



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

Agenda



Notice is hereby given that a public meeting of the Licensing and Examination Subcommittee of the Dental Hygiene Committee of California will be held as follows:

LICENSING AND EXAMINATION SUBCOMMITTEE MEETING

**Saturday, December 3, 2016
Evergreen Hearing Room
2005 Evergreen Street, 1st Floor
Sacramento, CA 95815**

Licensing and Examination Subcommittee Members:

Evangeline Ward, RDH, Chair
Nikki Moultrie, RDH
Sandy Klein, Public Member
Edcelyn Pujol, Public Member

Upon Conclusion of Legislative & Regulatory Subcommittee

Agenda

LIC 1 – Roll Call

LIC 2 – Public Comment for Items Not on the Agenda

[The DHCC may not discuss or take action on any matter raised during the Public Comment section that is not included on this agenda, except whether to decide to place the matter on the agenda of a future meeting (Government Code §§ 11125 & 11125.7(a))]

LIC 3 – Chairperson's Report

LIC 4 – Approval of the May 6, 2016 Licensing and Examination Subcommittee Meeting Minutes

LIC 5 – Written Examination Statistics – Informational Only

LIC 6 – Licensure Statistics – Informational Only

LIC 7 – Discussion and Possible Action to Review of Out-of-State Education in Soft Tissue Curettage, Nitrous Oxide-Oxygen and Administration of Local Anesthetics; Recommendation to the Full Committee

LIC 8 – Future Agenda Items

LIC 9 – Adjournment

DHCC members who are not members of this subcommittee may attend meetings as observers only, and may not participate or vote. Action may be taken on any item listed on this agenda, including information only items. Items may be taken out of order for convenience, to accommodate speakers, or maintain a quorum. All times are approximate and subject to change. The meeting may be cancelled without notice. For verification of the meeting, call (916) 263-1978 or access the Committee's Web Site at www.dhcc.ca.gov.

The meeting facilities are accessible to individuals with physical disabilities. A person who needs a disability-related accommodation or modification in order to participate in the meeting may make a request by contacting Anthony Lum

at (916) 576-5004 or e-mail anthony.lum@dca.ca.gov or send a written request to DHCC at 2005 Evergreen Street, Ste. 2050, Sacramento, CA 95815. Providing your request at least five (5) business days before the meeting will help to ensure availability of the requested accommodation.



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 1

Roll Call – Establishment of a Quorum



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 2

Public Comment for Items Not on the Agenda



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 3

Chairperson's Report:

A Verbal Report Will Be Provided.



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 4

**Approval of the May 6, 2016 Licensing and
Examination Subcommittee Meeting Minutes**



DENTAL HYGIENE LICENSING AND EXAMINATION
SUBCOMMITTEE MEETING MINUTES

Friday, May 6, 2016
Marriott Hotel – Los Angeles International Airport
Atlanta/Boston Room
5855 West Century Blvd.
Los Angeles, CA 90004

LIC 1 – Roll Call

Noel Kelsch, President of the Dental Hygiene Committee of California (DHCC), called the Dental Hygiene Licensing and Examination Subcommittee meeting to order at 11:15 a.m. She appointed Michelle Hurlbutt as Chair of the subcommittee as the regular chairperson, Evangeline Ward, was absent. Anthony Lum conducted the roll call and established a quorum with three subcommittee members present.

DHCC Licensing and Examination Subcommittee Members Present:

Michelle Hurlbutt, Acting Chair, Registered Dental Hygienist (RDH)
Educator
Sandra Klein, Public Member
Timothy Martinez, Doctor of Dental Medicine (DMD)

DHCC Licensing and Examination Subcommittee Members Absent:

Nicolette Moultrie, RDH
Evangeline Ward, RDH

DHCC Staff Present:

Lori Hubble, Executive Officer (EO)
Anthony Lum, Assistant EO
Estelle Champlain, Legislative and Regulatory Analyst
Nancy Gaytan, Enforcement Analyst
Kelsey Pruden, Department of Consumer Affairs (DCA) Legal Counsel

Public Present:

Jonathan Burke, Board and Bureau Relations Manager, Department of
Consumer Affairs (DCA)
Karen Fischer, EO, Dental Board of California (DBC)
JoAnn Galliano, Education Consultant, California Dental Hygienists'
Association (CDHA)
Lygia Jolley, President, CDHA
Vickie Kimbrough, Southwestern College
Shawn Leetch, Concorde College, San Bernardino Campus

LIC 2 – Public Comment for Items Not on the Agenda

There was no public comment for items not on the agenda.

LIC 3 – Chairperson's Report

There was no chairperson's report since the regular chairperson was absent.

LIC 4 – Acceptance of the May 2, 2015 Licensing and Examination Subcommittee Meeting Minutes

- **Motion: Sandra Klein moved to accept the May 2, 2015 Licensing and Examination Subcommittee meeting minutes.**

Second: Edcelyn Pujol.

Vote: The motion passed 3-0 (Ms. Ward and Nicolette Moultrie were absent).

