthly meeting.*
 - *All meetings are scheduled for Monday's at 3:00 pm and are held at the Board's administrative office.*
 -
- Volunteer scheduling for upcoming meetings of NHBODE
 - April 1 Dr. Scura
 - May 6 Dr. Albert
 - June 3 Dr. Crowley with Dr. Malik as an alterante
 - July 8 Dr. Malik
 - August 5
 - September 9
 - October 7 Dr. Scura
 - November 4
 - December 2

-
- Possible on-call rotation, obtaining agenda prior to meeting
 - Jeanne Clement has agreed to copy the Advisory Subcommittee member with the proposed public Board agenda when it is available prior to the meeting
- Proposed Biannual report to Board from the Committee-are the minutes sufficient?
 - Minutes deemed sufficient

• **COMMITTEE PERFORMANCE**

1. **Committee Performance 2018-2019**

2018-2019	Completed	Completed On Time	Completed + Past Due	Incomplete + Past Due
Comprehensive Evaluation-MS/R	1	0	1	0
Comprehensive Evaluation-MS/UR	1	0	1	1
Comprehensive Evaluation-GA/DS	10	9	1	1
Facility Inspection GA/DS	13	13	0	0
Facility Inspection MS/UR	1	1	0	0
Facility Inspection MS/R	1	1	0	0
Facility Inspection (for anesthesia administered by Anesthesiologist or CRNA)	0	0	0	0
Facility Inspection(Itinerant Dentist Anesthesia Provider)	0	0	0	0
Comprehensive Evaluation (Itinerant Dentist Anesthesia Provider)	0	0	0	0
TOTAL	27	24	3	2

Disposition of Overdue Evaluations:

GA/DS

Dr. McCarty- BOARD OVERSIGHT in not requiring a comprehensive evaluation of Dr. McCarty working under a dental license/ 5 months overdue/Complete-

Dr. Gupta Voonna- Scheduling /14 months overdue/INCOMPLETE

Drs Stone, Trowbridge, Field/They cancelled due to weather. Will be 2 months overdue. Dr. Malik informed the subcommittee that this was in the process of rescheduling.

MS/UR

Dr. John Herrin--Request for 2 month delay/ 2 months overdue/COMPLETE

Dr. Mindy Hall- Scheduling/ 4 months overdue/INCOMPLETE

MS/R- Ashley Pinette- Committee chair did not receive paperwork from evaluator. 10 months overdue/ COMPLETE

Subcommittee members agreed that the Chair should receive completed evaluation forms within 5 business days

Physical or electronically scanned forms are both acceptable ways to transmit information to the Chair

If a doctor being evaluated has an urgent time requirement to get the documents to the Board in time for the next meeting, for instance, that doctor must pay the cost of document transit to the Chair.

Evaluators should keep a copy of the original evaluation form

- **STATUS REPORT ON EVALUATIONS -- OVERDUE AND 2019**
 - Two overdue GA/DS comprehensive evaluations are scheduled
 - Three GA/DS facility inspections are not yet scheduled
 - Two overdue moderate sedation comprehensive evaluations are scheduled
 - 2019 assignments are being made according to the due dates, and all planned 5-year cycle renewal comprehensive evaluations have been assigned and are in the process of being scheduled

- **PRELIMINARY AGENDA FOR THE ANNUAL NHASEC THURSDAY, MAY 2, 2019 6 P.M. AT THE CENTENNIAL HOTEL, 96 PLEASANT STREET, CONCORD, NH 03301**
- **Preliminary agenda approved. Will ask for items when the announcement is sent**

- **REQUEST FOR VOLUNTEER REPORTS FOR ANNUAL MEETING IN MAY ON HB1577 (Dr. Crowley ?Dr. Abel), ADVISORY SUBCOMMITTEE ACTIVITY (Dr. Albert) AND THANK YOU LETTER TO DR. HOCHBERG (Dr. Scura)**
 -

- **OPIOID AND PAIN MANAGEMENT ISSUES**
 - **Dr. Malik will distribute several forms for the use of opioids in office practice:**
 - Risk assessment
 - Consent form
 - Information form for patient
 - PDMP forms
 - He will also check for the legal requirements for narcotic use by dentists in the state of NH
 - We will check with OMSNIC for any suggestions for narcotic use

- How many OMS in NH are practicing under a medical license?
- **SUCCESSION OPTIONS FOR NHASEC ADMINISTRATION**
 - The administrative burden of the NHSEC is great and becoming more so. Estimated costs for staff support for administration are \$10-12,000 annually.
 - Dr. Crowley suggests that future organization of NHASEC be composed of two arms. One would be an administration portion conducted by the Board. This arm would be responsible for maintain records, committee assignments, and handling of questions and problems with scheduling. It would also be required to maintain the submitted evaluation forms. It would be responsible for meeting planning for the annual meeting and Advisory Subcommittee meetings. It would be responsible for taking minutes, and tracking drafts and votes on the minutes. A possible administrator would be a retired OMS who knows the details of the evaluation process. The second arm would be the NHASEC, with a similar structure as currently exists, with a Chair and committee members who meet the requirements as consultants of the Board. The Advisory Subcommittee would continue with 5 members, with representation from GA, moderate sedation restricted and unrestricted, and pediatrics. All members would be content experts, and peer reviewers. This proposed change in administrative structure would transfer the administration to the Board. Costs could be covered by an increase in fees for evaluations. A certain amount would cover administration costs, and another part of the total fee would be for the evaluators. The exact cost of the administration could be calculated by dividing the total cost of the administration arm by the anticipated number of facility inspections and evaluations. Dr. Crowley will share the estimated annual costs on request. This transition must be in place within a year, when Dr. Crowley plans to step down from the Chair position.
 - We will check with different states to see how the administration of the evaluation committees is organized to see if there are useful models.

INFORMATIONAL

DENTAL ANESTHESIOLOGY SPECIALTY STATUS

On March 11, 2019, the American Dental Association's National Commission on Recognition of Dental Specialties and Certifying Boards (NCRDSCB) voted to recognize the new specialty of Dental Anesthesiology, joining nine other ADA-recognized dental specialties.

OMSNIC ADDITION TO NH OMS CONSENT FORM (Appendix 2)

OMSNIC has sent an email with a suggested addition to the consent form for NH policy holders treating patients under 13 to meet the statutory requirements of HB1577

NHDS ANNUAL MEETING AND OMSNIC RISK MANAGEMENT COURSE

Discussion on offering other anesthesia lectures in 2020 at the NHDS annual meeting, possible the sim ACLS and PALS, an offering by NHAOMS, NHDSA, directed toward anesthesia providers, possibly with enough credits to meet the new CE requirement for anesthesia related topics.

OMSNIC will be presenting a live course at the NHDS meeting in May.

Successful completion generates a 5% risk management credit. Info below. You can register with the NHDS.

Saturday, May 18, 2019

8:00am - 12:00pm

Inn at Church Landing

312 Daniel Webster Highway

Meredith, NH

Hosted by the New Hampshire Dental Society

Presented by Dr. Cindy Trentacosti and Mr. Stephen Pavkovic

ACLS AND PALS SIM COURSE APRIL 12,13, 2019 AT PARKLAND MEDICAL CENTER

NHBODE ADMINISTRATOR AND ATTORNEY

From Jeanne: John Cafasso's title is Administrator of the Board. The statute still references Executive Director but when the Boards were consolidated under OPLC, technically those positions became Administrators since there is only one Executive Director of OPLC and that is Peter Danles. The statute needs to be repealed but the Supplemental Job Description refers to the title as Administrator and John was aware of that when he applied for the position. The duties of both titles are exactly the same.

We do have a new Board Counsel. His name is JD Lavallee (official name is Jon-Daniel but he prefers to go by JD). He is not appointed by Governor & Counsel. He was hired by the Attorney General's office in December 2018 and assigned to several of the Boards here.

John Cafasso, Dental Board Administrator, also was not appointed by G&C. He was hired by OPLC in November 2018.

***PEDIATRICS* ARTICLE ON CONCERNS ABOUT SINGLE OPERATOR MODEL (Appendix 4)**

***JAMA* ARTICLE ON ANESTHESIA BILLING (Appendix 5)**

ADVISORY SUBCOMMITTEE MEETINGS

Dr. Malik has kindly offered to host the meetings at his Londonderry office. This location is acceptable to the Advisory Subcommittee members. Many thanks for his hospitality

Granite State Oral Surgery
80 Nashua Road
Londonderry, NH 03053

- June 20, 2019
- September 26, 2019
- December 19, 2019

Meeting adjourned at 7:05 PM

Respectfully submitted,

Karen E. Crowley

Karen E. Crowley, D.D.S.
Chairman New Hampshire Anesthesia and Sedation Evaluation Committee

Appendix 1 Draft Minutes of December 13, 2018 Advisory Subcommittee meeting

New Hampshire Anesthesia and Sedation Evaluation Committee

A Committee of the New Hampshire Board of Dental Examiners

Advisory Subcommittee Meeting

Thursday December 13, 2018
5:30 pm
Granite State Oral Surgery
80 Nashua Road
Londonderry, NH 03053

Attending: Dr. Vincent Albert, Dr. Karen Crowley, Dr. Sal Malik, Dr. Mark Scura
Excused: Dr. James Haas
Guest: Dr. Dennis Hannon, NHBODE

**NHASEC ADVISORY SUBCOMMITTEE FOURTH QUARTER MEETING
December 13, 2018**

AGENDA

OLD BUSINESS

- **VOTE on MINUTES OF PREVIOUS MEETING**
- **HB1577 and Board Response**
- **FIRE SAFETY REGULATIONS and communication to Dr. Pak**
- **BOARD OF REGISTRATION FOR MEDICAL TECHNICIANS (BORMT) update**
- **SUPPORT FOR DENTAL TARGETED EMERGENCY MANAGEMENT COURSES**

NEW BUSINESS

- **REPORT FROM DR. SCURA AND DR. ALBERT ON ATTENDANCE AT NHBODE MONTHLY MEETINGS IN NOVEMBER AND DECEMBER**
- **STATUS REPORT ON EVALUATIONS OVERDUE AND 2019**
- **COMMITTEE MEMBERSHIP**
- **SCHEDULING FOR THE ANNUAL NHASEC IN APRIL**

Meeting called to order December 13, 2018 at 5:45 PM

Public Session

**MINUTES OF NHASEC AS Q3 September 20, 2018 MEETING
UNANIMOUS VOTE TO APPROVE**

MINUTES OF April 2018 ANNUAL NHASEC MEETING

MINUTES HAVE BEEN SENT TO THE NHBODE FOR APPROVAL prior to committee vote (Pending) Dr. Hannon posited that the delay in response to the Board approval of the minutes may be due to a new Board attorney being appointed. This will probably happen in January.

HB1577 and Board Response

There was no further discussion on recommendations made previously by the Advisory Subcommittee to the NHBODE regarding Board action on HB1577.

The Blast email from NHBODE to all anesthesia permit holders has not happened to inform anesthesia permit holders of changes to informed consent and professional misconduct.

FIRE SAFETY REGULATIONS

Dr. Pak provided information that the National Fire Protection Agency (NFPA) recommends that all facilities that practice "deep sedation" must have specific medical gas requirements that are in the ambulatory surgical units with back-up generators. This would include all OMS offices

With further research into the issue, the members of the Advisory Subcommittee recommend that due to local agencies having jurisdiction in this matter and NFPA having no jurisdiction, no intervention of the NHASEC is indicated at this time. Gas storage is now addressed during facility inspections and comprehensive evaluations, and include the need to have tanks standing, with chains or other appropriate restraint in place.

BOARD OF REGISTRATION FOR MEDICAL TECHNICIANS (BORMT)

Dental assistants must register with the BORMT if they are involved with direct patient care and have access to controlled substances.

The NHBODE may have a plan in place to register dental assistants who are not registered with any other boards. Until this happens, registration for assistants who meet the above requirements shall be with BORMT

"SPONSORSHIP" OF OFFICE BASED PALS COURSE

Although the committee has no formal charge to offer continuing education for anesthesia related subjects, including emergency management, the members unanimously supported an effort to schedule standing annual courses, especially human simulation courses that are targeted to the dental community providing anesthesia.

I have made arrangement with Rick Ritt to put on ACLS and PALS sim courses April 12 and 13, 2019 at Parkland Medical Center. ADSA is helping to promote the course with email and brochure. A save-the-date email will also be sent soon. We hope to have this course an annual event to allow those taking the course an opportunity to recertify in the 2 year time limit now imposed for recertification

I have spoken to Mike Auerbach and am waiting to speak with Dr. Steve Ura to have NHDS sponsor the courses as well, which will broaden the reach of the offering to all NHDS dentists, many of whom are not ADSA members, but deliver anesthesia.

We can consider offering an 8 hour anesthesia related course at the NHDS Annual Meeting in May 2020 to fulfill the proposed biennial CE for anesthesia permit holders of 8 hours. This will facilitate accessible CE for this new requirement.

