# Research

# State Licensing Board Requirements for Entry into the Dental Hygiene Profession

Kristen Johnson, RDH, MS; JoAnn Gurenlian, RDH, MS, PhD, AFAAOM; Kandis Garland, RDH, MS; Jacqueline Freudenthal, RDH, MHE

## Abstract

**Purpose:** The purpose of this study was to identify current requirements for initial licensure and entry into the dental hygiene profession across state dental and dental hygiene licensing boards in the United States.

**Methods:** A non-experimental study design was used to study dental and dental hygiene board licensing requirements in the United States, Puerto Rico and the Virgin Islands. Each regulatory board website was searched for requirements for entry-level dental hygiene licensure. Requirements were recorded on an Excel spreadsheet. State dental practice acts were reviewed to gather further information and 20 regulatory bodies were contacted to verify accuracy. Descriptive statistics were used to analyze data.

**Results:** Information from a total of 52 dental boards (n=52) was examined for this study. Nearly all boards (n=51, 98.1%), with the exception of Alabama, required completion of entry-level education from a CODA accredited dental hygiene program and successful completion of the National Board Dental Hygiene Examination. Most states (n=51, 98.1%), except Delaware, also required a live-patient, a clinical board examination. Application fees ranged from $47.70 to $600. States varied considerably in terms of requirements for background checks, age, military status, and infection control training.

**Conclusion:** Although the majority of regulatory bodies require completion of entry-level dental hygiene education from a CODA accredited program and successful completion of national board and a live-patient, clinical examination, there is considerable variation in other additional requirements for initial dental hygiene licensure.

**Keywords:** dental hygiene workforce models, dental hygiene education, licensure, accreditation standards, scope of practice

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## Introduction

Licensure and regulation have been important aspects for public health in the dental hygiene profession since its inception. The purpose of licensing is to protect the health and safety of consumers and to ensure a high quality of care is provided. Typically, practitioners are required to undergo specific education from an accredited institution and examination as a means of demonstrating that the public is protected from fraudulent or incompetent service providers.[1,2] In 1917, Connecticut became the first state to require dental hygienists to become licensed to practice.[3] Since that time, dental hygiene licensure has been regulated by individual state dental boards.[4] State boards of dentistry, also known as boards of dental examiners or state dental licensing boards, are created by the state legislature. Their authority typically includes the "establishment of qualifications for licensure; issuance of licenses to qualified individuals; establishment of standards of practice and conduct; taking disciplinary action against those who engage in misconduct; and promulgation of rules to enable the board to perform its duties."[5]

There are currently 52 state dental boards, including the District of Columbia and the Virgin Islands. Nineteen state boards also include dental hygiene committees or councils, which are responsible for governing actions associated with the practice of dental hygiene. In 2018, California became the first state to have a self-regulating, dental hygiene licensing body, that is not a subcommittee of a dental board, when the Dental Hygiene Committee of California was renamed the Dental Hygiene Board of California (DHBC). The DHBC

is recognized as an independent board operating within the Department of Consumer Affairs, with full authority to license and regulate dental hygienists in addition to reviewing and disciplining dental hygiene educational programs in the state of California.[6]

In order to be licensed as a registered dental hygienist, one must first graduate from an accredited dental hygiene program within a college or university. The candidate for dental hygiene licensure is also required to pass the National Board Dental Hygiene Examination, as well as a state or regional clinical examination.[7] In addition, each state has its own requirements for licensure, including a jurisprudence examination, official school transcripts, basic life support certification, local anesthesia, and age requirements. Licensure can be denied to applicants who are not in compliance with the state's dental practice act or those with criminal convictions. Most states include background checks as part of their licensing procedures.[8] In 2018, the American Dental Hygienists' Association (ADHA) proposed that the Commission on Dental Accreditation (CODA) implement changes in regards to the entry-level degree for dental hygiene education, replacing the associate degree with the baccalaureate degree (Standard 2-1). Standard 2-1 currently specifies that the educational requirements for entry-level into the profession of dental hygiene "must include at least two academic years of full-time instruction or its equivalent at the postsecondary college-level."[9] CODA requested justification for this change and five areas to be addressed. One of these areas included the need for information from state dental and dental hygiene boards regarding current requirements for licensure and entry into the profession.[10] The purpose of this study was to identify current requirements for initial licensure and entry into the dental hygiene profession, from state dental and dental hygiene licensing boards in the United States (US).