NAME	Minutes VOTE:		OTHER
	Aye	Nay	
Michelle Hurlbutt	X		
Sandy Klein	X		
Edcelyn Pujol	X		
Evangeline Ward			X
Nicolette Moultrie			X

LIC 5 – Written Examination Statistics - Informational Only

Mr. Lum explained that DHCC's current examination pass rate for the Law and Ethics Exam are similar to pass rates for previous years. Chair Hurlbutt expressed that she finds the pass rate disappointing. She proposed that it may be time to reevaluate the exam. Lori Hubble stated that this exam's reevaluation is set for 2017/2018.

Chair Hurlbutt suggested that it may be better to change the exam to a format she says other states use which involves a student being allowed to retake the exam (presumably with no mandatory wait time between attempts) until a passing score is achieved. She explained that if the (electronic) exam were designed so that after each module the student was required to pass a quiz before moving on, it would both ensure that key points were understood as well as yielding a higher pass rate.

Public Comment: Lygia Jolley commented that the low pass rate may be attributed to some schools not using the same texts to teach as are used

to create exam questions. She inquired whether it was known which specific schools' graduates consistently failed to achieve passing scores. Ms. Hubble answered that it has not been the practice for DHCC to compile pass rates by school. Ms. Jolley commented that in the course of her work as president of CDHA, she is often contacted by students who complain of not having been taught using the same texts from which the Law and Ethics exam questions were derived. Ms. Hubble clarified that access to relevant texts is not a valid excuse because an outline including resources and citations is provided to students when the exam is scheduled and is available on the DHCC Internet Web site.

Chair Hurlbutt concluded that since the Law and Ethics exam is scheduled to be reviewed in 2017/2018 there will be an opportunity for improvement.

There were no further comments.

LIC 6 – Licensure Statistics- Informational Only

Mr. Lum informed the subcommittee that the current year's report is DHCC's first implementation of statistical licensure reporting using BreEZe. He noted that BreEZe offers greater accuracy than the legacy system in this type of reporting; specifically BreEZe identified and eliminated errors caused by the legacy system having incorrectly duplicated licensing categories. Those errors had created falsely elevated reporting of licensure count, and this should be considered when comparing to the current, more accurate, report of licensure count.

Mr. Lum went on to describe that BreEZe gives users the ability to parse out discrepancies in records. This enables staff to more efficiently assist applicants in resolving unmet licensing requirements such as missing Livescan fingerprint results.

Chair Hurlbutt requested that in the next meeting DHCC staff provide a more granular report demonstrating the reasons for delinquent licenses. She was especially interested in identifying how many delinquencies were due to continuing education holds. Ms. Hubble explained that although BreEZe enables this type of reporting, the status of license applications change so frequently that a static report may not truly represent trends.

Public Comment: Gayle Mathe raised concern that some licensees operating under fictitious name permits do not following protocol to disclose the practitioner's name along with the business name.

Chair Hurlbutt asked if it was possible to audit for name disclosure compliance among fictitious name permit holders. Mr. Lum clarified that the only times DHCC would be situated to know if a fictitious name permit holder was in compliance with name disclosure are at the point of application and when a case of noncompliance is reported to the DHCC. Mr. Lum offered that the DHCC could remind the community of this requirement through a DHCC Internet Web site post and newsletter.

There were no further comments.

LIC 7 – Future Agenda Items

Chair Hurlbutt requested a status report on name disclosure compliance among fictitious name permit holders.

There were no further comments.

LIC 8 – Adjournment

The Dental Hygiene Licensing and Examination Subcommittee meeting adjourned at 11:40 a.m.



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 5

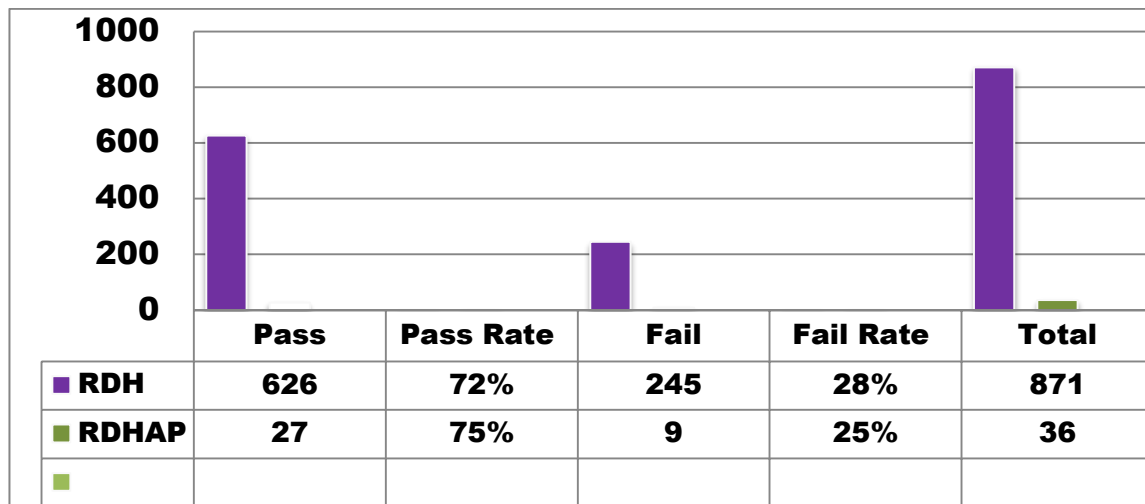
Written Examination Statistics – Informational Only