NEW BUSINESS

- **REPORT FROM DR. SCURA AND DR. ALBERT ON ATTENDANCE AT NHBODE MONTHLY MEETINGS IN NOVEMBER AND DECEMBER**
- **Both doctors said that the Board members appreciated their availability for questions that arose during Board meetings. Thanks to both doctors for attending these meetings**
- **Dr. Scura submitted a document (Anesthesia Permit Flow Chart) for the use of the Board at the request of the Board which outlines some of the key requirements for each level of permit and proposed permit. See below.**

Anesthesia Permit Flow Chart

For the use by the Members of the

NH Board of Dental Examiners

12/14/2018 prepared by Dr Mark Scura

MINIMAL SEDATION NO PERMIT

Minimal Sedation- No permit required

- 1) Under 13-Inhalation only—Nitrous oxide
- 2) Over 13- A)-Inhalation Only

- B)-Enteral- using one or more doses of one drug within a 24-hour
Following the manufacturers guidelines
- C) A combination of A and B above

MODERATE SEDATION TWO LEVELS OF PERMIT

Moderate Sedation Restricted

- 1) The Patient is Over 13 Years of Age
- 2) Routes of Administration is enteral or combination enteral-inhalation.
- 3) Agents shall be limited to a single dose of one or more drugs, or a multi-dose of a single drug using manufacturer's guidelines.

Moderate Sedation Unrestricted

- 1) Patients shall be of any age
- 2) Route of administration shall be enteral, parenteral or any combination with inhalation sedation.
- 3) With or without inhalation sedation, agents shall be limited to a single dose of one or more drugs or a multi-dose of a single drug using manufacturer's guidelines

DEEP SEDATION/GENERAL ANESTHESIA TWO PROPOSED LEVELS OF PERMIT

Deep Sedation/General Anesthesia

Permit Level 1/ Includes Pediatric Patients (Under 13) *

- 1) Fulfills the guidelines established to administer anesthesia to patients under 13
- 2) Routes of administration include inhalation, enteral and parenteral

Permit Level 2* –

- 1) May administer Deep Sedation/General anesthesia only to patients older than 13 years old
- 2) Routes of administration include inhalation, enteral and parenteral.

- Deep Sedation/General Anesthesia Permit Level 1 and Permit Level 2 are being proposed by the New Hampshire Anesthesia and Sedation Evaluation Committee Advisory Subcommittee.

12/14/2018- prepared by Dr Mark Scura

- **STATUS REPORT ON EVALUATIONS -- OVERDUE AND 2019**
 - Two overdue GA/DS comprehensive evaluations are scheduled
 - Three GA/DS facility inspections are not yet scheduled
 - Two overdue moderate sedation comprehensive evaluations are scheduled
 - 2019 assignments are being made according to the due dates, and all planned 5-year cycle renewal comprehensive evaluations have been assigned and are in the process of being scheduled
- **COMMITTEE MEMBERSHIP**
 - An invitation will be sent to Dr. Herrin to join the NHASEC
- **Volunteer scheduling for upcoming meetings of NHBODE**
 - January 7 Dr. Haas
 - February 4 Dr. Crowley
 - March 4 Dr. Malik
 - April 1 Dr. Scura
- **SCHEDULING FOR THE ANNUAL NHASEC IN APRIL**
 - Thursday, April 25 or May 2, 2019 6:00pm The Centennial Hotel, Concord, NH
 - May 2 is proving to be the best date so far for respondents

OTHER

Dr. Hannon is the Board representative to the PDMP state committee. Concerns about non-reporting of Suboxone and Methadone were voiced.

Planned Advisory Subcommittee quarterly meetings 2019. Dr. Malik has kindly offered to host the meetings at his Londonderry office. This location is acceptable to the Advisory Subcommittee members.

Granite State Oral Surgery
80 Nashua Road
Londonderry, NH 03053

- March 21, 2019
- June 20, 2019
- September 26, 2019
- December 19, 2019

Non-Public Session entered at 7::05 pm

Meeting adjourned at 7:35PM

Respectfully submitted,

Karen E. Crowley

Karen E. Crowley, D.D.S.

Chairman New Hampshire Anesthesia and Sedation Evaluation Committee

Appendix 2 OMSNIC alert regarding anesthesia informed consent for patients under the age of 13

PATIENT SAFETY AND RISK MANAGEMENT ALERT

NH Anesthesia Informed Consent Specific Requirements

OMSNIC
DEFENDING THE SPECIALTY

It has come to our attention that, per New Hampshire House Bill 1577, Section XII-g(3), effective August 7, 2018, in cases where dentists will administer anesthesia (deep sedation and general) to patients under the age of 13, "Informed consent shall include the statement that the procedure may be performed in a hospital setting with additional anesthesia personnel, possibly at an increased expense."

In addition to the signed, dated, and fully completed procedure-specific consent form, OMSNIC has always recommended you document the informed consent discussion, including any specific questions or concerns raised by the patient related to the treatment plan, in your treatment records.

Therefore, to help you comply with Section XII-g(3), and to support the informed consent discussion, you may consider adding the below statement to your informed consent forms and include a similar statement in the treatment record.

Per our discussion, you have the option for the procedure to be performed in a hospital setting with additional anesthesia personnel, possibly at an increased expense.

The information above is specific to Section XII-g(3). To access HB-1577 Final Version in its entirety, click the link below:

[NH HB-1577](#)

The above language is available for download from the OMSNIC website in the Informed Consent and Documents section, under the "Anesthesia Informed Consent Form" heading. All OMSNIC forms are customizable to allow you the option of incorporating this language into your consent forms. If you have any questions, please contact our Patient Safety and Risk Management Department at 800-522-6670.

This information is provided as general information by OMSNIC to assist you in meeting the requirements of NH HB-1577, Section XII-g(3). OMSNIC and its related, affiliated, and subsidiary companies disclaim any and all warranties, expressed or implied, as to the quality, accuracy, or completeness of the information provided above. Because federal, state and local laws vary, nothing in this statement is intended to serve as legal advice or to establish any standard of care. To determine the applicability of NH HB-1577 to your clinical practice, legal advice, if desired, should be sought from competent counsel in your state.

Appendix 3 Draft Minutes of NHASEC 2018 Annual Meeting



**Questions? Call
OMSNIC Patient
Safety and Risk
Management
at 800-522-6670.**



New Hampshire Anesthesia and Sedation Evaluation Committee

A Committee of the New Hampshire Board of Dental Examiners

The New Hampshire Anesthesia and Sedation Evaluation Committee Annual Meeting 2018

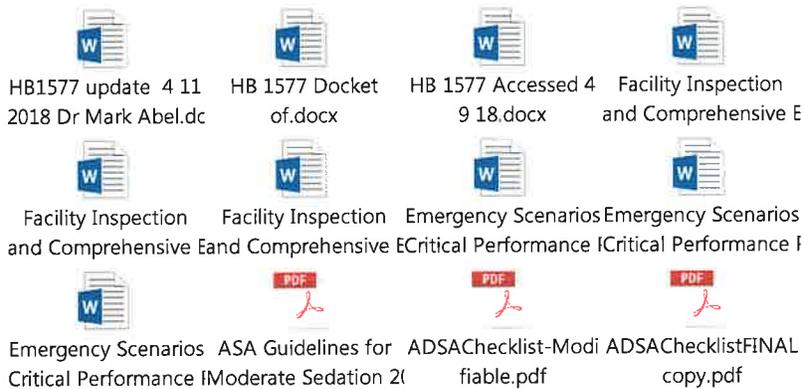
Thursday April 12, 2018
6-9pm Meeting/ Dinner
The Centennial – Daniel Webster Room
96 Pleasant Street
Concord NH, 03303

Provided (Hard Copy in Your Folder):

- Sample Evaluation Scheduling information letter
- Facility Inspection and Comprehensive Evaluation Form for Deep Sedation-General Anesthesia Permit
- Facility Inspection and Comprehensive Evaluation Form for Moderate Sedation Restricted Permit
- Facility Inspection and Comprehensive Evaluation Form for Moderate Sedation Unrestricted Permit
- Emergency Scenarios Critical Performance Points Office Evaluation Deep Sedation General Anesthesia
- Emergency Scenarios Critical Performance Points Office Evaluation Moderate Sedation
- NH Laws and Rules – Recent Rule Changes
- NH Statutes Dentist and Dentistry
- Office Sign in/ BLS/HCP, ACLS,PALS 2014-3-13
- Currently assigned inspections for 2018
- NH Anesthesia and Sedation Committee Directory

Provided (USB Memory Stick):

   
ADA_Sedation_Use_Guidelines 2016.pdf ADA_Sedation_Teaching_Guidelines 2016.pdf sign in sheet day of evaluation.docx RulesupdateDec2015 word bold.docx
   
nhsace meeting 2018 minutes.docx NHASEC Agenda 2018 Annual Meetingand Dentistry ~ 4-22-EVALUATEE FOR CON NH Statutes Dentist LETTER TO



ATTENDING : Dr. Karen Crowley, Chair, Dr. Mark Abel, Dr. Rocco Addante, Dr. Vincent Albert, Dr. Shane Citron, Dr. James Haas, Dr. Mark Hochberg, Dr. Chandler Jones, Dr. Douglas Katz, Dr. Christopher King, Dr. Barton McGirl, Dr. Peter Reich, Dr. Richard Rosato, Dr. Mark Scura, Dr. Gregory Shaker, Dr. Patrick Vaughan.

NOT IN ATTENDANCE: Dr. Shauna Gauthier, Dr. Matthew Heimbach, Dr. Salman Malik, Dr. Kimberly Meyer, Dr. Dave Pak

Invited Guests: Dr. Tara Levesque-Vogel, President, NHBODE, (in attendance), Ms. Constance Stratton, [former]Executive Director NHBDE (not in attendance), Ms. Jeanne Clement, Administrative Assistant, NHBDE(not in attendance),

PUBLIC OBSERVER(s): Mr. Dwayne Thibeault, MSN, ARNP, CRNA, Blue Sky Solutions Group, PLLC

Agenda Thursday, April 12, 2018

Introductions and Preliminary Items

- I. Call to Order (Dr. Crowley)

- II. Recognition of New NHASEC member Dr. Douglas Katz (Dr. Crowley)
- III. Additional Items and Approval of Agenda (Dr. Crowley)
- IV. Introduction of Guest (Dr. Levesque-Vogel)
- V. Update of NHBODE activities (Dr. Levesque-Vogel)
- VI. Recognition and Self-Introduction of Public Attendees (Dr. Crowley)

Old Business

- VII. Pediatric Emergency Scenarios (Dr. Crowley)
- VIII. Use of Current Evaluation Forms (Dr. Crowley)

New Business

- IX. Suggested Scenario Changes (Dr. Crowley)
- X. Resignation of NHBODE Executive Director, (Dr. Crowley, Dr. Levesque-Vogel) (Informational)
- XI. Current and upcoming opening for Director NHBDE (Dr. Crowley Informational)
- XII. Committee Performance 2017-2018 (Dr. Crowley)
- XIII. Advisory Subcommittee Report (Dr. Hochberg)
- XIV. Procedure: Request for extensions/ delay of evaluations/expired credentials (Dr. Crowley)
- XV. HB 1577 History, Actions Taken and Implications for Practice (Dr. Abel)
- XVI. Rules Revision- Rewrite or Update? Task Force Formation (Dr. Crowley)
- XVII. ASA Guidelines for Moderate Sedation 2018 (Dr. Crowley Informational)
- XVIII. Dr. Kuepper's letter of thanks for service on NHASEC and NHBODE (Dr. Crowley)
- XIX. Invitation to to NHASEC (Dr. Crowley)
- XX. Other Business
- XXI. Adjournment

Attachments

Appendix A Minutes of 2017 Meeting (approved and submitted to NHBODE)

APPENDIX B DR. HOCHBERG REPORT ON ADVISORY SUBCOMMITTEE

APPENDIX C DR. ABEL'S REPORT ON HB 1577

MINUTES

Introductions and Preliminary Items

- I. Call to Order (Dr. Crowley) Public portion of the meeting called to order 6:10. She thanked the Committee members for their diligence in protecting the safety of those receiving sedation and anesthesia in the dental offices of New Hampshire.
- II. Recognition of New NHASEC member Dr. Douglas Katz (Dr. Crowley)

Dr. Katz is a periodontist. He was trained at Duquesne and holds a Moderate Sedation Unrestricted permit. He is interested in treating the nervous patient.

- III. Additional Items and Approval of Agenda (Dr. Crowley)
None noted

- IV. Introduction of Guest (Dr. Levesque-Vogel)
Dr. Levesque-Vogel is the new president of NHBODE. She practices general dentistry with her brother and father in her grandfather's legacy practice in Nashua. Her brother was a mechanical engineer. Dr. Levesque-Vogel is interested in having someone with anesthesia background on the Board. There will be an opening when Dr. Albee finishes his term in July

- V. Update of NHBODE activities (Dr. Levesque-Vogel)
Online renewal has been a challenge. The Board is in existence to help protect the public. The NH government is attempting to be transparent, and all meetings have to be posted, announced and open to the public, unless there is an item that is sensitive to someone's reputation or a personnel matter.

- VI. Recognition and Self-Introduction of Public Attendees (Dr. Crowley)
Mr. Wayne Thibeault is a CRNA who provides office sedation in 13-14 locations. He cannot be on the committee as he is not a dentist, but is willing to act as a consultant for the scenarios and any other issues that arise within his expertise.

Old Business

VII. Pediatric Emergency Scenarios

We need updated scenarios for pediatric evaluations of MS-UR and DS/GA. Mr. Thibeault offered to act as a consultant for modification of existing scenarios. Consider the inclusion of local anesthesia toxicity, prevention and management.

ADSA has introduced iPad algorithms. There was a question of whether use of this is allowable during an evaluation. Dr. Crowley discussed the literature supporting the use of cognitive aids during routine and emergency care. Checklists, algorithms, flip cards or any other aid is allowable. The objective is to have a good outcome, and memory is unreliable with complex, infrequent and stressful events. The use is encouraged, but no system is endorsed by the Committee. It is important that these be used as aids, not primary sources of information, during emergency evaluations. Familiarity with the method is critical. Using it for the first time or using it without being informed or aware of content is unacceptable.