## Methods

A non-experimental, descriptive study design was used to answer the following questions: 1) What are the state licensing board requirements for licensure and entry into the dental hygiene profession? 2) Are there differences in licensing board requirements for entry into the dental hygiene profession between state dental licensing boards and dental hygiene licensing boards? This design was deemed to be the most appropriate as no variables were manipulated.[11,12] Data, as identified on dental and dental hygiene licensing board websites, were documented and described.

The sample for this IRB exempt study included all state dental and dental hygiene licensing boards throughout the US, including the District of Columbia and the Virgin Islands. Puerto Rico was considered for inclusion; however, their website did not include any information about dental hygiene licensure by examination, nor did it include information regarding application for dental hygiene licensure. Personal contact with the licensing board of Puerto Rico was also unsuccessful.

An Excel spreadsheet was created to record information specific to each state board's licensure by examination for a new dental hygiene graduate. Licensure renewal, licensure for educators, and temporary licenses were excluded from this study. The data collection instrument was pilot tested using information from five states to verify the information for completeness and accuracy. Two co-investigators independently reviewed and verified information collected by the principal investigator (PI) as a way of establishing validity of the data collection process. In addition, the PI contacted a representative of the state board of dentistry of the first five state licensing boards to verify that the information posted on the website was current and accurate. This process was used to establish reliability as well as contribute to the validity of the study.

To obtain specific information, the PI searched each state dental board website for information about licensure for dental hygienists. The next step was to search for licensure by examination to ensure that the information collected was specific to licensing requirements for entry-level candidates. The PI evaluated the applications for specific requirements and noted them in the data spreadsheet by state. In many cases, the PI searched the dental practice act to gather complete information missing from the licensure application. In addition, the PI and a co-investigator contacted 20 state boards to verify where to locate the specific information and to verify the data collected. Furthermore, the PI contacted state licensing specialists to verify that the information provided on the website was current.

Descriptive statistics were used to analyze data. Similarities and differences among states has been summarized using frequencies and percentages.

## Results

A total of 52 licensing boards were examined for this non-experimental study. All states and territories have a dental regulatory board. California also has a dental hygiene board and 19 other states have a dental hygiene committee or council, as shown in Table I. These dental hygiene committees' and board responsibilities vary by state. Responsibilities may include advising the dental board on rules and proposed statue changes about the dental hygiene profession, evaluating continuing education classes, monitoring dental hygienists' compliance with continuing education requirements, disciplinary decisions, and reviewing applications for licensure.

Individual state licensing application requirements are shown in Table II. Almost all (n=51, 98.1%) dental regulatory boards, with the exception of Alabama (n=1, 1.9%), require completion of a dental hygiene entry-level education from a CODA-accredited program and successful completion of the National Board Dental Hygiene Examination. Proof of education could consist of a letter from the dental hygiene program, official dental hygiene transcripts, or a notarized copy of a dental hygiene diploma. Most states (n=51, 98.1%), with the exception of Delaware (n=1, 1.9%), require a regional clinical board examination. All regulatory boards required an application fee. This fee ranged from $47.70 to $600.00, with an average fee of $164.44.

Most regulatory boards require a jurisprudence examination (n=40, 76.9%) and basic life support or cardiopulmonary resuscitation (CPR) certification (n=45, 86.5%) as a requirement for licensure (Table II). In addition, New York, Alabama, Delaware, Hawaii, Louisiana, Mississippi, North Carolina, Oklahoma, and Oregon (n=9, 17.3%) have language requiring applicants to verify completion of infection control training. Sixteen governing boards (30.8%) specify an age requirement ranging from 17 to 21 years of age. States vary considerably in terms of requirements for background checks, fingerprints, statements of good moral character, citizenship and immigration status. New Mexico, North Carolina, Rhode Island, South Dakota, Texas, West Virginia, and Wyoming (n=7, 13.5%) include a section on military status.