MEMORANDUM

DATE	December 3, 2016
TO	Licensing and Examination Subcommittee Members
FROM	Eleonor Steiner, Licensing Analyst
SUBJECT	LIC 5 – Written Examination Statistics

RDH AND RDHAP WRITTEN LAW AND ETHICS EXAM (APRIL 1, 2016 – NOVEMBER 10, 2016)



RDH WRITTEN LAW & ETHICS EXAMINATION

Date Range	RDH Candidates Tested	Pass		Fail	
04/01/2016 – 11/10/2016	871	626	72%	245	28%
03/01/2015 – 04/01/2016	1,233	899	73%	334	27%
10/01/2014 – 02/29/2015	371	234	63%	137	37%

RDHAP WRITTEN LAW & ETHICS EXAMINATION

Date Range	RDHAP Candidates Tested	Pass		Fail	
04/02/2016 – 11/10/2016	36	27	75%	9	25%
03/01/2015 – 04/01/2016	86	65	76%	21	24%
10/01/2014 – 02/29/2015	25	20	80%	5	20%



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 6

Licensure Statistics – Informational Only



MEMORANDUM

DATE	November 9, 2016
TO	Licensing and Examination Subcommittee
FROM	Eleonor Steiner, Analyst
SUBJECT	LIC 6 – Licensure Statistics

DHCC Licensure Statistics (as of November 9, 2016).

LICENSE STATUS	LICENSE TYPE				
	RDH	RDHAP	RDHEF	FNP	TOTAL
ACTIVE	17,390	529	25	148	18,092
INACTIVE	2,067	44	3	0	2,114
DELINQUENT	2,956	50	4	38	3,048
LICENSED SUBTOTAL	22,413	623	32	186	23,254
REVOKED	18	0	0	0	18
DENIED	0	0	0	0	0
VOLUNTARY SURRENDERED	13	2	0	0	15
CANCELLED	7,295	13	0	23	7,331
DECEASED	207	2	0	0	209
RETIRED	34	0	0	0	34
NON-LICENSED SUBTOTAL	7,567	17	0	23	7,607
TOTAL POPULATION (Licensed Subtotal minus Non-licensed Subtotal)	14,846	606	32	163	15,647

LICENSE TYPES

Registered Dental Hygienist - **RDH**
Registered Dental Hygienist in Alternative Practice - **RDHAP**
Registered Dental Hygienist in
Extended Function - **RDHEF**
Fictitious Name Permit - **FNP**

LICENSE STATUS

Active – A license that has completed all renewal requirements.
Inactive – Renewal fees have been paid and license placed on Inactive status.
(Reasons vary including: not currently practicing, live scan or CE incomplete)
Delinquent – Fees have not been paid for one or more renewal periods.
CE Hold - Continuing Education not completed.
Revoked – Disciplinary actions taken, not licensed to practice in CA.
Denied – License or application denied due to disciplinary actions.
Voluntary Surrendered – Surrendered license voluntarily due to disciplinary action.
Cancelled – Nonpayment of renewal fees for five years.



Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 7

Discussion and Possible Action to Review Out-of-State Education in Soft Tissue Curettage, Nitrous Oxide and Oxygen, and Administration of Local Anesthetics; Recommendation to the Full Committee



MEMORANDUM

DATE	December 3, 2016
TO	Licensing and Examination Subcommittee
FROM	Lori Hubble, Executive Officer
SUBJECT	Evaluation Process for Out-of-State SLN Courses

At the May 2016 DHCC meeting, a member of the public requested that the DHCC consider modifying licensure requirements for hygienists who received their training outside of California. As a result, the Committee directed staff to bring this issue forward for discussion at a future meeting.

Staff researched the issue and determined that pursuant to Title 16, Division of 11, Article 3, Section 1105.2 (E) of the California Code of Regulations, the DHCC is authorized to evaluate an out-of-state dental hygiene program curriculum to determine if it is commiserate with DHCC's licensure standards for a California dental hygiene license - those standards being found in Section 1107 of the same article.

1105.2 (E) Specific Curriculum Content. Curriculum relating to the administration of local anesthetic agents, administration of nitrous oxide-oxygen analgesia, and performance of periodontal soft tissue curettage shall meet the requirements contained in Title 16, Division 11, Section 1107 of the California Code of Regulations. Out-of-state dental hygiene programs that are accredited by the Commission on Dental Accreditation or an approved accrediting body and who provide instruction according to this subdivision may be approved by the Committee to meet the requirements set forth in Business and Professions Code, Section 1909.