VIII. Use of Current Evaluation Forms

Many changes have been made in the forms over the last few years. Some are typographical or layout issues. Some are made by decision of the committee with substantive content issues. Some are changes requested by NHBODE. Examples of recent changes: discontinuing vasopressin as a mandatory drug, acceptability of fentanyl as well as morphine as mandatory narcotic, acceptability of midazolam as well as diazepam for seizure resuscitation, designation of anesthesia provider, self-contained vs. facility dependent. PLEASE be sure that you have the most recent forms. PLEASE call Dr. Crowley's office, Erin, to have the most current form sent electronically to be sure that you are using the most current form just prior to your evaluation. PLEASE be sure that EVERY box and line is filled and meets the standard. Examples will be given of deficiencies in form submission resulting in extra hours of work for the Chair. **Many** thanks for attending to this with great care.

Procedural Note:

Please send all completed facility and comprehensive evaluation forms to:

Dr. Karen E. Crowley, Chair NHASEC
12 Parmenter Road Unit A-2
Londonderry, NH 03053

She will forward them to the Board. Please note any changes that you think need to be made to the forms.

* PLEASE REMEMBER THAT ALL COMPLETED EVALUATION FORMS MAY BE VIEWED BY EVALUTEE OR OTHERS OUTSIDE OF THE COMMITTEE

ON THE EVALUATION FORMS!!!! BE SURE THAT

- ✓ **ALL CHECK OFF BOXES ARE FILLED OUT, THAT**
- ✓ **ALL INFORMATION IS ACCURATE, AND**
- ✓ **IN THE CASE OF INCOMPLETE OR MISSING INFORMATION, THE PLAN FOR COMPLETION OF THAT INFORMATION IS GIVEN.**
- ✓ **EXAMPLES TO BE GIVEN BY DR. CROWLEY OF RECENT SMALL PROBLEMS THAT TOOK HOURS TO RESOLVE.**

New Business

IX. Change on GA/DS scenarios suggested by Dr. Kuepper and Dr. Able. Consider consolidating the 2 hypertension scenarios into a single hypertension scenario and add a symptomatic hypotension scenario. Consider combining angina and MI into an ACUTE coronary syndrome scenario and add a local anesthetic toxicity/ overdose scenario. Dr. Citron volunteered to work on this.

Over the next year, please critically evaluate the chest pain, angina, MI scenario for needed changes.

Suggestion made to use current expert practice resources for creating scenarios. OMSNIC has cases for continuing education that may be helpful. The AAOMS Office Anesthesia Evaluation Manual will have a new edition shortly. It has been pending for over a year. Publication date unknown at this time.

X. Changes of Board Administration

Constance Stratton resigned effective March 20, 2018 from the position of Executive Director of the NHBODE.

Interim ED is Sheri Walsh, ED of Health Care OPLC.

There is a job posting for skills which an attorney or retired dentist might have. It is a 29 hour a week position.

XI. Opening of Director Position on NHBODE

Dr. Scura has been endorsed by the Trustees of NHDS for the current opening on NHBODE occasioned by Dr. Kuepper's resignation in February from both the Board and the NHASEC. Dr. Scura will plan to attend the Monthly Board meeting on May 7, 2018 whether or not he has been appointed by then. Another director opening will occur in July when Dr. Albee's term is done.

XII. Committee Performance 2017-2018

2017-2018	Completed	Completed On Time	Completed + Overdue	Incomplete + Overdue
Comprehensive Evaluation MS/R	0	0	0	0
Comprehensive Evaluation-MS/UR	5	4	1	1
Comprehensive Evaluation-GA/DS	17	11	6	3
Comprehensive Evaluation (Itinerant Dentist Anesthesia Provider)	0	0	0	0
Comprehensive Evaluation Sub Totals	22	15	7	4
Facility Inspection MS/R	0	N/A	N/A	N/A
Facility Inspection MS/UR	1	N/A	N/A	N/A
Facility Inspection (Itinerant Dentist Anesthesia Provider)	1	N/A	N/A	N/A

Facility Inspection (for anesthesia administered by Anesthesiologist or CRNA)	6	N/A	N/A	N/A
Facility Inspection Sub Totals	8			
Total Number of Evaluations	30			4

The reasons for non-compliance with time deadlines is not consistent but has many sources of non-performance. Dr. Crowley was unable to find a pattern that could be corrected. Therefore, it is incumbent upon committee members to be sure that the comprehensive evaluations especially are completed within the appropriate time framework. The issue of non-compliance is very significant, especially in this era of public interest and oversight. If you have an assignment and are unable to contact the evaluatee, if there is no response, or if you make a good faith effort with 2-3 phone calls with no response, PLEASE get back to the Chair immediately. She will reassign, or work on a solution to the problem. PLEASE do not leave this open-ended but make a determination of response within 2-3 phone calls OR GET IT REASSIGNED!!!

Discussion of issues raised during evaluations occurred. The self-contained vs. facility dependent concept was introduced to allow any itinerant anesthesia provider not using resources of a facility to be evaluated once every 5 years with mobile equipment. However, there is frequent use of gases, suction, lights and other critical resources by all providers. Therefore, at this time, the concept will be dropped. All facilities hosting sedation or anesthesia services must have a facility inspection.

The NHBODE is considering an initial provisional evaluation prior to granting a permit. The idea is that the initial evaluation, which is now only a facility inspection will be replaced with a facility inspection plus scenario performance. This is a greater assurance that the dentist applying for a permit has the resuscitative skills needed for patient safety. Two evaluators will be required, as it is a high stakes evaluation. The clinical performance will occur within 90 days and will also require 2 evaluators. If successful, then the 5 year term for the next office evaluation begins at the time of the clinical performance.

Itinerant providers came under discussion. The recommendation of the Advisory Subcommittee is that every facility should be inspected. There are no uniform requirements for dental office construction and emergency egress, as there are for surgical day care centers and hospitals. Emergency egress, transfer protocols specific for each office, awareness of the host dentist responsibilities in and emergency, and scripted transfer calls are all issues to be considered, not the competency or armamentarium of the anesthesia provider. The emergency response is not an individual effort but a team effort, and the itinerant provider does not have day-to-day familiarity with most offices or staff of hosting office.

XIII. Advisory Subcommittee Report (Dr. Hochberg) See Appendix B below

XIV. Procedure: Request for extensions/ delay of evaluations (Dr. Crowley)

Those evaluatees who request an extension may have a reasonable issue, but in fact, if they are in non-compliance, the issue must be brought to the NHBODE as soon as this occurs. Maternity leave, new staff, few or difficulty in securing cases are some of the reasons cited with the request for extension. If a dentist is delivering anesthesia, then that dentist should be able to undergo an evaluation. The evaluation is a viewpoint, not a pinnacle of performance. Anesthesia delivery is an everyday competence, not a static or one-time achievement. Dr. Crowley respectfully declines to give extensions based on the current climate of public scrutiny and the requirements of the Rules.

XV. HB1577 History and Update (Dr. Abel) See Appendix C below

XVI. Rules Revision or Total Rewrite? (Dr. Crowley)

2016 ADA GUIDELINES for the Use of Sedation and General Anesthesia by Dentists and 2016 ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students must be referenced in the Rules immediately. With the likely passage of HB1577 in the Senate, other additions to the Rules for anesthesia will be necessary. The Advisory Subcommittee has recommended that action be postponed until a new, permanent and full-time Board ED is in place so effort will

be expended most effectively. We will need a task force to work on the Rules. This is likely to consist of the Advisory Subcommittee members. Any others interested?

The most likely plan at this time is to revise the current Rules to meet the statutory requirements of HB1577. One of the real issues from a regulatory point of view is the new mandate for oversight of minimal sedation. There is simply not enough manpower on the Board or our committee to evaluate 1200 more dentists at once, and by August 7.

The recommendation for 16 hours of the 40 hours of biennial continuing education which is anesthesia-related was made by the Advisory Subcommittee and approved by the Committee.

XVII. ASA Guidelines for Moderate Sedation 2018 (Dr. Crowley)
Informational

It is important that the committee members be aware of standards of providing moderate sedation. The American Society of Anesthesiology has new standards this year that are more current than their previous guidelines for sedation by non-anesthesiologists. Please read and consider. The document in pdf format is contained in the memory stick provided at the meeting.

XVIII. Dr. Kuepper Thank you

Letter and card signed by committee members will be sent

XIX. Invitation to Dr. Jill Brinkman, Dr. Keith Kealey, and Dr. Michael Alexander.

Suggestions for other candidates are welcome.

XX. Other Business

No other business introduced

XXI. Adjournment Unanimous approval to adjourn at 8:00 pm

Respectfully submitted,

Karen E. Crowley

Karen E. Crowley, D.D.S., Chair

Electronic vote to approve minutes
sent _____ 2018.
Phone messages left _____ 2018 and final tally
_____ 2018.

APPENDIX A 2018

Minutes of 2017 Meeting (approved and submitted to NHBODE)

**New Hampshire Anesthesia and Sedation Evaluation Committee
Annual Meeting
Minutes of the 2017 Meeting**

**Wednesday April 19, 2017
5:00 - 5:30pm Open to Public
5:30pm-8pm Closed Meeting
The Centennial – Franklin Pierce Room
96 Pleasant Street
Concord NH, 03303**

Attending:

Dr. Karen Crowley, Dr. Mark Abel, Dr. Dr. Vincent Albert, Dr. Shane Citron, , Dr. James Haas, Dr. Mark Hochberg, Dr. Chandler Jones, Dr. Robert Kuepper, Dr. Salman Malik, Dr. Barton McGirl, Dr. Kimberly Meyer, Dr. Peter Reich, Dr. Gregory Shaker, Dr. Patrick Vaughan.

Not in Attendance:

Dr. Rocco Addante, Dr. Shauna Gauthier, Dr. Matthew Heimbach, Dr. Dave Pak, Dr. Richard Rosato, Dr. Mark Scura

Invited Guests:

Dr. Charles Albee, President NH Board of Dental Examiners, Dr. Christopher King

Committee chair Dr. Karen E. Crowley called the public portion of the meeting to order at 5:30 PM. She welcomed Dr. Albee with a round of applause for his contributions to dentistry in NH. She welcomed future

committee member Dr. Christopher King. Dr. Crowley thanked the committee warmly for their contributions to the committee; for contributing to the safety of patients in NH dental offices and for ensuring that any patient that enters a dental office in NH for anesthesia and sedation enters an office that meets the minimum standards for patient safety for anesthesia.

The public portion of the meeting was adjourned at 6:00 PM, and the Committee met for further deliberations in the closed meeting.

PALS CERTIFICATION REQUIREMENTS

After lengthy discussion, a vote was taken to ratify a prepubertal age requirement for PALS certification for NH Dental Anesthesia Permit holders –GA/DS, MS-UR who treat pre-pubertal patients.

Dr. Kuepper made the motion, seconded by Dr. Malik.

MOTION: Suggested Revisions of NH Den 304.02
Permits for Use of General Anesthesia, Deep Sedation and Moderate Sedation

Den 304.02 (a) (4) Such dentists shall be currently certified in American Heart Association (AHA) approved advanced cardiac life support (ACLS) if treating post-pubertal patients. Such dentists shall be currently certified in American heart Association (AHA) approved pediatric advanced life support (PALS) if treating pre-pubertal patients. These requirements supersede any requirements for current ACLS or PALS certification stated in the American Academy of Pediatric Dentistry 2006 “Guidelines for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures” as referenced in Den 304.02 (d) (1).

Den 304.02 (b) (3) a.the American Dental Association **2016** “Guidelines for the Use of Sedation and General Anesthesia by Dentists” ...

Den 304.02 (b) (3) b. ...**2016** “Guidelines...”

Den 304.02 (c) (3) b. ...**2016** “Guidelines...”

10 in favor of the motion

3 opposed to the motion

The motion passed that the recommendation to NHBDE will be changed from practitioners who treat patients under age 16 to those who treat pre pubertal patients will require PALS certification.

Dr. Crowley prepared a letter to NHBDE for the NHASEC after being made aware that the NHBDE voted that everyone delivering anesthesia and sedation in the State of NH should be required to have PALS. See **Appendix 1**. This was sent to the Board immediately following the meeting.

EVALUATIONS

We have 3 overdue providers

Disposition: one is scheduling issue, one being scheduled and one not scheduled at all.

We are trying to improve timely evaluations. There are fewer seriously delayed evaluations than in the past few years, but we have 100% compliance as our goal. Right now we have a few non-compliant permit holders.

The NHBODE has asked Dr. Crowley to review all completed evaluation forms before they go to board as the Board is unable to proof them. Please send completed evaluation paperwork to Dr. Crowley who will then submit them to the Board. Dr. Albee stated that the NHBDE gets a summary of the evaluation and if the evaluation meets the current requirements as attested by the evaluators, the NHBDE grants a permit.

NHBODE says the Evaluatees are asking for their completed evaluation forms. Dr. Crowley has no problem with them seeing the forms. These completed forms may be looked at by parties other than this committee. It is very important that you make only objective notations so you are not subject to any problem should a difficulty arise with the evaluation or some other issue later on.

ITINERANT PROVIDERS

Several committee members have done evaluations of itinerant providers. A discussion took place regarding issues with Itinerant providers. Comments were very favorable.

Emergency protocol should be required for each individual office. Script for emergency call for each individual office should be submitted.

Facility inspections should be required if the provider is not self-contained; that is, if the provider relies on the facility for suction, oxygen, or other essential armamentaria.