Some dental regulatory boards have additional specific requirements for entry-level licensure applicants. A radiation safety course is required for California licensure. HIV/AIDS training is required in Washington, while HIV, HBV and HCV status disclosure is necessary in Louisiana. Professional liability insurance is mandated in Colorado. Tennessee requires a letter of recommendation from a dental professional. Massachusetts, North Dakota, Ohio, and West Virginia (n=3, 7.7%) require signed statements from a physician, physician assistant, or nurse practitioner that the applicant is medically cleared to practice dental hygiene. Oklahoma may require a personal interview by the state board upon request. Four boards North Dakota, Oklahoma, South Dakota, and Wyoming (n=4, 7.7%) require personal references. Failure to pay taxes must be reported on applications in California, Missouri, New Jersey, and Tennessee (n=4, 7.7%) and student loan default reporting is mandated in New Jersey.

## Discussion

This study was designed to address CODA's request for information regarding state licensure requirements for entry-level dental hygiene applicants. Results identified many similarities across the regulatory licensing bodies. Most regulatory boards require applicants to have graduated from a CODA-accredited dental hygiene program, have proof of passing a national written and a regional clinical examination, and successfully complete some form of background check. Most boards also require a jurisprudence exam and current CPR certification. No differences were found in these requirements between dental licensing boards and/or dental hygiene boards or committees. There is considerable variation beyond these primary elements in terms of additional requirements including age, armed forces status, application fees, professional liability insurance number and type of references, debt, health status, and additional training.

The clinical examination is an aspect of the licensure process that has been debated within dentistry and dental hygiene. Live patients are required for the regional organizations administering clinical licensure examinations and includes the Council of Interstate Agencies (CITA), Central Regional Dental Testing Service (CRDTS), Commission on Dental Competency Assessments (CDCA), (formerly Northeast Regional Board of Dental Examiners or NERB), Southern Regional Testing Agency (SRTA), and Western Regional Examining Board (WREB). The live patient requirement brings up a range of ethical considerations including patient welfare, free and informed consent, and adequate follow-up care.[13-15]

Alternative assessments of clinical competency as qualifications for entry to the profession was studied in a cross-sectional survey of all CODA-approved entry-level dental hygiene program directors by Fleckner and Rowe.[16] Findings revealed that most dental hygiene program directors agreed that a single state and regional exam had "low validity in reflecting the complex responsibilities of the dental hygienist in practice" and that graduating from a CODA-approved dental hygiene program and passing a national board exam certifies that a graduate is capable of functioning as a licensed dental hygienist.[16]

While an alternative to the regional clinical exam for dental hygiene has not been created, others have championed a call for this change in dentistry.[17] In 2014, the American Dental Education Association (ADEA) House of Delegates passed Resolution 5-H 2014, recommending the elimination of the human subject/patient-based components of the clinical licensure examination process and called for a task force to create a plan to transition to an alternative licensure process.[18] Since that time, dental graduates in California, Colorado, New York, and several other states can obtain licensure through the successful completion of

**Table I. Dental hygiene regulatory bodies: responsibilities by state**

| State | Regulation | Composition | Responsibilities |
|---|---|---|---|
| AZ | Committee | 5 DHs (1 from dental board)<br>1 dentist (from dental board)<br>1 public member | Advise board on rules and regulations concerning dental hygiene education, regulation and practice<br>Evaluates CE classes for expanded function<br>Monitors compliance with CE requirements |
| CA | Board | 4 DHs<br>1 dentist<br>4 public members | Issuing, reviewing, and revoking licenses<br>Developing and administering examinations<br>Adopting regulations, determining fees and continuing education requirements |
| CT | Ad hoc committee as needed | Not specified | Address rules or disciplinary actions |
| DE | Committee | 3 DHs | Writes the examination for licensure in conjunction with dental board<br>Votes on issues of licensure by credentials, disciplinary decisions, continuing education requirements, and issues involving the policy and practice of dental hygiene but not the scope of practice |
| FL | Council | 4 DHs (1 from board)<br>1 dentists (from board) | Develops all dental hygiene rules to submit to the board for approval |
| GA | Committee | 1 DH<br>1 dentist | Not defined |
| IA | Committee | 2 DHs (board members<br>2 dentists (board members) | Make all rules pertaining to dental hygiene; the dental board is required to adopt and enforce these rules |
| ME | Subcommittee | 3 DHs (1 board member)<br>2 dentists (board members) | Perform an initial review of all applicants for licensure as a dental hygienist<br>Review submissions relating to continuing education and all submissions related to public health supervision status of dental hygienists |
| MD | Committee | 3 DHs (all board members<br>1 dentist (board member)<br>1 public member (board member)` | All matters pertaining to dental hygiene must first be brought to the committee for its review and recommendation |