Please review the attached article from *Dimensions of Dental Hygiene Magazine* describing the lack of consensus among the States regarding standards for the administration of local anesthesia.

Staff Recommendation

Staff recommends that the Licensing and Examination Subcommittee consider the feasibility of evaluating out-of-state SLN courses in terms of the following:

- Regulations to clearly specify how the evaluation would take place
- Creation of an application form
- Determination of a processing fee

- Expenditure of personnel hours to process evaluations and applications
- Mechanism to enforce compliance or revoke approval of reciprocity for programs when there is cause to believe the program is not operating within acceptable standards
- Mechanism to determine if cause is sufficiently met to believe the program is not operating within acceptable standards

Committee Action

The staff requests that the Licensing and Examination Subcommittee advise on the following:

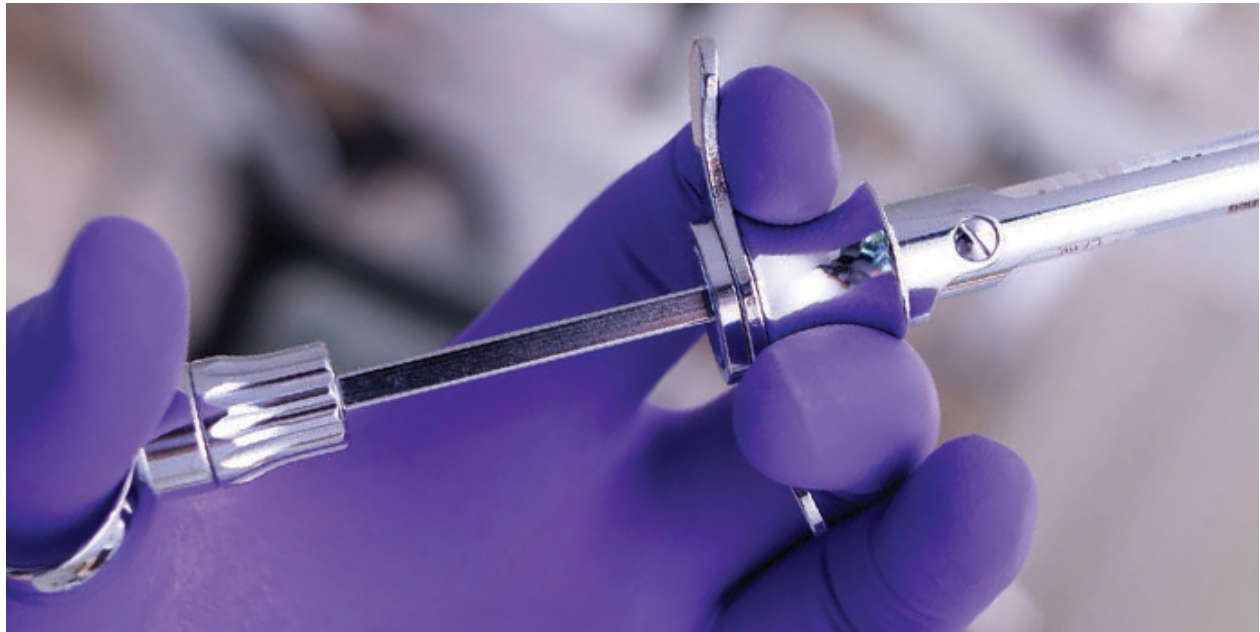
- Does the DHCC wish to pursue a new evaluation process for out-of-state SLN courses at this time?
- If so, by what specific means would such an evaluation be accomplished?

Reprinted with permission. Sean G. Boynes, DMD, MS, and Kathy Bassett, RDH, Med.

“The Search for Consensus.” *Dimensions of Dental Hygiene*. March 2016;14(03):18,20–23.

THE JOURNAL OF PROFESSIONAL EXCELLENCE
Dimensions
OF DENTAL HYGIENE

The Search for Consensus



MILOSLJUBICIC / ISTOCK / THINKSTOCK

Even though dental hygienists have been successfully administering local anesthesia for more than 40 years, consensus on national education standards and utilization guidelines has yet to be achieved.

By Sean G. Boynes, DMD, MS, and Kathy Bassett, RDH, MEd

The roles of dental hygienists continue to expand and comprise clinicians, educators, patient managers, and community oral health advocates.¹ As more responsibilities are

delegated to nondentists, skill sets and scopes of practice will be redefined. One such skill that is widely used by dental professionals is local anesthesia administration (LAA). Although dental hygienists have been providing LAA in the United States in a safe and effective manner for more than 40 years, there is no national scope of practice that includes LAA. A lack of consensus regarding educational requirements and optimal LAA methodologies also remains. This article will explore relevant aspects of LAA within the dental hygienist's scope of practice.

TABLE 1. Commission on Dental Accreditation (CODA) Standard 2-18²

Where graduates of a CODA-accredited dental hygiene program are authorized to perform additional functions required for initial dental hygiene licensure as defined by the program's state specific dental board or regulatory agency, program curriculum must include content at the level, depth, and scope required by the state. Further, curriculum content must include didactic and laboratory/preclinical/clinical objectives for the additional dental hygiene skills and functions. Students must demonstrate laboratory/preclinical/clinical competence in performing these skills.