PROTOCOL FOR BECOMING A COMMITTEE MEMBER

Appendix 2.

Welcome Letter

Appendix 3.

PEDIATRIC EMERGENCY SCENARIOS

Dr. Crowley states that she will work on creation of Pediatric Emergency Scenario for MS/UR permit holder treating pediatric patients.

OTHER POINTS OF DISCUSSION

The Committee chair checked with a supplier regarding gas tank storage. They say tanks should be stored at room temperature and no higher than 110 degrees. Tanks should be upright and chained.

Please use current version of the evaluation forms.

An email with the current version is sent to all committee members if any changes are made.

Check with Dr. Crowley's office that you have the current form. We've received out of date forms that don't reflect the current committee requirements.

The evaluation forms have been changed from a requirement to have Morphine to Morphine **OR** Fentanyl.

The committee agreed that diazepam or midazolam is acceptable for anti-seizure treatment. The forms have been changed to reflect this.

In the 2015 ACLS update, vasopressin was removed from the treatment algorithm for cardiac arrest. Consequently, it will be removed as a requirement in the evaluation forms.

EVALUATION CANCELLATION POLICY

It was the decision of the committee members that the full fee will be due for evaluations cancelled within 48 hours of the scheduled time/date. If something comes up outside of this time framework the evaluator can decide how to handle it. This notation will be included on the front of the forms, and written in any correspondence with the evaluate.

SUBCOMMITTEE OF THE NHASEC

Dr. Albee states the NHASEC is established through one sentence in the rules. The dental hygienist committee is established in a similar manner. They are a committee of 5 and they meet every month. Dr. Albee states that the Board would like a more current vehicle for anesthesia information. He requests that the NHASEC form a sub-committee to help the NHBDE on a more regular basis.

One of each type of permit provider will be on this working committee.

Advisory Committee Volunteers: Dr. Crowley, Committee Chair, Dr. Haas, Dr. Hochberg, Dr. Kuepper, Dr. Scura.

The NH Rules need to be cleaned up and changed to reflect best practice. The NHBDE needs volunteers that will help to clean up the anesthesia rules, especially Den 304 which governs the NH Anesthesia and Sedation rules. The Advisory Committee will assist with this.

8:12 pm Motion to adjourn the annual NHASEC annual meeting.

Respectfully submitted,
Karen E. Crowley, DDS

Electronic vote to approve minutes sent October 11, 2017 and
October 25, 2017.
Phone messages left on October 27 and October 31 and final tally
November 1, 2017.
12/22 Approve 0 Disapprove 10 no response.

Appendix 1. Draft letter to NHBDE re: PALS

Attached to email

Appendix 2. PROTOCOL TO BECOME A COMMITTEE MEMBER

*New Hampshire Anesthesia and Sedation
Evaluation Committee*

A Committee of the New Hampshire Board of Dental Examiners

**Protocol to become a Committee member for the NH Anesthesia
and Sedation Evaluation Committee:**

Description: The committee is composed of dental consultants who
have contracted to act as agents for the Board.

Action by Committee applicant:

- 1) Send a letter indicating interest in joining the committee along
with a copy of Curriculum Vitae to the Chair of the
Anesthesia/Sedation evaluation committee.
- 2) If the Chair of the Committee approves the applicant, the Chair
sends a positive recommendation and supporting documentation
to the NH Board of Dental Examiners. The applicant would be
voted on by the NH Dental Board of Examiners at their monthly
meeting.
- 3) If the applicant is approved by the NH Board of Dental
Examiners a contract or agreement is sent from the Board to the
applicant. Once signed and returned the Board will notify the
Chair of the committee. The applicant is then added to the NH
Anesthesia and Sedation Evaluation Committee list of

evaluators. A welcome letter is issued by the Chair of NHASEC to the new committee member.

N.B.: The candidate must comply with administrative rule Den 304.2 (h) (3) a. and b. (see attached) in order to be considered.

Appendix 3.

*New Hampshire Anesthesia and Sedation
Evaluation Committee*

A Committee of the New Hampshire Board of Dental Examiners

August 14, 2017

Dr.

Dear Doctor,

It is my pleasure to welcome you to the New Hampshire Anesthesia and Sedation Evaluation Committee, a committee of the New Hampshire Board of Dental Examiners.

You have gone through many hurdles to reach this point of peer review for anesthesia in dentistry. You are trained and educated in the art and science of sedation and/or anesthesia, you have met the requirements of the NHBODE to receive a permit for practicing, and you yourself have undergone the process of office evaluation and comprehensive evaluation. Now, going even further, you have volunteered your time and expertise to ensure the safety of the citizens of New Hampshire. Congratulations on your achievements and altruism!

Our Committee mission is to maintain the standards of equipment, drugs, personnel and emergency preparedness of the dentists given the privilege of delivering sedation and anesthesia in the state of New Hampshire. Our service is to the citizens of New Hampshire who depend on these processes to ensure their safety in the dental offices of New Hampshire.

Your duties as a Committee member are several. First, you will participate in the evaluation process for facility inspections and comprehensive evaluations of dentists seeking anesthesia and sedation permits. The standards for these are determined by the Committee, and are covered in several documents which are attached. Specifically, they are the Facility and Comprehensive Evaluation forms for Moderate Restricted Sedation Providers, Moderate Unrestricted

Sedation Providers and Deep Sedation/General Anesthesia Sedation Providers. Also included are the scenarios for the comprehensive evaluations for moderate sedation providers and deep sedation/general anesthesia providers. Your office evaluation assignments are attached. I will ask you to not only perform these office inspections individually and comprehensive evaluations as a team member, but to give feedback for improvement of the forms and the process as you see necessary. Other documents that are attached are the Policy and Procedure Manual, the organizational chart of NHBDE and the Committee and the Directory of current members of the Committee.

Second, the annual meeting of the Committee occurs in early spring, and I respectfully ask for your attendance. I try to keep the meetings as short as possible and on point. I appreciate the views and opinions of all committee members, and find that the collective wisdom is greater than that of any one individual.

Lastly, I would ask that you share with the Committee any information you obtain about office outpatient anesthesia trends and issues, so that we can all stay well informed about the climate in which we practice this privilege of providing pain and anxiety relief for the citizens of New Hampshire.

Welcome to the NHASEC! I consider our privilege to practice sedation and anesthesia a public trust. The work we do as a Committee will uphold that trust. It will help us to maintain standards so that our privilege to deliver these services to the people of New Hampshire can be continued with the best interest of the patient as our primary objective. Thank you for your participation. I look forward to your unique contribution to the Committee.

Sincerely yours,

Karen E. Crowley, D.D.S.
Chair, Anesthesia and Sedation Evaluation Committee
New Hampshire Board of Dental Examiners
Crowley Oral Surgery and Associates
12 Parmenter Road, Unit A-2
Londonderry, NH 03053
(603) 437-7600

APPENDIX B 2018

**DR. HOCHBERG'S REPORT ON ADVISORY
SUBCOMMITTEE**

NHASEC AS
New Hampshire
Anesthesia/sedation
evaluation committee
Advisory subcommittee

Formed at the NHASEC annual
meeting in April 2017

Advisory Subcommittee Responsibilities

- Members should be current with the latest in Anesthesia related issues & regulations with ADA, AAOMS, ASA, ADSA, ASDA, AAPD that could affect NH regulations regarding anesthesia delivery by dentists.
- Members should be available in an Advisory capacity the the NHBODE on Anesthesia related issues.
- Subcommittee composed of a Chair a representatives from all levels of permit holders. (Ideally: Pediatric Sedation Provider, Dentist Anesthesiologist, GA/DS provider, Unrestricted Moderate Sedation Provider, Restricted Moderate Sedation Provider.
- Advisory Subcommittee will plan on meeting Quarterly to discuss current issues in Anesthesia (in general) and NH regulatory issues. (specifically)

NHASEC AS

June 7, 2017
October 26, 2017
January 24, 2018
February 21, 2018
April 4, 2018

June 7, 2017 meeting

Discussion of NHBODE Actions related to Anesthesia (eg: Board voted to require PALS for only those Anesthesia Providers treating Pre-pubertal patients, **not all Anesthesia Providers**)

Discussion of NHASEC Issues

Welcome new members, Scheduling of difficult OAE, How to handle overdue Comprehensive OAE

Rewrite the Rules DEN 304 (these were reviewed and inconsistencies were found that will need corrected)

Definition of Prepubertal (vs age) included in the "Rules"

Timing of Comprehensive Anesthesia Evaluations_(should be within 6 to 8 weeks of Facility Inspections)

Insufficient time/flexibility of current OAE evaluators.

(Suggest allowing non-permitted recent NHASEC members to continue to inspect offices)

Action plan from June 7, 2017 meeting

- ← Develop volunteer call schedule for members of NHASEC AS to attend NHBODE meeting
- ← Dr. Kuepper to send our discovered inconsistencies in the "Rules" DEN 304 for the other members to review.
- ← Schedule delinquent Comprehensive OAE ASAP
- ← Send out OAE assignments in August, instead of January.
- ← Contact the NH Pharmacy Board regarding rules for the storage and security of Controlled Substances.

OCTOBER 26, 2017

MEETING

Extended an invitation to Dr. Sal Malik to join NHASEC AS which he accepted.

Itinerant Anesthesia Providers are either **Self Contained** or **Facility Dependent**

(Written Emergency Transfer Plan required for each office the IAP provides anesthetics in.)

Questions from the NHBODE were answered by the Chair + Subcommittee members.

NHASEC Assignments –Must be completed by the evaluator in a timely manner, or Chair informed ASAP.

Scheduling of OAE – If three attempts to schedule are unsuccessful, Chair informed ASAP to resolve or re-assign.

Revision of DEN 304 (Dr. Kuepper recommended using Colorado Rules and Regs as a model to improving NH Rules and Regs)

Subcommittee recommends two evaluators necessary for ALL Comprehensive OAE.

Subcommittee recommends NHBODE allow retired Anesthesia Permit holders to continue to conduct OAE until their permits expire.

JANUARY 24, 2017

meeting

Implications of HB 1577 for Rules changes (NHASEC AS member Dr. Kuepper met with bill co-sponsors)

- PALS required for Anesthesia of pre-pubertal patients.
- Dr. Kuepper recommended some changes in wording (eg: "competent" changed to "qualified")
- Dr. Kuepper recommends DAANCE become a **requirement** for GA/DS providers as an acceptable second qualified Anesthesia team member.

(NEITHER NH REP willing to omit second Anesthesia professional for pre-pubertal patients)

- Dr. Jim Haas expresses concern over HB1577 limiting "access to care" with second Anesthesia provider necessary for Moderate Sedation. May need insurance mandate for children older than 6 years of age that require behavior management.
- A Pediatric Designation for all Anesthesia permit levels to be managed at the Rules level.
- Mandate for CE requirement related to Anesthesia & Sedation (**Subcommittee recommends 16 hours**)
- Proposed requirement of **ROOT CAUSE ANALYSIS** for ADVERSE EVENTS related to Anesthesia & Sedation (Subcommittee tables this to a later time)
- Subcommittee recommends every non-dentist Anesthesia provider **MUST** have an initial Facility Insp.

JANUARY 24, 2018 Meeting Continued

INITIAL PROSIONAL PERMIT (IPP)

- Applicant files for IPP for all levels of permitting based on education & training.
- NHASEC conduct initial facility inspection **AND** Emergency scenarios (2 evaluators)
- Within 90 days, NHASEC conducts clinical patient SED/ANES evaluation by 2 evaluators.
- If successful, 5 year cycle of OAE begins.

QUESTIONS FROM THE NHBODE

FEBRUARY 21, 2018 MEETING

Discussion of Implications of HB1577 for NH Rules Changes

- HB1577 introduced by NH REPS Marsh, Dawn-Bailey, Messmer, Cushing & SEN Reagan in 1/10/2018
- Meeting at NHBODE 1/20/2018 with HB 1577 co-sponsors REP Marsh & Dawn-Bailey.
- REP Marsh proposed Amendment to NH 1577 exempting Dental Anesthesiologist and OMS from 2nd

decreed Anesthesia Provider if DAANCE certified assistant present.

- Public Hearing on HB1577 held 1/30/2018 at Health, Human Services and Elderly Affairs Subcommittee
- REP Knirk on 1/30/2018 proposes another Amendment to HB1577 reverting back to original bill requiring decreed 2nd Anesthesia Provider.
- NHBODE President Tara Lesveque-Vogel writes letter to Chair of HHSEA subcommittee on 2/6/2018 suggesting language change back to the Marsh Amendment
- Working Session of HHSEA Subcommittee on 2/20/2018 has NHASEC Chair Dr. Karen Crowley speak at their invitation

(Training & qualifications of Dental Anesthesia team, CRNA comparison to DAANCE certified assistant, lack of need for Minimal Sedation permitting, work of NHASEC to date, CE requirements for ANES/SED providers, Instituting the new Initial Provisional Permit)

FEBRUARY 21, 2018 Meeting continued

REPS Marsh, Champion, Knirk, Bove submit another HB1577 Amendment on 2/20/2018 which was voted "OUGHT TO PASS"

Full Committee Executive Session voted 18-1 for Amendment to pass the following day.

From here: Submission to NH HOUSE of REPS (will be followed closely by NHDS lobbyist Adam Schmidt)

Then goes to NH SENATE

**NHASEC AS is in favor of
the most recent
Amendment of HB 1577**

**FEBRUARY 21, 2018
meeting continued**

Dental Anesthesia Rules Changes that will be necessary as a result of NH 1577

DAANCE will now be required certification for all anesthesia assistants.