an advanced education, post-graduate residency program. In Minnesota, dental students can complete the objective structured clinical exam (OSCE), a modified version of the National Dental Examining Board of Canada's licensure exam, rather than take the traditional exam involving live patients. In California, dental students can obtain licensure by successfully completing a hybrid portfolio. Other dental schools have adopted a curriculum integrated format that was piloted at the University of Buffalo.[17,20] With regards to dental hygiene, in 2018, the ADHA also adopted policy promoting the elimination of the patient procedure-based single encounter clinical examination.[19] However, at this point in time, there are no alternatives to a live-patient examination for candidates for dental hygiene licensure.

More recently, a Task Force on Assessment of Readiness for Practice (TARP) was created consisting of members of the American Dental Association (ADA), the American Student Dental Association (ASDA) and ADEA to address the issues of the use of single encounter, procedure-based examinations on patients, as part of the dental licensure process along with licensure portability challenges that are burdensome and unnecessary for validating patient safety.[21] The TARP has proposed a modernized process for initial

**Table I. Dental hygiene regulatory bodies: responsibilities by state (continued)**

| State | Regualtion | Composition | Responsibilities |
|---|---|---|---|
| MI | Committee | 2 DHs<br>2 dentists<br>1 dental assistant<br>1 public member | Considers matters related to the dental hygiene profession and make recommendations to the Board |
| MO | Commission | 5 DHs (1 board member) | Makes recommendations to the board concerning dental hygiene practice, licensure, examinations, discipline and educational requirements |
| MT | Committee | 2 DHs (board members)<br>1 dentist (board member) | Formulates specific recommendations to bring to the entire board for action |
| NV | Committee | 3 DHs (board member)<br>1 dentist (board member) | Formulates recommendations on dental hygiene rules for the board |
| NH | Committee | 4 DHs (1 board member)<br>1 dentist (board member) | Proposes rules concerning the practice, discipline, education, examination and licensure of dental hygienists |
| NM | Committee | 5 DHs (2 board members)<br>2 dentists<br>2 public members | Adopts all rules pertaining to dental hygiene<br>Also responsible for the discipline of dental hygienists<br>The board enforces the dental hygiene committee's rules |
| OK | Committee | 5 DHs (1 board member) | Not defined |
| OR | Standing committee as needed | Not specified | Not defined |
| RI | Committee | 1 DH<br>1 dentist<br>1 public member | Serves as an examining committee for applicants applying for licensure as dental hygienists |
| TX | Advisory Committee | 3 DHs<br>1 dentist<br>2 public member | Not defined |
| WA | Committee | 3 DHs<br>1 public member | Develops rules and definitions to implement in the dental hygiene practice act with the dental hygiene examining committee |

licensure of dentists that includes completion of a university-based, CODA accredited dental education program including documentation of clinical competence and assessment of psychomotor skills; passage of the National Board Dental Examination; and successful passage of a valid and reliable clinical assessment that does not utilize the single encounter clinical examination performed on a live patient. TARP has proposed substituting the live patient examination with the following options: use of an OSCE, graduation from a CODA accredited PGY-1 program, or the use of other assessments such as the Portfolio or Compendium of [Clinical] Competency Assessment. Furthermore, TARP has recommended that state boards enact changes to allow for increased licensure portability as well as the examination of a common core of credentials that can serve as a basis for licensure compacts between states.[21] These dental assessment models could also be adapted for dental hygiene, allowing for reciprocity between states and increased licensure portability. These recommended changes have begun in Oregon through Senate Bill 824 that allows that State Board of Dentistry to accept results of national and regional testing agencies or clinical board examinations by other states for applicants who wish to practice dentistry or dental hygiene. Alternative assessments that do not require live patients are acceptable.