Intent: Functions allowed by the state dental board or regulatory agency for dental hygienists are taught and evaluated at the depth and scope required by the state. The inclusion of additional functions cannot compromise the length and scope of the educational program or content required in the accreditation standards and may require extension of the program length.

EDUCATION AND TRAINING

Education and training of LAA commonly occurs via one of two pathways: dental hygiene program/school curriculum or continuing education certification courses. Competence for permit or licensing is reflected within each state's rules and regulations (dental practice act). In addition, Standard 2-18 of the Commission on Dental Accreditation (CODA) states that dental hygienists must be educated to perform all tasks in a state's dental practice act (Table 1).² How each program develops its local anesthesia curriculum within this standard is at the school's discretion.

As seen in Figure 1, a great deal of variation exists between states in the number of instruction hours required before dental hygienists can become licensed in LAA. The hours required range from zero to 72. As such, it is no surprise that significant disparities in didactic and clinical requirements, supervision levels, and LAA methodologies exist.³

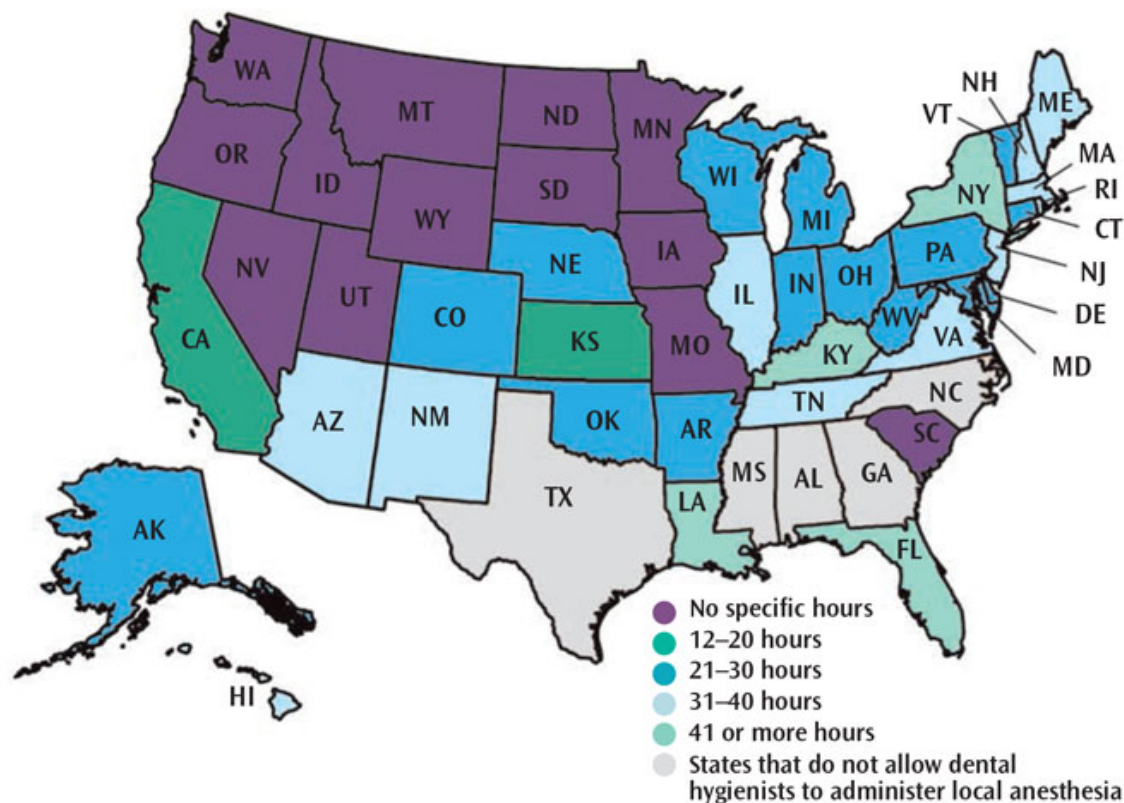


FIGURE 1. This map demonstrates the number of instructional hours required by each state before dental hygienists can become licensed to administer local anesthesia.²

The American Dental Hygienists' Association compiles data on LAA rules and regulations for each state. When comparing these data, it is clear that no national education standard exists. Thus, it may be helpful to consider the states with the longest history of dental hygienists providing LAA. Five states have allowed dental hygienists to provide LAA for 40-plus years: Washington, Oregon, Idaho, New Mexico, and Missouri. Of these five states, only New Mexico requires a minimum number of instruction hours (34 hours) while the other four have no requirements. The seven states with less than 10 years of LAA experience by dental hygienists—Indiana, Ohio, New Jersey, Maryland, Pennsylvania, Virginia, and Florida—require a minimum number of training hours, ranging from 28 to 60. Florida, the most recent state to permit dental hygienists to provide LAA, requires 60 hours of instruction. The average number of hours required for these seven states is 33. When comparing states that limit LAA to infiltration only, similar discrepancies are seen. For example, New York requires 45 hours of instruction, while South Carolina has no minimum requirement. In comparison, the national average for total required instruction (including both didactic and clinical hours when applicable) is 22 hours.