(May be easy for AAOMS members, D.A. may need to get their assistants through DAANCE)

(NHBODE may accept EMT/Paramedic training as an alternative)

(Transition phase to having DANCE certified assistants, SC recommended 2 years)

- ← NHASEC AS's interpretation of proposed legislation is MS-U permit holders NOT affected by HB 1577
- ← Minimal Anesthesia Permitting Proposed by HB 1577
 - A. No theoretical concern for NHASEC
 - B. Incongruent wording as proposed in the legislation.
 - C. Permitting of up to 1400 dentists will be a huge administrative burden for the NHBODE.
 - D. No specific requirements for OAE for Minimal Sedation Permits.

DENTAL ANESTHESIA RULES REVISION PLAN

Rules changes need to be update to reference the ADA Guidelines for Use of SED/GA by dentists & Guidelines for teaching Pain Control & Sedation to Dentists & Dental Students (most current version)

Propose In-Office Emergency Drills Training (Log of training dates, participants, drills reviewed, etc.) (Quarterly sessions of one hour will be recommended with everyone in office participating)

To improve NH Rules and Regs, do we modify current Rules, or rewrite the Rules using Colorado as a model

Will need to develop some type of Minimal Sedation Permitting Process

Will need to develop a format for "ROOT CAUSE ANALYSIS" of Adverse Events

Will need to enact the recommendation of the Initial Provisional Permitting Process

Will need to incorporate "any new language" of NH legislation that is passed into law.
Need to update requirements of Anesthesia Assistants
Consider a PEDIATRIC DESIGNATION for all GA/DS permits and Minimal Sedation Permits
NHBODE vacancy – NHASEC AS recommends Dr. Mark Scura to fill this position.
NHASEC AS recommends sending a "Letter of Appreciation" to Dr. Robert Kuepper for all the work has done on multiple levels.

APPENDIX C 2018

DR. ABEL'S REPORT ON HB1577 to NHASEC Annual Meeting

Dr. Mark Abel

April 11, 2018

New Hampshire HB1577 was introduced by Rep. Dean-Bailey, Rep. Messmer, Rep. Cushing, Rep. Marsh, and Sen. Reagan on January 10, 2018 at the request of one of Rep. Dean-Bailey's constituents who is the grandmother of Caleb Sears, a 6-year-old boy who died under office anesthesia administered by a California oral surgeon in 2015. The proposed bill mandates that a second, dedicated anesthesia provider be present for administration of sedation to children under the age of 13 for dental procedures. A meeting was held at the New Hampshire Board of Dental Examiners (NHBODE) office on January 20, 2018 with the bill's key sponsors (Rep. Dean-Bailey and Rep. Marsh, an ophthalmologist), together with Connie Stratton, Dr. Laurie Rosato, and Dr. Robert Kuepper, among others. Dr. Kuepper provided testimony at that meeting on behalf of the NHBODE giving context to the legislators of New Hampshire's stellar safety

record with respect to sedation administered by dentists in their offices to date.

Subsequent to the January 20th meeting, Rep. Marsh filed an amendment to exempt Dental Anesthesiologists and Oral Surgeons from the requirement for a second, dedicated anesthesia provider, if a DAANCE-certified assistant was in attendance. Rep. Knirk then proposed an amendment on January 30, 2018, which essentially reverted the bill's wording back to requiring a second, dedicated anesthesia provider be present for administration of sedation to children under the age of 13 for dental procedures, regardless of a dentist's specialty training.

A public hearing on the bill was held by the House Health, Human Services, and Elderly Affairs (HHSEA) Committee on January 30, 2018. A summary in support of the bill was given by Rep. Dean-Bailey and Rep. Marsh. Testimony was also then given by Mike Auerbach and Dr. Manny Sousa for the New Hampshire Dental Society (NHDS), by Connie Stratton for the NHBODE, and by Dr. Mark Abel as a private-practice oral surgeon. The testimony advocated that the bill be modified to give the NHBODE the authority to enforce the rules mandated by the bill, to better reflect the training and abilities of the various dental specialists, and to address the affordability question of offering parents the option of having their children's dental procedures performed in a hospital setting with additional anesthesia personnel present at an increased expense. Current statutes only require medical insurers to reimburse facility and anesthesia charges for children under age 6 undergoing dental procedures in a hospital setting, whereas the bill highlights that special attention with respect to anesthesia for dental procedures be provided for children under age 13. Testimony was then given in support of the bill, as originally introduced, by Dr. Charles Cote, representing the American Academy of Pediatrics, who was critical of dentists' ability to provide sedation to children unsupervised in their offices.

Following this public hearing, Dr. Levesque-Vogel wrote to Chairman Kotowski of the HHSEA Committee on February 6, 2018, suggesting language changes of the bill with the Marsh amendment. A Working Session of a subcommittee of the HHSEA Committee was held on February 20, 2018. Dr. Karen Crowley testified at the invitation of the Chair (Rep. Bove) as to

the training and qualifications of the anesthesia team, CRNA comparisons to DAANCE, the lack of need for a minimal anesthesia permit, the work of the New Hampshire Anesthesia and Sedation Evaluation Committee (NHASEC) to date, and the already recommended changes to the Rules to strengthen the continuing education requirements for permit holders, instituting a Provisional Permit.

Subsequent to that meeting, Rep. Marsh, Rep. Champion, Rep. Knirk, and Rep. Bove submitted another amendment on February 20, 2018, which was voted “ought to pass” during a full Committee Executive Session 18-1 the next day. The amended version of the bill, which passed the HHSEA Committee, included the wording that exempted Dental Anesthesiologists and Oral Surgeons from the requirement for a second, dedicated anesthesia provider for administration of sedation to children under the age of 13 for dental procedures.

On March 14, 2018, the bill was referred to the Senate Health and Human Services (HHS) Committee. On April 3, 2018, the HHS Committee held a public hearing, at which testimony was provided by Mike Auerbach and Dr. Manny Sousa for the NHDS, and by Dr. Mark Abel as a private-practice oral surgeon. The NHDS expressed gratitude for “Rep. Dean-Bailey’s initiative to review and update the state’s rules governing dental sedation to hopefully prevent tragedies like the one that occurred in California from occurring in New Hampshire.” The NHDS further expressed gratitude that they were approached by the bill’s sponsors to help improve the legislation and that they look forward to working together with the Legislature in the future. The NHDS also expressed appreciation that the bill’s sponsors were willing to amend the bill to include changes to state statutes so that medical insurers will be required to cover facility and anesthesia charges for children under the age of 13 undergoing dental procedures in a hospital setting. Dr. Abel echoed this sentiment and also highlighted some recommended wording changes to more accurately reference the specialties of “dental anesthesiology” and “oral and maxillofacial surgery” for exceptions under this bill.

This past week, the NHDS Lobbyist (Adam Schmidt) continued to act as a liaison between the bill’s sponsors and the dental

community to further tweak the bill's wording to be acceptable to all of the stakeholders involved.

Appendix 4

Articles on Single Operator Model of Sedation

Concerns Regarding the Single Operator Model of Sedation in Young Children

Rita Agarwal, Anna Kaplan, Raeford Brown, Charles J. Coté

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772.

Concerns Regarding the Single Operator Model of Sedation in Young Children.

Agarwal R, Kaplan A, Brown R, Coté CJ.

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2018 Mar 2. No abstract available.

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the emergency department, he was immediately and successfully intubated, but it was too late. For the next 48 hours, our family stayed by Caleb's side in his hospital room. Caleb's medical condition deteriorated, until finally a neurologist told us he had passed. Caleb's parents held him as he was removed from the ventilator.

Over the next months, our family provided support in court we could for Caleb's educational interests. This profound personal loss spurred our family to educate ourselves further regarding dental practice models and procedures. Looking beyond Caleb's case, it was surprising to learn that this was a common model in dental practice. Our family discovered that Caleb's death was not an isolated incident, but no one was doing anything to change it. We set out to show a light in this issue and hopefully prevent other families from suffering similar unimaginable losses. Caleb's Law began when our family (Caleb's mother and father, my husband, and myself) met with our California State Assembly member Terry Thurmond. My dream had been that had happened to Caleb and proposed a bill to make dental anesthesia safer. I worked closely with Mr. Thurmond to both draft a bill and present it to the State Assembly.

The first version of the bill proposal drafted by our family required that there be a dedicated qualified anesthesia provider to monitor pediatric patients undergoing deep sedation or general anesthesia. This version of the bill had major opposition from the California Dental Association and the California Association of Oral and Maxillofacial Surgeons. The American Academy of Pediatrics, California AAP, CA, a 501(c)(3) separately incorporated from the national AAP, stepped in as the sponsor of the legislation. The AAP-CA provided clout and credibility. They helped us muster lobbying resources, physicians eager to testify for children's safety, and

had deep experience with child health advocacy. Two authors (CIC, R.A.) provided background and testimony as witnesses for hearings and meetings with legislators and broadened the coalition of advocates that were now advocating for change. The California Society of Anesthesiologists and the California Society of Dentists, pediatricians, also joined us with support of the bill. Together this coalition, which included our family, worked to shepherd the bill through the legislature and to the governor for signature. This became known as Caleb's Law Part 1.

Caleb's Law Part 1 [www.calebslaw.com] passed in 2016 and accomplished 3 important changes: (1) it mandated improved data collection by the Dental Board of California by requiring them to collect specified epidemiologic information for each adverse event and encouraged the dental board to contract with a nonprofit anesthesia registry to begin real-time data collection for sedation impairment in the dental office; (2) mandated that the dental board perform a study of sedation safety; and (3) specified the contents of a disclosure form for parents concerning anesthesia-related risks in a dental setting.

The California Dental Board completed their study by September 2016. The Family and Assemblymember Thurmond, together with the AAP-CA, have now sponsored a new 2-year bill to further these recommendations. Items include some type of either that there should be a separate anesthesia provider for young children undergoing deep sedation and general anesthesia. This bill, AB 2214, known as Caleb's Law Part 2, however, the dental lobby continues to challenge the recommended changes, arguing that there are insufficient data to justify change and that a separate anesthesia provider would increase costs to patients and decrease access to care. This point is

typically argued, given that dentists and oral surgeons usually feel their patients are safe for surgery and anesthesia. Caleb's oral surgeon, for example, billed for 700 dollars for anesthesia and 1255 for the general anesthesia.

Caleb was a completely healthy child. He did not have an allergy, as with our a later heart defect. His death was completely preventable. Had a medically skilled independent physician as recommended by the AAP/AAPD guidelines been used, Caleb would likely not have died. It is a tragedy that a child who was healthy and completely free of medical conditions had to suffer a preventable death. It is a tragedy that a child who was healthy and completely free of medical conditions had to suffer a preventable death.

DISCUSSION

Younger children are recognized to be at increased risk for side effects and complications with sedation and/or anesthesia. The medical community routinely follows the AAP/AAPD and the American Society of Anesthesiologists (ASA) guidelines regarding procedures with sedation. The AAP/AAPD guidelines state "being deep sedative there will be 1 person usually responsible for continuous observation of the patient's vital signs, airway patency and adequate oxygenation and to monitor administration of sedative agents."

The dental board of California has issued a bill that requires the dental board to conduct a study of sedation safety and to report the results of the study to the public. The bill also requires the dental board to develop and implement a plan to improve the safety of sedation and anesthesia in dental offices.

It is important to note that the dental board of California has issued a bill that requires the dental board to conduct a study of sedation safety and to report the results of the study to the public. The bill also requires the dental board to develop and implement a plan to improve the safety of sedation and anesthesia in dental offices.

Table with 4 columns: Name, Title, Journal, Year. Includes entries for 'Sedation in the dental office' and 'Anesthesia in the dental office'.

services. Sedation modules, courses, and hands-on workshops are taught locally and nationally and include a crisis management workshop. Both the Board and the American Academy of Pediatrics (AAP) state "anesthesia should be administered only by persons trained in the administration of general anesthesia and not involved in the conduct of the surgical/operative procedure."

In contrast to physicians, dentists and dentists and oral surgeons often use the single operator model. The single operator model allows for 1 anesthesia permit holder (as defined by the state in which the dental work is performed) to administer both the sedation and/or anesthesia and perform the dental work. Each individual state determines the requirements for licensing and scope of practice. Many of these practitioners will have a dental assistant help monitor the patient. The American Association of Oral and Maxillofacial Surgeons has published guidelines approving oral surgeons to administer anesthesia with only 2 dental assistants for support. They justify this practice by claiming that 1 dental assistant's only job is to monitor the patient while the other assists the dentist. The oral surgeon in this model is the only one trained in anesthesia, sedation, resuscitation, and medical care. State dental boards do little to track adverse outcomes in dental offices despite the authors of several medical articles reporting disproportionate rates of injury

and deaths in anesthesia in dental offices as compared with medical settings. The requirements for the education and training of dental assistants vary considerably from state to state. They often have no more than a high school education, with many having only on-the-job training (Table 1). A dental assistant in most states is not licensed to draw up or administer medications, cannot perform any rescue maneuvers and in all likelihood does not have the education or training to recognize or change levels of sedation. There is a Dental Assistant Anesthesia National Certification Examination that requires 36 hours of online education and the successful passage of an online examination. This certification is required in a few states (CA, HI) for a dental assistant (or in some cases dental hygienists) to be allowed to monitor and assist with sedation of children. The Dental Assistant Anesthesia National Certification Examination still does not qualify participants to draw up or independently administer medications. California has a Dental Sedation Assistant Certification that requires 210 hours of self-paced education and training. Although cardiac life support and PALS training are not required, although Caleb's Law Part 2 (AB 2214) which is currently being reviewed in the California State Assembly would require PALS training. The only person capable of administering medications and assisting with emergency resuscitation is the dentist or oral surgeon performing the procedure. Thus, the only backup for rapidly responding additional skilled

help is by calling 911, which may take many minutes and may have emergency medical technicians who lack skills to manage a child's airway. The dental office is in fact a high risk venue, which makes adequate skilled staffing even more important. With the single operator model, the dentist or oral surgeon would have to simultaneously manage the airway, draw up and/or administer rescue medications, recognize and call the code, and manage any emergency resuscitation. This is an impossible task for even the most skilled clinician.