**Table II. Dental hygiene entry-level, initial licensure requirements**

| State | Clinical Exam | Proof of Education | Application Fee | Jurisprudence | CPR | Background Check | Other Requirements |
|---|---|---|---|---|---|---|---|
| AL | CITA CRDTS WREB SRTA | DH Transcripts | $225 | Yes | Yes | Criminal fraud questions<br>Good moral character with testimonials<br>Notarized affidavit<br>Passport photo<br>Citizen/immigration status | HEP B series |
| AK | CITA WREB | DH Transcripts Certification of Completion | $300 | Yes | Yes | Professional fitness<br>National Practitioners Data Bank<br>Self Query<br>Notarized affidavit Release of records | Abuse identification and reporting |
| AR | CITA CDCA CRDTS WREB SRTA | DH Transcript | $100 | Yes | Yes | Passport photo | |
| AZ | CITA CDCA WREB | Certificate of Completion | $300 | Yes | Yes | Good moral character<br>Fingerprints<br>Notarized affidavit<br>Passport photo | |
| CA | CITA CRDTS WREB | Certificate of Completion | $200 | Yes | Yes | Fingerprints<br>Criminal fraud questions<br>Passport photo | Expanded function education if out of state<br>Radiation safety course<br>Failure to pay taxes results in denial of license |
| CO | CITA WREB SRTA | DH Transcripts | $160 | No | Yes | Personal data questions<br>Citizen/immigration status | Professional liability insurance |
| CT | CDCA CITA SRTA | DH Transcripts | $150 | No | Yes | Yes, but parameters not specified | |
| DE | | DH Transcripts | $189 | Yes (must be notarized) | Yes | Fingerprints<br>Notarized affidavit | Proof of high school transcripts or GED |
| DC | CDCA CITA WREB | DH Transcripts | $245 | Yes | Yes | Criminal fraud questions<br>Good moral character<br>Personal affidavit<br>Passport photo | |
| FL | CDCA CITA | Certification of Completion | $135 | Yes | Yes | Criminal fraud questions<br>Release of records | |
| GA | CRDTS | DH Transcripts | $75 | Yes | Yes | National Practitioners Data Bank<br>Criminal fraud questions<br>Notarized affidavit Citizen/ immigration status | |
| HI | CDCA CITA CRDTS WREB SRTA | Certificate of Completion | $246 | No | Yes | Citizen/immigration status<br>Release of records | |
| ID | CITA WREB | DH Transcripts | $150 | Yes | Yes | Notarized affidavit<br>Release of records | |

continued on page 60

**Table II. Dental hygiene entry-level, initial licensure requirements (continued)**

| State | Clinical Exam | Proof of Education | Application Fee | Jurisprudence | CPR | Background Check | Other Requirements |
|---|---|---|---|---|---|---|---|
| IL | CDCA CITA CRDTS WREB SRTA | Certificate of Completion | $100 | No | Yes | | |
| IN | CDCA CITA WREB SRTA | Certificate of Completion<br>DH<br>Transcripts | $100 | Yes | Yes | Fingerprints<br>Criminal fraud questions<br>Personal data questions<br>Passport photo | |
| IA | CITA WREB | Certificate of Completion | $100 | Yes | Yes | Release of records | |
| KS | CITA CRDTS WREB CRTA | DH<br>Transcripts | $100 | Yes | Yes | National Practitioner Data Bank<br>Notarized affidavit<br>Passport photo | |
| KY | CDCA CITA WREB SRTA | DH<br>Transcripts<br>Proof of Completion of Requirements | $125 | Yes | Yes | Fingerprints<br>FBI background check<br>National Practitioner Data Bank<br>Notarized affidavit Personal data questions | |
| LA | CITA | Certification of Education | $280 | Yes | Yes | Fingerprints<br>Personal data questions<br>Notarized affidavit<br>Passport photo<br>Proof of citizenship or immigration with birth certificate | HIV status disclosure |
| ME | CDCA CITA WREB SRTA | Certification of Education<br>DH<br>Transcripts | $241 | Yes | Yes | National Practitioner Data Bank<br>Personal affidavit | Abuse identification and reporting |
| MD | CDCA CITA | DH<br>Transcripts; certified | $275 | Yes | Yes | Good moral character<br>National Practitioner Data Bank<br>Personal data questions<br>Notarized affidavit<br>Passport photo<br>Release of records | |
| MA | CDCA CITA WREB SRTA | DH<br>Transcripts<br>Letter from Dean | $126 | Yes | Yes | Good moral character<br>National Practitioner Data Bank<br>Notarized affidavit<br>Passport photo | Physician statement |
| MI | CDCA CITA WREB | Certificate of Completion<br>DH Transcript | $47.70 | No | Yes | Good moral character<br>Fingerprints<br>Personal affidavit | |
| MN | CDCA CITA CRDTS WREB Results notarized | DH Transcript notarized | $148.25 | Yes, and notarized | Yes | Complete background check<br>Personal data questions<br>Personal affidavit and notarized affidavit<br>Passport photo | |