Unfortunately, variation in state dental anesthesiology regulation is also common.⁴ Discrepancies in state regulations may adversely affect portability of licensure, patient experience, and dental practices' financial models. Additionally, variations in the initial licensure of dental hygienists with LAA training may be confusing for newly graduated dental hygienists.⁵ For many, especially those who take regional board exams, LAA competencies may not even be assessed.

Currently, **44 states and the District of Columbia include local anesthesia administration** within their dental hygiene scopes of practice.

Rules and regulations governing LAA are determined by state dental boards. States have their own requirements and they often necessitate different training and documentation such as proof of passing a regional board examination, signed affidavit by a supervising dentist, and/or graduation from an accredited dental hygiene school with a verified LAA curriculum. This not only poses challenges for dental hygiene professionals moving across state lines, but also for the credentialing bodies themselves.⁴ Thorough review of the dental practice act is imperative prior to engaging in practice.

PRACTICE CHARACTERISTICS

Currently, 44 states and the District of Columbia include LAA within their dental hygiene scopes of practice. A national survey completed in 2011 revealed that the majority of dental hygiene respondents (59.5% of 432 survey participants) administered local anesthesia.⁶ This study also demonstrated that the majority of respondents administered anesthesia for procedures to be performed by a dentist (58.4% of 257 survey participants). Practice settings can influence the number and types of injections administered by dental hygiene professionals. Clinicians working in periodontal practices and those in public health settings reported more frequent use of LAA.⁶ The small number of dental hygiene professionals employed by endodontists may perform LAA as their primary task.^{7,8}

Figure 2 demonstrates the type of supervision required for dental hygienists during LAA by state. Supervision is usually described as:

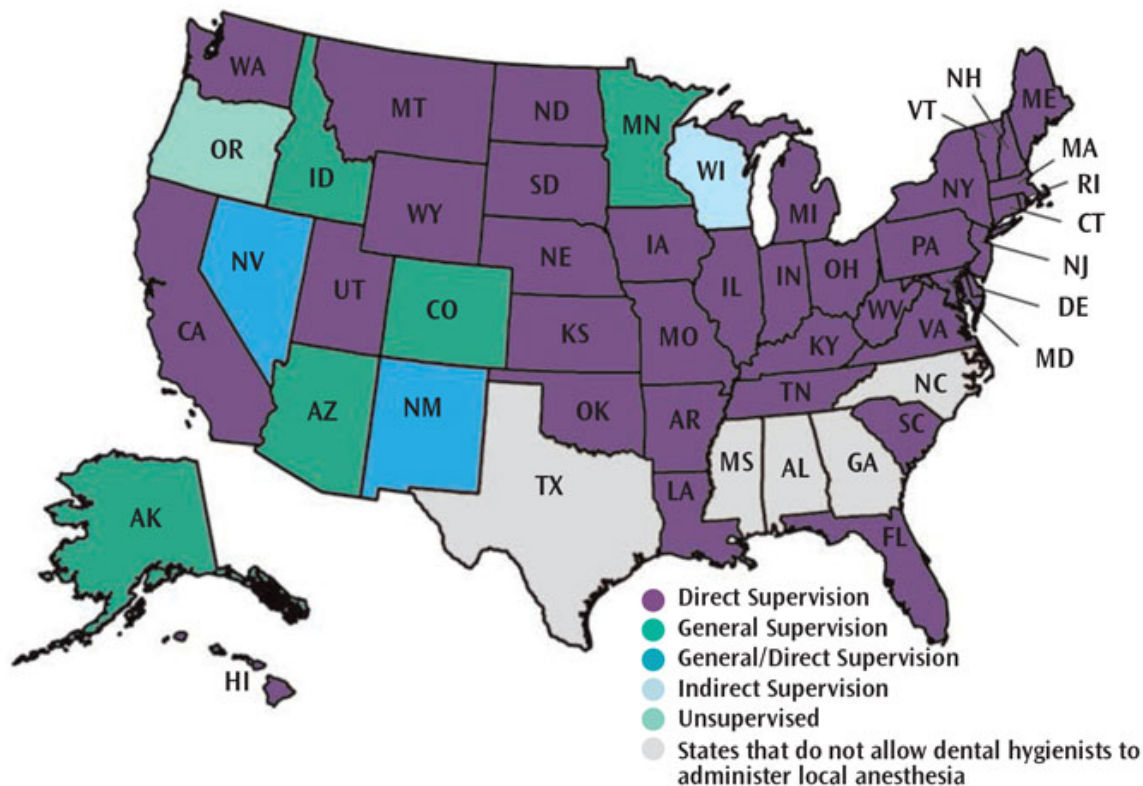


FIGURE 2. This map illustrates the supervision requirements by state for the administration of local anesthesia by dental hygienists.²

Direct: a supervising dentist is on the premises, has diagnosed the condition, authorized the procedure, and evaluates the completion of the procedure [some states use the term "indirect" with a similar definition]

General: a supervising dentist has authorized the procedure and completed a diagnosis but does not physically need to be on the premises

Direct/general: This level of supervision varies depending on the practice activity or the type of licensure/certification of the dental hygiene professional⁹

TABLE 2. Commission on Dental Accreditation Standard 2-17 2016²

Graduates must be competent in providing appropriate life support measures for medical emergencies that may be encountered in dental hygiene practice.