In medicine, adverse events are routinely reported to the institution's quality improvement or risk management offices. Additionally, multiple national agencies (Joint Commission, Food and Drug Administration, Centers for Disease Control and Prevention, etc.) and societies have developed databases to collect as much information on these events as possible, with the intent to understand faulty processes and improve outcomes. The same data collection does not occur in dentistry. The state dental boards are the sole recipient of these data before the passage of Caleb's Law in California and the simultaneous review of dental sedation practices in Texas, not 1 dental board in all 50 states was systematically tracking these data. This year, Texas and California will be the first 2 states to start tracking data on adverse events.

When Caleb's family evaluated their anesthesia options, they calculated the risks on the basis of the dominant medical model. They had no reason

Remember that this is a general... would administer anesthesia... and conduct the procedure... (pediatric dentists and oral... surgeons have been able to provide... services on the basis of... the reputation of safety created by... the medical community without... disclosing to the patients that they... did not follow the same standards... These who argue for the continuation... of the single operator model have a... lack of data to prove that this practice... is any less safe than having a single... qualified anesthesia provider. This... argument is longstanding. Over 15... years ago, Choi et al¹⁷ reported 29... deaths at a pediatric hospital... (due to an anesthesia technician... being in control of the anesthesia... machine). The American Pediatric... Society, the American Pediatric... Society Reporting System, and other... databases that collect information on... anesthesia are not designed to capture... data on sedation and/or anesthesia... for the vast majority of sedations.

The authors of a 2015 article in... the *Journal of the American Dental... Association* reported the incidence... of death in their region as patients... undergoing deep sedation or general... anesthesia for oral and maxillofacial... surgery. In addition, the gross value... of the procedure was reported... (operator fee).¹⁸ They used the Oral... and Maxillofacial Surgery National... Resource Emergency anesthesia... database (database from 2003 to... 2013) to determine the incidence... of sedation and/or anesthesia... complications. They also reported... that 10 million sedations were performed... in which 100 children, and 112... deaths at least injuries occurred... They estimated that 1 case of death... for every 1000 sedations, and at least 1... million were sedations administered... every month. These complications... are more frequent than in healthy... patients of all ages undergoing... invasive procedures. These...

Findings can be compared with the... Whitefly data (reported by the... Society for Pediatric Anesthesia),... which gathers data on the risk... and incidence of complications in... pediatric anesthesia.¹⁹ Whitefly... data is an aggregation of 22 pediatric... anesthesia departments designed... to reduce the risk and incidence of... complications in pediatric anesthesia... by gathering, interpreting, and... taking action on data collected from... these departments. Risks and... incidents are reported along with... associated information as well as... demographic variables of cases and... demographics. There have been... no anesthesia-related deaths or... morbidity events in almost 2... million healthy children (8 Tyler... MD, personal communication... <http://www.whitefly.org>, 2017). Another database, the Pediatric... Sedation Research Consortium,²⁰ is... a collaborative study that collects... epidemiologic information and... to making pediatric sedation... safer and more effective.²¹ All... sedation personnel in participating... institutions, offices, and clinics... regardless of specialty are reported... (including data on a few dental... providers. There are currently 49... participating institutions. There... have been 10 deaths and significant... complications in over 500,000... reported cases to date (J. Cantam... MD, personal communication... Fall President and Co-Chairman of... the Pediatric Sedation Research... Consortium, 2017). Although there... have been adverse events, with two... reported mortality (1 child, the... morbidity and mortality of healthy... children ranking in 1 of 10 on the... ASA scale who are undergoing... general anesthesia or procedural... sedation reported by their institutions... (of 500,000 to 600,000)... appear to be well below that reported... from the dental community in healthy... children and adults (1 of 1000-2)... likely because of the ready availability...

of skilled personnel to successfully... revise the child

CONCLUSIONS

The AAP has made a commitment... to improve care for children... undergoing dental sedation... (including all practitioners... from the AAP AAP guidelines. The... American Academy of Pediatric... Dentistry and oral maxillofacial... surgeons are all on their Top 10... list of sedation and/or anesthesia... services to use the single operator... model of sedation and/or anesthesia... from difficult procedure, and the... Society and British Columbia Dental... Association have permanently... suspended the single operator... model.²² An advocate for the safety... of all children, we must permanently... suspend the same rules and guidelines... apply to all children undergoing deep... sedation or general anesthesia until... the data is in order. Analyze all types... of procedures. First, complete sedation... for those children by conducting their... own AAP chapter and clinics... or state chapters and by analyzing... the records and after to help... (pediatric dentists to find a better... state or California. It is also... possible to help children with... a long-term permanent... sedation become a single procedure... until the data is in order. Every... evening adverse event. **Pediatrics**... can educate patients about the risks... of sedation, and clinicians to... ask questions (HealthyChildren.org).

ABBREVIATIONS

- AAP: American Academy of Pediatrics
- AAPD: American Academy of Pediatric Dentistry
- AAOHA: American Association of Pediatric Dentists, California
- ASA: American Society of Anesthesiologists
- FALL: pediatric advanced life support

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POTENTIAL CONFLICT OF INTEREST: The authors have indicated no potential conflicts of interest that could be construed as a conflict of interest.

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[Prevalence and Predictors of Adverse Events during Procedural Sedation Anesthesia-Outside the Operating Room for Esophagogastroduodenoscopy and Colonoscopy in Children: Age Is an Independent Predictor of Outcomes.](#)

Biber JL, Allareddy V, Allareddy V, Gallagher SM, Couloures KG, Speicher DG, Cravero JP, Stormorken AG.

Pediatr Crit Care Med. 2015 Oct;16(8):e251-9. doi: 10.1097/PCC.0000000000000504.

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Appendix 5 JAMA Article on Anesthesia Billing



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JAMA Network Open

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Comparison of Anesthesia Times and Billing Patterns by Anesthesia Practitioners

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See commentary "[Is Upcoding Anesthesia Time the Tip of the Iceberg in Insurance Fraud?](#)" in *JAMA Netw Open*, volume 1 on page e184302.

Associated Data

[Supplementary Materials](#)

Supplement: eTable 1. List of Medical Comorbidities and ICD-9 Codes

eTable 2. Regression Coefficients for Case Prediction

eTable 3. Differences in Type of Institution Between Included and Excluded Cases

eTable 4. Distribution of Surgical CPTs Between Included and Excluded Cases

eMethods. Regression Model

eFigure. Distribution of Anesthesia Times

[jamanetwopen-1-e184288-s001.pdf](#) (483K)

GUID: 9261C719-8539-4B42-B65B-27674CC0AE39

[Go to:](#)

Key Points

Question

What is the incidence of anomalous billing among anesthesia practitioners in the United States?

Findings

In this cross-sectional study of 4221 anesthesia practitioners in the United States, 212 reported an unusually large number of cases with durations that were a perfect multiple of 5 minutes. These practitioners submitted billing for anesthesia times that exceeded the expected time by a mean of 21.5 minutes.

Meaning

Anesthesia practitioners with the highest tendency to report anesthesia times with a demonstrable anomaly (times rounded to 5 minutes) may be more likely to report longer-than-expected anesthesia times.

[Go to:](#)

Abstract

Importance

Most physicians must exercise discretion in choosing billing details that determine payment for their services. Understanding the degree to which physicians inappropriately use this discretion has important implications for payment policies. However, separating higher case complexity from inappropriate billing has made this a challenging issue to study. Anesthesia offers a useful test case because practitioners are partly compensated by self-reported length of time (anesthesia time) spent on a case.

Objective

To characterize the incidence and consequences of inappropriate billing practices among anesthesia practitioners.

Design, Setting, and Participants

In this cross-sectional study of data from a large anesthesia registry, 6 261 955 procedures performed by 4221 anesthesia practitioners (physician anesthesiologists, nurse anesthetists, and anesthesiologist assistants) between January 1, 2010, and March 31, 2015, were studied. A total of 3047 practitioners practiced primarily in community hospitals, whereas 453 practiced primarily in university hospitals and 721 practiced in other settings (eg, specialty hospital).

Exposures

Practitioners with anomalous patterns were identified as those reporting an unusually high number of anesthesia times ending in a multiple of 5 minutes (eg, 65 minutes).

Main Outcomes and Measures

Incidence of anomalous patterns among anesthesia practitioners and the increase in anesthesia times associated with these patterns.

Results

This study included 4221 practitioners who each performed at least 300 anesthetic procedures. Practitioners in the top fifth percentile reported anesthesia times ending in a multiple of 5 minutes a mean (SD) of 53.7% (13.7%) of the time (range, 36.8%-96.1%), whereas practitioners in the 6th to 10th percentiles reported anesthesia times ending in a multiple of 5 minutes a mean (SD) of 31.8% (2.0%) of the time (range, 29.2%-36.7%). Practitioners in the top fifth percentile submitted billing for anesthesia times that exceeded the expected time by a mean of 21.5 minutes (95% CI, 15.8-27.1 minutes).

Conclusions and Relevance

In this study, findings suggest that anesthesia practitioners with the highest tendency to report anesthesia times ending in a multiple of 5 minutes did so with high frequency, which reflects anomalous billing. These practitioners also sought payment for longer-than-expected anesthesia times, which would correspond to higher payment for their services.

[Go to:](#)

Introduction

In the United States, hospitals and health care practitioners exercise discretion in determining the amounts paid for their services. For example, in outpatient settings, payment is often based on the practitioner's assessment of the complexity of the patient's case and the issues addressed. Although insurers provide this discretion because complex cases require more time, there are concerns that it may be used inappropriately to increase compensation. For example, in response to the elimination of consultation payments from the Medicare Part B Physician Fee Schedule in 2010, one study¹ demonstrated that practitioners nearly fully substituted toward billing for more expensive new office visits, suggesting inappropriate use of subjective codes in the fee schedule.

More generally, studies suggest that some physicians engage in revenue-maximizing behavior, as exemplified by supplier-induced demand^{2,3,4} and self-referral.^{5,6} Characterizing the degree to which practitioners inappropriately use their discretion has important policy implications. If inappropriate discretion is widespread, this would argue in favor of payment mechanisms with reduced discretion. In addition, at its extreme, inappropriate use of discretion constitutes insurance fraud, which imposes significant costs. In 2014, \$1.4 billion was spent to combat Medicare and Medicaid fraud,⁷ and the cost of fraud more generally has been estimated to range from \$82 billion to \$272 billion.⁸

Previous studies have demonstrated the presence of inappropriate billing practices among hospitals⁹ and insurers¹⁰ and have found that hospitals modify behavior in response to antifraud enforcement efforts.¹¹ However, fewer studies have examined practitioner behavior. A prior study¹² found regional variation in the frequency of diagnosis codes among Medicare beneficiaries but did not address the implications for billing. Moreover, this study demonstrated a key difficulty in assessing the degree of inappropriate discretion: if one practitioner states that a particular case is complex and another does not, who is correct? Although researchers and insurers can identify practitioners who bill anomalously, such as billing an unusually high number of complex cases, it is difficult to identify whether the anomaly is attributable to inappropriate discretion or a truly higher incidence of complex cases, particularly because there are often few objective criteria to judge complexity.

In the United States, the amount that insurers pay for a given anesthetic case is based on the number of anesthesia units it generates. Each case is associated with a fixed number of units based on type of surgery; for example, in 2014, a laparoscopic cholecystectomy generated 7 units for fee-for-service Medicare patients.¹³ In addition, a case generates units based on the self-reported amount of time spent providing care (anesthesia time), earning 1 unit for every 15 minutes.¹⁴ Insurer regulations typically dictate that anesthesia time starts when the anesthesia practitioner begins preparing the patient for the procedure and ends when the patient is transferred to postanesthesia care. Because many insurers pay to the actual minute (eg, a 12-minute case earns 0.8 unit), insurers require that practitioners report exact times without any rounding. In a 2014 survey conducted by the American Society of Anesthesiologists, the median payment for an anesthesia unit among commercial payers was \$66, whereas the national Medicare rate was \$22.62.¹⁵

In the United States, anesthesia care can be provided by anesthesiologists (physicians trained in the specialty of anesthesiology), nurse anesthetists, or anesthesiologist assistants, with the last 2 groups typically providing care under the supervision of an anesthesiologist.¹⁶ Throughout this article, the term *anesthesia practitioner* is used to refer to all 3 groups.