**Table II. Dental hygiene entry-level, initial licensure requirements (continued)**

| State | Clinical Exam | Proof of Education | Application Fee | Jurisprudence | CPR | Background Check | Other Requirements |
|---|---|---|---|---|---|---|---|
| MS | CDCA CITA WREB SRTA | | $150 | Yes | Yes | Good moral character | |
| MO | CDCA CITA CRDTA WREB SRTA | DH Transcripts | $155 | Yes | Yes | Good moral character<br>Personal data questions<br>Notarized affidavit<br>Passport photo | Child support obligation<br>Failure to pay taxes results in denial of license |
| MT | CITA WREB SRTA | Certificate of Completion | $185 | Yes | Yes | National Practitioner Data Bank | |
| NE | CITA CRDTS WREB SRTA | DH Transcripts | $110 | Yes | No/Yes if licensed for Nitrous | Personal data questions<br>Citizenship/immigration status with documentation | |
| NV | CDCA CITA WREB | DH Transcripts | $600 | Yes | Yes | Good moral character<br>Fingerprints<br>National Practitioner Data Bank<br>Criminal fraud questions<br>Personal data questions<br>Passport photo<br>Citizenship/immigration status | |
| NH | CDCA CITA SRTA | DH Transcripts | $100 | Yes | Yes | Notarized criminal background check two character references<br>Criminal fraud questions<br>Personal data questions<br>Citizen/immigration status with birth certificate | |
| NM | CDCA CITA CRDTS WREB SRTA | Certificate of Completion | $350 | Yes | Yes | Complete background check<br>Criminal fraud questions<br>Notarized affidavit<br>Passport photo | |
| NY | CDCA | Certification of Completion DH Transcripts | $128 | Yes | Yes | Good moral character<br>Criminal fraud questions<br>Citizenship/immigration status | Child support obligation<br>Abuse identification and reporting |
| NC | CITA | | $275 | Yes | Yes | Fingerprints<br>Complete background check | |
| ND | CITA WREB SRTA | DH Transcripts | $200 | Yes | Yes | Fingerprints<br>National Practitioner Data Bank | Notarized copy of DH Diploma<br>Three personal references<br>Physician statement |
| OH | CDCA CRDTS WREB SRTA | Certification of Education; Certified DH Transcripts | $184 | Yes | No/Yes if licensed for local anesthesia | Good moral character<br>Complete background check<br>Notarized affidavit<br>Passport photo | HEP B series<br>Physician statement |