Intent: Dental hygienists should be able to provide appropriate basic life support as providers of direct patient care.

In the six states where LAA is provided under general supervision (Alaska, Idaho, Nevada,

Colorado, Arizona, and Minnesota), the procedures are delegated to dental hygienists as part of approved treatment plans. In these settings, dental hygiene professionals are held to the same standards of competency, safety, and appropriate responses to adverse reactions as set forth by state regulations and CODA standards (for training programs). For example, CODA Standard 2-17 mandates that dental hygiene professionals be competent in providing appropriate life support measures for medical emergencies that may be encountered in dental hygiene practice (Table 2).² This directly applies to all sites where dental hygienists administer local anesthesia in accordance with state regulations.

SAFETY AND EFFECTIVENESS

A significant record of safety of LAA by dental hygiene professionals is documented in the published scientific literature.^{5,10,11} Based on 1990 and 2005 surveys, no formal complaints were reported regarding dental hygienists engaged in LAA.^{12,13} Few significant adverse issues have been reported during the 300 million plus dental-related local anesthetic injections administered each year. Both dentists and dental hygienists have a remarkable record of safety.^{14,15}

Data on effectiveness demonstrate that dental hygienists obtain the training to administer local anesthesia with high levels of success.^{5,10,11} Reported anesthesia success rates following the administration of an intraoral anesthetic agent range from 86% to 97%, with variations for injection type and technique similar to those seen throughout the dental profession.^{5,13,15} In a study of Arkansas dentist employers, investigators reported 92% of respondents were satisfied with dental hygienists' abilities to administer local anesthesia.¹⁶ In a study evaluating school-based dental care, no significant differences in complication rates were found when dentists and dental hygienists were compared.¹⁷

DEVELOPING A NATIONAL CONSENSUS

While seven states (Alaska, Colorado, Idaho, Minnesota, Nevada, New Mexico, and Oregon) permit dental hygienists to engage in LAA at some level of general supervision, six states (Delaware, North Carolina, Mississippi, Alabama, Georgia, and Texas) continue to exclude local anesthesia as part of the dental hygiene scope of practice. In 2015, legislation was introduced in Texas to change the scope of practice; however, the bill did not gain enough support to advance through the legislature.¹⁸

Hyperbole, concern for patient safety, and politics are at play whenever regulatory officials consider expanding dental hygienists' scopes of practice. Moreover, underutilization of expanded function auxiliaries occurs more often in dentistry than in other health care disciplines.^{19,20} Previous investigators have cited insufficient experience and education regarding team-based patient care models as reasons for their underutilization in dentistry.^{19,21,22}

PRACTICE IMPLICATIONS

Dental hygiene professionals engaged in LAA may improve their dental practices' financial viability and sustainability. Surveys have demonstrated that a majority of dentists reported that delegating LAA to dental hygienists provides benefits such as enhanced patient satisfaction and

increased productivity.^{5,10,16} A better understanding of these effects requires additional research.²¹⁻²⁵

CONCLUSION

Dental hygienists have demonstrated they can proficiently and safely administer local anesthesia. While much progress has occurred over the past 40 years, there remains no national education standard or utilization consensus regarding LAA. The entire profession of dentistry would likely benefit from a consensus monogram endorsed by both organized dentistry and dental hygiene that provided guidelines regarding education requirements and the use of LAA. In an era of health care paradigm shifts, the ability to increase practice efficiencies and improve treatment outcomes and patient experience by allowing dental hygiene professionals to provide LAA suggests that the time is right for national consensus.



SEAN G. BOYNES, DMD, MS, is director of interprofessional practice at Boston-based DentaQuest Institute, a national nonprofit organization providing clinical care and practice management solutions to help providers improve oral health. A dentist anesthesiologist, Boynes has authored more than 50 publications. His book, *Dental Anesthesiology: A Guide to the Rules and Regulations of the United States*, is used by many dental organizations and oversight boards as a reference guide.



KATHY BASSETT, RDH, MEd, is a professor and clinic coordinator in the Department of Dental Hygiene at Pierce College in Lakewood, Washington. She has more than 30 years of practice experience, focused primarily in local anesthesia delivery and restorative expanded functions. Bassett is also a co-author of the textbook *Local Anesthesia for Dental Professionals* and a *Dimensions of Dental Hygiene* Editorial Advisory Board member.