In this study, we examined the incidence and consequences of inappropriate discretion in billing in the case of anesthesia. Anesthesia presents a unique case because practitioners are paid in large part by the self-reported amount of time that they spend on a given case (anesthesia time), giving an incentive to report longer anesthesia times. Similar to other specialties, identifying practitioners with anomalously long anesthesia times is not sufficient to demonstrate inappropriate discretion because these anomalous times could be explained by unobserved clinical or institutional factors. However, anesthesia is unique because other anomalies, such as

an excess number of cases with an anesthesia time ending in a multiple of 5 minutes (eg, reporting an excess number of cases with an anesthesia time of 75 minutes as opposed to 74 or 76 minutes), have no plausible clinical basis. Thus, it is possible to identify inappropriate discretion through a 2-step process. First, use the presence of anomalous billing patterns with no clinical basis, such as an excess number of cases with an anesthesia time ending in a multiple of 5 minutes, to identify practitioners who may be billing anomalously. Second, because rounding habits may explain this former phenomenon, estimate whether these practitioners report longer-than-expected anesthesia times based on observable clinical and institutional characteristics. To the extent that practitioners with anomalous patterns also report anesthesia times that are longer than would be expected, this would argue that they may be inappropriately using their discretion. This approach, which uses statistical anomalies to identify anomalous behaviors, has been used in other settings to identify anomalous behaviors (eg, cheating on standardized examinations¹⁷). We applied this approach using a nationwide US registry of anesthesia cases to characterize the scope of anomalous and inappropriate billing practices among anesthesia practitioners.

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Methods

We used deidentified data from the National Anesthesia Clinical Outcomes Registry (NACOR), a registry of anesthesia cases that is maintained by the Anesthesia Quality Institute.¹⁸ The registry is a collection of anesthesia claims that are provided by participating anesthesia practices (283 practices as of April 2015). The database includes information obtained from billing and medical records that are converted into a publicly available file, the Participant User File. For each case, the Participant User File provides information, such as surgical and anesthesia *Current Procedural Terminology (CPT)* codes, diagnosis codes (*International Classification of Diseases, Ninth Revision [ICD-9]*), and the reported anesthesia time. The reported anesthesia time in NACOR is extracted from administrative records and represents the same time that was sent to the insurer to establish payment. In addition, the data report encrypted identifiers for the specific facility, anesthesia group, and anesthesia practitioner. Because anesthesia practices report these data to varying extents, not all data are available for every case. NACOR data have been extensively used for outcomes research in anesthesiology.^{19,20} This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (**STROBE**) reporting guideline for reporting cross-sectional study results. Institutional review board review was not required according to the Stanford University protocol for deidentified data.

The data included 26 568 734 anesthesia cases that occurred between January 1, 2010, and March 31, 2015. We excluded cases for which the following variables were missing: anesthesia time (n = 1 888 625), surgical *CPT* code (n = 6 359 104), patient age (n = 269 761), patient sex (n = 441 368), specific anesthesia practitioner (n = 880 132), and *ICD-9* diagnosis codes (n = 425 750). NACOR classifies facilities into 9 categories (university hospital, large community hospital, medium community hospital, small community hospital, specialty hospital, attached surgery center, freestanding surgery center, pain clinic, and surgeon's office); we excluded cases for which the facility was unknown or listed as a pain clinic or surgeon's office (n = 3 819 101). We excluded cases with more than 1 practitioner (which typically occurs when 1 practitioner relieves another later in the day, n = 5 047 903). Finally, we restricted analyses to

surgical *CPT* codes with at least 1000 observations and practitioners who had performed at least 300 procedures, resulting in a final sample of 6 261 955 anesthetic cases. These procedures were performed at 931 surgical facilities and encompass 819 surgical *CPT* codes. Anesthesia care in these cases was provided by 4221 anesthesia practitioners who were employed by 147 anesthesia practices. The number of facilities is larger than the number of anesthesia practices because many practices will cover more than 1 facility (eg, a practice may cover a hospital and several surgery centers).

Statistical Analysis

Identifying practitioners with anomalously long anesthesia times is not sufficient to measure inappropriate discretion because these times may be explained by unobserved clinical or institutional factors and differences in rounding habits. Therefore, we used a 2-step process to estimate the incidence and consequences of inappropriate billing discretion. First, we identified practitioners with anomalous patterns of anesthesia times (those reporting an excess number of anesthesia times ending in a multiple of 5 minutes) for which there can be no clinical justification. Second, we identified whether these anomalous practitioners also tended to report longer anesthesia times than their peers nationally after adjusting for type of surgery, surgical facility, and patient characteristics. As a first step, for each practitioner, we calculated the proportion of anesthesia times ending in a multiple of 5 minutes. We then ranked practitioners based on the percentage of cases ending in a multiple of 5 minutes and identified practitioners in the top 5th percentile and the top 6th to 10th percentiles. Simple summary statistics regarding patient and practitioner characteristics were calculated for each of these 3 groups (top 5th percentile, top 6th to 10th percentiles, and remaining practitioners) by using a 2-tailed *t* test to assess for statistical significance in the case of continuous variables and a χ^2 test for discrete (yes/no) variables.

Rounding anesthesia times to the nearest 5 minutes may be anomalous but is not necessarily indicative of inappropriately high billing (eg, practitioners could be rounding down). To assess this possibility, we analyzed whether practitioners with an unusually high proportion of anesthesia times rounded to the nearest 5 minutes also had anesthesia times that were longer than their peers after adjustment for surgery type, surgical facility, and patient characteristics. Specifically, we used multivariable linear regression to estimate expected anesthesia times for each case. Independent variables included indicators for type of surgery (based on surgical *CPT* code), indicators for facility, patient age and sex, and indicators for patient comorbidities based on *ICD-9* codes (full list of comorbidities and *ICD-9* codes is given in eTable 1 in the [Supplement](#)). By incorporating facility-specific indicators, we essentially compared a given practitioner's times against the times of other practitioners at the same facility. An advantage of this approach is that it is robust to facility-specific factors (such as speed of the operating room staff and the surgical team) that may be associated with anesthesia times.

We then calculated the difference between the observed time and the expected time for each case. Linear regression was used to estimate the extent to which those practitioners who were most likely to report anesthesia times ending in a multiple of 5 minutes (ie, practitioners in the top 5th percentile and the top 6th to 10th percentile) were also more likely to exceed their expected times. All analyses were performed using Stata statistical software, version 14.0

(StataCorp). Details of our regression model can be found in the eMethods and eTable 2 in the [Supplement](#). Because our primary analysis examined differences in outcomes between 2 groups (the top 5th percentile and the top 6th to 10th percentile of practitioners) against the remaining practitioners, we defined 2-sided $P \leq .025$ as indicating statistical significance.

Additional Analyses

We conducted additional analyses to determine the robustness of our results across several subgroups. We examined 3 subgroups based on the type of facility (university hospital, community hospital, and specialty hospital or surgery center) and subgroups based on whether an anesthesia resident was involved in the case. For each subgroup analysis, we reranked practitioners within the subgroup based on frequency of cases with anesthesia times ending in 5 minutes (ie, top fifth percentile) and performed the analyses described above again.

Given the difference between the initial data set ($n = 26\,568\,734$) and final sample ($n = 6\,261\,955$), we performed several comparisons between the final sample and the cases that were dropped to characterize the extent to which the final sample is representative of the overall data set. For the cases for which we had data on facility type ($n = 20\,217\,215$), we compared the distribution of facility type (eg, university hospital) between the final sample and the excluded cases. We also compared the distribution of surgical CPT codes (ie, surgery type) between the included and excluded cases for the cases with nonmissing surgical CPT codes ($n = 19\,554\,872$).

Go to:

Results

This study included 4221 practitioners who each performed at least 300 anesthetic procedures. The mean (SD) anesthesia time was 106 (129) minutes, and the median (range) was 68 minutes (1-1439 minutes). Anesthesia times that were a multiple of 5 minutes were unusually prevalent, as shown by increases in the distribution that occur every 5 minutes ([Figure 1](#)). For example, 66 920 cases had an anesthesia time of 60 minutes compared with 49 985 with an anesthesia time of 59 minutes and 47 331 with an anesthesia time of 61 minutes. The general pattern remained the same when all procedures were considered (eFigure in the [Supplement](#)). Similarly, 802 practitioners (19.0%) reported a percentage of anesthesia times ending in 0 or 5 that were statistically distinguishable from the expected value of 20%, using a threshold of $P < .001$ for statistical significance. Anesthesia times that were a multiple of 5 minutes were longer vs all other cases (mean, 111 minutes [95% CI, 110-112 minutes] vs 104 minutes [95% CI, 104-104 minutes]). A total of 3047 practitioners (72.2%) practiced in a community hospital, whereas 453 (10.7%) practiced in a university hospital, with the remaining practitioners (721 [17.1%]) practicing in other settings (eg, specialty hospitals). [Table 1](#) presents additional characteristics of our sample, stratified by 3 groups of practitioners (top 5th percentile in terms of reporting anesthesia times ending in a multiple of 5 minutes, top 6th to 10th percentile, and remaining practitioners). Compared with the remaining practitioners, those in the top fifth percentile were more likely to practice in university hospitals (50 [23.6%] vs 347 [9.1%]; $P < .001$), less likely to practice in specialty hospitals or surgical centers (12 [5.7%] vs 694 [18.2%]; $P < .001$), and more likely to practice in the northeastern United States (111 [52.4%] vs 377 [9.9%]; $P < .001$). On

average, practitioners in the top fifth percentile were less likely to treat male patients (38.7%; $P < .001$) and patients with depression (1.1%; $P = .03$) and were more likely to encounter patients with congestive heart failure (1.0%), hypertension (11.9%), diabetes (5.1%), and chronic kidney disease (2.4%) ($P < .001$ for all these comorbidities). These comparisons were similar for practitioners in the 6th to 10th percentile. For example, practitioners in the 6th to 10th percentile were also more likely to practice in university hospitals (56 [26.5%] vs 347 [9.1%]).

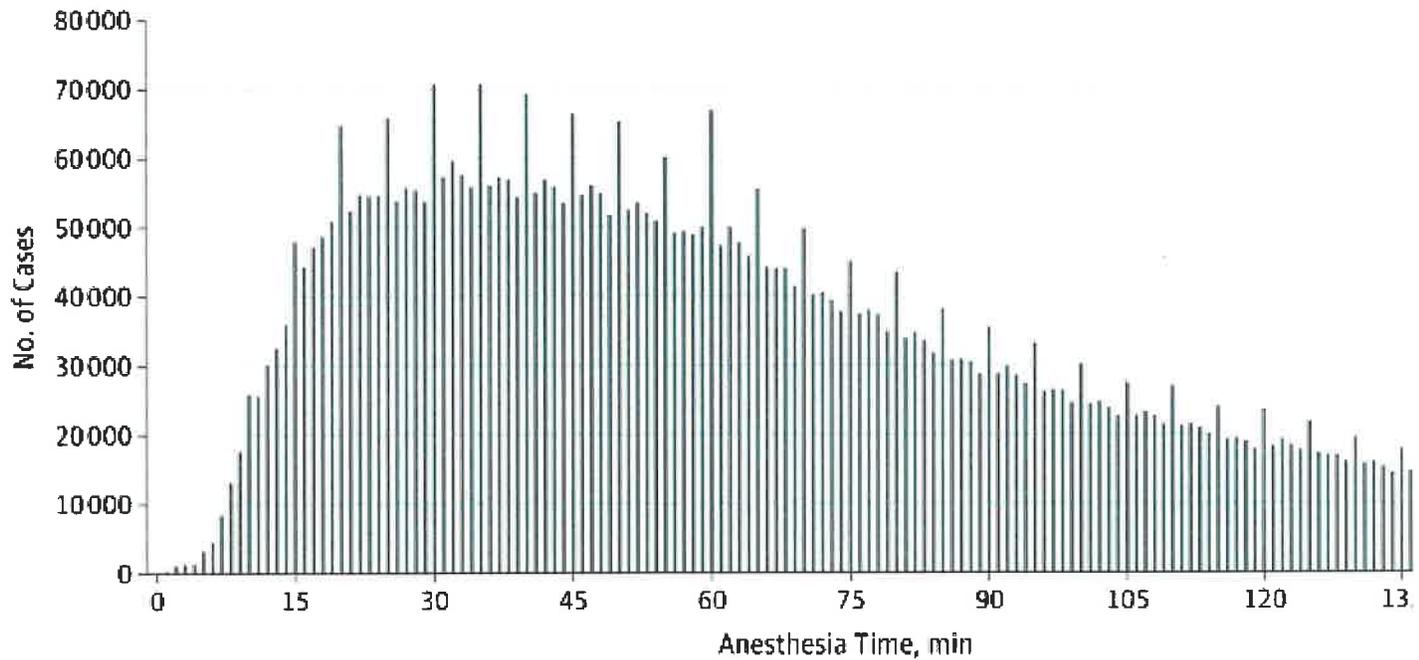


Figure 1.
Distribution of Anesthesia Times for the 6 261 955 Cases in the Study Sample

The figure is truncated at 150 minutes; for times past 150 minutes, see eFigure in the Supplement.

Table 1.