References

1. Darby ML, Walsh M. *Dental Hygiene Theory and Practice*. 3rd ed. Philadelphia: Saunders; 2009.
2. Commission on Dental Accreditation. Accreditation Standards for Dental Hygiene Education Programs. Available at: [ada.org/~media/CODA/ Files/dh.pdf?la=en](http://ada.org/~media/CODA/Files/dh.pdf?la=en). Accessed February 16, 2016.
3. American Dental Hygienists' Association. Local Anesthesia by Dental Hygienists: State

- Chart. Available at: adha.org/resources-docs/7514_Local_Anesthesia_Requirements_by_State.pdf. Accessed February 16, 2016.
4. Boynes SG. Dental Anesthesiology: A Guide to the Rules and Regulations of the United States. Chicago: *American Dental Society of Anesthesiology*; 2013.
 5. Boynes SG, Zovko J, Peskin RM. Local anesthesia administration by dental hygienists. *Dent Clin N Am*. 2010;54:769–778.
 6. Boynes SG, Zovko J, Bastin MR, et al. Dental hygienists' evaluation of local anesthesia education and administration in the United States. *J Dent Hyg*. 2011;85:67–74.
 7. Gutman ME, Gutmann JL. The dental hygienist as a co-therapist in endodontic practice. *J Endodon*. 1999;25:272–274.
 8. Waldman HB, Feigen ME. Endodontists in a period of improving dental economics and changing realities of practice. *J Endodon*. 1990;16:179–181.
 9. American Dental Association, Department of State Government Affairs. Expanded Functions for Dental Assistants. Available at: aapd.org/assets/1/7/StateLawsonDAs.pdf. Accessed February 16, 2016.
 10. Anderson JM. Use of local anesthesia by dental hygienists who completed a Minnesota CE course. *J Dent Hyg*. 2002;76:35–46.
 11. Lobene RR. The Forsyth Experiment. Boston: Harvard University Press; 1979.
 12. Scofield JC, Gutmann ME, DeQald JP, et al. Disciplinary actions associated with the administration of local anesthetics against dentists and dental hygienists. *J Dent Hyg*. 2005;79:8.
 13. Sisty-Lepeau N, Boyer EM, Lutjen D. Dental hygiene licensure specifications on pain control procedures. *J Dent Hyg*. 1990;64:179–185.
 14. Malamed SF. *Handbook of Local Anesthesia*. 5th ed. St Louis: Mosby; 2004.
 15. Bassett K, DiMarco A, Naughton D. *Local Anesthesia for Dental Professionals*. ed. 2nd ed. Saddle River, New Jersey: Prentice Hall; 2014.
 16. DeAngelis S, Goral V. Utilization of local anesthesia by Arkansas dental hygienists, and dentists' delegation/satisfaction relative to this function. *J Dent Hyg*. 2000;74:196–204.
 17. Boynes SG, Riley AE, Milbee S, et al. Evaluating complications of local anesthesia administration and reversal with phentolamine mesylate in a portable pediatric dental clinic. *Gen Dent*. 2013;61:70–76.
 18. Richardson AM. Dental hygiene and anesthesia: Even government is perplexed by doublespeak. Available at: dentistryiq.com/articles/2015/03/dental-hygiene-and-anesthesia-even-government-is-perplexed-by-doublespeak.html. Accessed February 16, 2016.
 19. Blue CM, Funkhouser E, Riggs S, et al. Utilization of non-dentist providers and attitudes toward new provider models: Findings from the national dental practice-based research network. *J Public Health Dent*. 2013;73:237–244.
 20. National Rural Health Association. Recruitment and Retention of a Quality Health Workforce. Available at: ruralhealthweb.org/index.cfm?objectid=4076C0CD-1185-6B66-885EFC4618BEF23F. Accessed February 16, 2016.
 21. Leske GS, Leverett DH. Variables affecting attitudes of dentists toward the use of expanded function auxiliaries. *J Dent Educ*. 1976;40:79–85.
 22. Blue C, Phillips R, Born D, Lopez N. Beginning the socialization to a new workforce model: dental students' preliminary knowledge of and attitudes about the role of the dental therapist. *J Dent Educ*. 2011;75:1465–1475.

23. Edelstein BL. Examining whether dental therapists constitute a disruptive innovation in US dentistry. *Am J Public Health*. 2011;101:1831–1835.
24. Widstrom E, Linna M, Niskanen T. Productive efficiency and its determinants in Finnish Public Dental Service. *Comm Dent Oral Epidemiology*. 2004;32:31–40.
25. Wright JT, Graham F, Hayes C, et al. A systematic review of oral health outcomes produced by dental teams incorporating midlevel providers. *J Am Dent Assoc*. 2013;144:75–91.

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Saturday, December 3, 2016

Dental Hygiene Committee of California

Licensing and Examination Subcommittee

LIC 8

Future Agenda Items



Saturday, December 3, 2016

Dental Hygiene Committee of California

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LIC 9

Adjournment