Sample Summary Statistics According to Percentiles Based on the Cases With Anesthesia Times Ending in a Multiple of 5

Variable	Top Fifth Percentile (n = 212)		Top 6th to 10th Percentiles (n = 211)		Remaining Practitioners (n = 3798)
	Practitioners	<i>P</i> Value ^a	Practitioners	<i>P</i> Value ^a	
Type of institution, No. (%) [SE]					
University hospital	50 (23.6) [2.9]	<.001	56 (26.5) [3.0]	<.001	347 (9.1) [0.5]

Variable	Top Fifth Percentile (n = 212)		Top 6th to 10th Percentiles (n = 211)		Remaining Practitioners (n = 3798)
	Practitioners	<i>P</i> Value ^a	Practitioners	<i>P</i> Value ^a	
Community hospital	150 (70.7) [3.1]	.56	140 (66.4) [3.3]	.05	2757 (72.6) [0.7]
Specialty hospitals and surgery centers	12 (5.7) [1.6]	<.001	15 (7.1) [1.8]	<.001	694 (18.2) [0.6]
US Census region, No. (%) [SE]					
Northeast	111 (52.4) [3.4]	<.001	39 (18.5) [2.7]	<.001	377 (9.9) [0.5]
Midwest	35 (16.5) [2.6]	<.001	93 (44.1) [3.4]	<.001	1119 (29.4) [0.7]
South	36 (17.0) [2.6]	<.001	45 (21.3) [2.8]	.02	1101 (29.0) [0.7]
West	30 (14.2) [2.4]	<.001	34 (16.1) [2.5]	<.001	1201 (31.6) [0.8]
Patient characteristics, mean [SE], %					
Age, y	50.8 [0.6]	.47	52.1 [0.6]	.02	50.2 [0.2]
Male	38.7 [0.7]	<.001	41.9 [0.7]	.31	42.5 [0.1]
Patient comorbidities, mean [SE], %					
Congestive heart failure	1.0 [0.1]	<.001	0.8 [0.1]	.09	0.7 [0.02]
Peripheral vascular disease	0.8 [0.1]	.21	1.0 [0.2]	.02	0.7 [0.02]
Hypertension	11.9 [0.9]	<.001	5.7 [0.6]	.27	5.1 [0.1]
Chronic obstructive pulmonary disease	0	.41	0	.63	0
Diabetes	5.1 [0.4]	<.001	3.0 [0.3]	.006	2.3 [0.1]
Chronic kidney disease	2.4 [0.2]	<.001	1.6 [0.1]	<.001	1.2 [0.0]
Cancer	3.9 [0.2]	.59	4.8 [0.3]	.002	4.1 [0.1]
Cerebrovascular disease	0.4 [0.04]	.06	0.4 [0.04]	.11	0.3 [0.01]
Dementia	0.01 [0.0]	.26	0.002 [0.001]	.05	0.01 [0.001]
Myocardial infarction	0.2 [0.04]	.76	0.2 [0.03]	.98	0.2 [0.01]
Liver disease	0.4 [0.06]	.74	0.6 [0.07]	.007	0.4 [0.01]
Alcohol abuse	0.1 [0.01]	.62	0.08 [0.01]	.69	0.08 [0.003]
Drug abuse	0.05 [0.01]	.44	0.03 [0.01]	.31	0.04 [0.002]
Schizophrenia	0.07 [0.01]	.13	0.1 [0.06]	.43	0.2 [0.02]

Variable	Top Fifth Percentile (n = 212)		Top 6th to 10th Percentiles (n = 211)		Remaining Practitioners (n = 3798)
	Practitioners	P Value ^a	Practitioners	P Value ^a	
Depression	1.1 [0.2]	.03	1.3 [0.3]	.13	1.9 [0.09]

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^aP values represent the statistical significance of the difference between the given group and remaining practitioners.

Practitioners in the top 5th percentile reported anesthesia times ending in a multiple of 5 minutes a mean (SD) of 53.7% (13.7%) of the time (range, 36.8%-96.1%), whereas practitioners in the 6th to 10th percentile reported anesthesia times ending in a multiple of 5 minutes a mean (SD) of 31.8% (2.0%) of the time (range, 29.2%-36.7%). After adjustment for the hospital where the procedure occurred, surgery type, patient comorbidities, age, and sex, practitioners in the top 5th percentile reported anesthesia times that exceeded the expected time by a mean of 21.5 minutes (95% CI, 15.8-27.1 minutes; mean, 141 minutes [95% CI, 132-151 minutes] vs 120 minutes [95% CI, 112-128 minutes]) (Figure 2). By contrast, practitioners in the top 6th to 10th percentile had observed anesthesia times that were similar in length to the expected time (mean, 126 minutes [95% CI, 117-136 minutes] vs 128 minutes [95% CI, 118-137 minutes]; mean difference, -1.3 minutes; 95% CI, -4.3 to 1.6 minutes; $P = .38$). The remaining practitioners reported anesthesia times that were similar to the predicted time (mean, 102 minutes [95% CI, 101-104 minutes] vs 103 minutes [95% CI, 102-105 minutes]; mean difference, -0.8 minute; 95% CI, -1.5 to -0.1; $P = .02$).

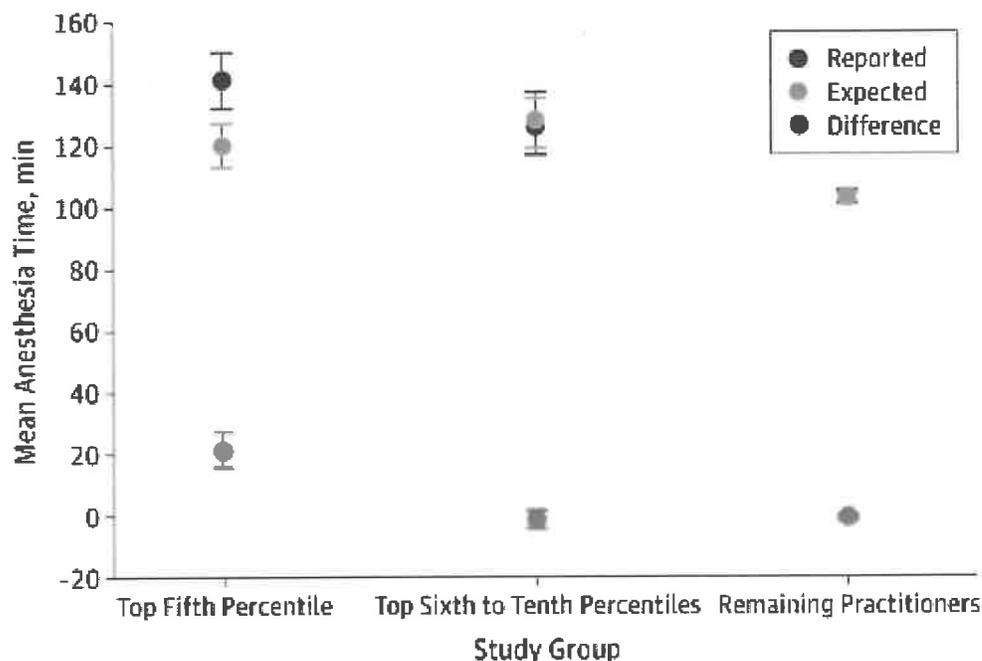


Figure 2.

Reported and Expected Anesthesia Times and the Mean Difference Between the These Times for Each Study Group

Anesthesia practitioners were classified into 1 of 3 groups based on the extent to which their reported anesthesia times ended in a multiple of 5 minutes (top fifth percentile, top sixth to tenth percentiles, and remaining practitioners). Error bars with 95% CIs are shown and are corrected for clustering within practitioners.

These results largely persisted across each of the subgroups that we examined (Table 2). For example, for practitioners in university hospitals, the top fifth percentile reported anesthesia times that exceeded the expected time by a mean of 26.5 minutes (95% CI, 19.6-33.2 minutes; $P < .001$), whereas the top fifth percentile of practitioners in community hospitals exceeded expected times by a mean of 16.5 minutes (95% CI, 9.2-23.9 minutes; $P < .001$). Finally, we also examined differences in some observable characteristics (eg, type of facility and distribution of surgical CPT codes) between the cases in our final sample and excluded cases. Although our results suggested that anesthesia practitioners in the final sample were more likely to practice in medium-sized community hospitals (2 706 688 [43.2%] vs 5 633 804 [40.4%]) and specialty hospitals (234 487 [3.7%] vs 278 303 [2.0%]) and less likely to practice in other types of facilities, these differences were small (eTable 3 in the Supplement). Similarly, the types of procedures for both groups were qualitatively similar (eTable 4 in the Supplement).

Table 2.

Difference Between Observed and Expected Anesthesia Times (Subgroup Analyses)

Group	Top Fifth Percentile (n = 212)		Top 6th to 10th Percentiles (n = 211)		Remaining Practitioners (n = 3798)	
	Observed Minus Expected Anesthesia Time, Mean (95% CI), min	P Value ^a	Observed Minus Expected Anesthesia Time, Mean (95% CI), min	P Value ^a	Observed Minus Expected Anesthesia Time, Mean (95% CI), min	
Facility type						
University	26.5 (19.6 to 33.2)	<.001	-4.9 (-10.2 to 0.4)	.75	-5.9 (-8.9 to -2.9)	
Community	16.5 (9.2 to 23.9)	<.001	0.2 (-3.7 to 4.1)	.91	0.4 (-0.4 to 1.3)	
Other (specialty hospital or surgical center)	38.8 (20.6 to 56.9)	<.001	-0.9 (-3.6 to 1.7)	.36	-2.2 (-2.9 to -1.5)	
Presence of anesthesia resident						
Yes	31.4 (24.2 to 38.6)	<.001	-3.1 (-7.9 to 1.7)	.21	-4.0 (-6.4 to -1.6)	
No	22.5 (10.0 to 35.0)	<.001	-1.2 (-7.4 to 4.9)	.90	-0.8 (-1.8 to 0.2)	

^a*P* values represent the statistical significance of the difference between the given group and remaining practitioners.

Go to:

Discussion

Physicians are often paid for services for which complexity is tied to compensation and that rely on physician discretion in reporting. Identifying the extent to which physicians inappropriately use their discretion is important in designing optimal payment policy but is difficult to study because complexity is often measurable only by the physician. In this study, we found that some anesthesia practitioners seemed to inappropriately exercise their discretion in billing, as suggested by reporting anesthesia times that were disproportionately a multiple of 5 minutes. Rounding to the nearest 5 minutes alone would not significantly affect the total case time, but it could suggest a proclivity for other forms of inaccurate reporting. We found that practitioners with a propensity to round their times also reported anesthesia times 22 minutes longer than expected, corresponding to increased revenue ranging from \$34 to \$98 per case based on reimbursements by various payers.¹⁵ This 22-minute increase represents a 21% increase in time-related payment associated with the mean case and a 32% increase associated with the median case in our sample. Subgroup analyses revealed that anomalous billing patterns were associated with increased case length across a variety of practice settings (eg, community and university hospitals), and the association was particularly strong at specialty hospitals and surgery centers, a finding that is arguably consistent with concerns about increased costs for operations performed in specialty surgical hospitals.²¹

Our findings are not necessarily conclusive of inappropriate billing. It is possible that those practitioners with a disproportionate share of anomalous billing report anesthesia times that are closer to reality, whereas other practitioners may systematically report anesthesia times that are less than the actual time that could justifiably be billed. The likelihood of this possibility seems low, however, given that it would suggest that most practitioners tend to underreport anesthesia times rather than the alternative possibility that a few practitioners inappropriately overstate anesthesia times.

Our results have important policy implications. Like other studies,^{9,10,11,12} our study suggests potential cost savings from reducing the amount of discretion that health care practitioners have in determining the payment that they receive for a given service. In anesthesia specifically, our results suggest that paying practitioners based solely on the type of case performed (and removing the time element) may be a better alternative to current payment policy. Under this new policy, anesthesiologists would no longer be paid based on the self-reported amount of time spent on the case, but similar to surgeons, the policy could allow anesthesiologists to add a modifier code for particularly difficult cases. Another potential policy would be to explicitly tie the start and stop of anesthesia time to surgical times, such as the times when the patient enters and exits the operating room, which are typically recorded by a third party (the operating room staff).

Limitations

Our results should be viewed in light of their limitations. Although we adjusted for surgery type, surgical facility, and patient characteristics, we cannot rule out the possibility that other unobserved factors could explain why practitioners with anomalous anesthesia times report longer times. In particular, our data set did not have patient-specific identifiers; thus, we could not use patient fixed effects to adjust for unobservable patient characteristics. However, it is unclear how unobserved patient characteristics would be correlated with billing anomalies. Moreover, our subgroup analyses revealed no substantial differences among procedures performed by an anesthesia resident, a proxy for case complexity, compared with those performed by a practitioner other than an anesthesia resident.

Our data did not include information on specific practitioners; thus, we were unable to discern the degree to which anomalies were more common among anesthesiologists than among nurse anesthetists. We also only analyzed a fairly obvious billing anomaly. Our approach would miss many other forms of inappropriate billing, such as adding a fixed number of minutes to each case. Moreover, our approach compared a given practitioner's times against the anesthesia times reported by other practitioners practicing in the same facility. Although this approach is robust to facility-specific factors (such as speed of the operating room teams), it tends to underestimate the degree of inappropriate discretion to the extent that all practitioners at a given facility use inappropriate discretion or to the extent that inappropriate discretion occurs at the system level (eg, at the billing office). Our results were based on a subset of cases from practices reporting data to NACOR and may not generalize to other populations. However, although there were a large number of excluded cases, our sensitivity analyses suggest that the excluded cases were qualitatively similar in many ways to the included cases. In addition, data submitted to NACOR are estimated to account for 25% of all anesthesia cases in the United States.²² Finally, our findings should not be used to indicate fraud because we are unable to ascertain intent.

Go to:

Conclusions

Our results suggest that concerns over whether health care practitioners may inappropriately use their discretion to set payments are not unwarranted because we speculate that anesthesia practitioners are not unique in the scale or scope of their behaviors. Given our findings, we suggest that future studies should examine the degree to which physicians and other health care practitioners inappropriately use their discretion in determining reimbursement, as well as the potential effect of alternative payment policies.

Go to:

Notes

Supplement.

eTable 1. List of Medical Comorbidities and ICD-9 Codes

eTable 2. Regression Coefficients for Case Prediction

eTable 3. Differences in Type of Institution Between Included and Excluded Cases

eTable 4. Distribution of Surgical CPTs Between Included and Excluded Cases

eMethods. Regression Model

eFigure. Distribution of Anesthesia Times

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