continued on page 62

**Table II. Dental hygiene entry-level, initial licensure requirements (continued)**

| State | Clinical Exam | Proof of Education | Application Fee | Jurisprudence | CPR | Background Check | Other Requirements |
|---|---|---|---|---|---|---|---|
| OK | CRDTS<br>WREB | DH<br>Transcripts | $100 | Yes | Yes | National Practitioner Data Bank<br>Criminal fraud questions<br>Passport photo<br>Citizenship/immigration status with birth certificate | Copy of DH Diploma<br>Personal interview if requested by Board<br>Three personal references |
| OR | CDCA CITA<br>WREB | Certification of Education<br>DH<br>Transcripts | $180 | Yes | Yes | Fingerprints<br>Personal data questions Notarized affidavit<br>Passport photo | |
| PA | CDCA CITA<br>WREB | | $75 | No | Yes | Good moral character | |
| RI | CDCA CITA<br>WREB | DH<br>Transcripts | $65 | No | No/Yes if licensed for L.A. or N2O2 | Criminal fraud questions<br>Notarized affidavit<br>Passport photo<br>Citizenship/immigration status | |
| SC | CITA CRDTS | DH<br>Transcripts | $150 | No | Yes | Personal data questions<br>Notarized affidavit<br>Passport photo<br>Citizenship/immigration status notarized | |
| SD | CITA CRDTS<br>WREB | DH<br>Transcripts | $215 | Yes | Yes | Good moral character<br>National Practitioner Data Bank<br>Criminal fraud questions<br>Personal data questions<br>Passport photo<br>Citizenship/immigration status with birth certificate<br>Release of records | Three personal references |
| TN | CDCA CITA<br>CRDTS<br>WREB SRTA | DH<br>Transcripts | $125 | Yes | Yes | Complete background check<br>Criminal fraud questions<br>Passport photo<br>Citizenship/immigration status notarized | Two letters of recommendation by a dental professional<br>Failure to pay taxes results in denial of license |
| TX | CITA CRDTS<br>WREB | DH<br>Transcripts | $126 | Yes | Yes | Fingerprints<br>National Practitioner Data Bank<br>Notarized affidavit<br>Passport photo<br>Citizenship/immigration status | American Association of Dental Board self-query<br>Official High School transcripts |
| UT | CDCA CITA<br>WREB | DH<br>Transcripts | $60 | No | Yes | Good moral character<br>Criminal fraud questions<br>Personal data questions<br>Personal affidavit<br>Citizen/immigration status | |
| VT | CDCA CITA<br>WREB | Certificate of Completion | $150 | Yes | Yes | | Emergency office procedure course |

**Table II. Dental hygiene entry-level, initial licensure requirements (continued)**

| State | Clinical Exam | Proof of Education | Application Fee | Jurisprudence | CPR | Background Check | Other Requirements |
|---|---|---|---|---|---|---|---|
| VA | CITA WREB CRDTS SRTA CDCA | Certification of Education<br>DH<br>Transcripts | $175 | No | No | National Practitioner Data Bank<br>Notarized affidavit | |
| VI | CITA WREB | Certification of Education<br>DH<br>Transcripts | $100 | Yes | No | Good moral character with two letters of references<br>National Practitioner Data Bank<br>Complete background check<br>Notarized affidavit<br>Passport photo<br>Citizen/immigration status<br>Release of records | |
| WA | CDCA CITA CRDTS WREB | Certification of Completion<br>DH<br>Transcripts | $100 | Yes | Yes | Fingerprints<br>Complete background check<br>Personal data questions | Expanded function education<br>7 hours of HIV/AIDS training |
| WV | CDCA CITA CRDTS WREB SRTA | Certificate of Completion | $75 | Yes | No | Good moral character with a certified letter stating in good standing<br>National Practitioner Data Bank<br>Criminal fraud questions<br>Personal data questions<br>Notarized affidavit<br>Passport photo<br>Citizenship/immigration status | Physician statement |
| WI | CDCA CITA CRDTS WREB | DH<br>Transcripts | $150 | Yes | Yes | Criminal fraud questions<br>Personal data questions<br>Personal affidavit<br>Passport photo<br>Citizenship/immigration status | Education requirements for expanded function |
| WY | CDCA CITA CRDTS WREB | DH<br>Transcripts | $150 | Yes | Yes | Good moral character<br>National Practitioner Data Bank<br>Criminal fraud questions<br>Personal data questions<br>Personal affidavit<br>Passport photo<br>Citizenship/immigration status | Education requirements for expanded functions<br>Three personal references<br>Three professional references |

Another consideration associated with licensure and regulation has been noted in a comparison of nurse practitioners and dental hygienists by Taylor.[22] Dental hygiene has been largely regulated by dentists, who in turn are also employers, whereas nursing has been self-regulated since the early 1900s.[22] Taylor notes that the structure of dental hygiene licensure allows state legislators and dental boards to "suppress dental hygienists from practicing to the fullest extent of their training."[22] Reducing restrictions on the dental hygiene scope of practice would allow increased opportunities to expand access to care. With new workforce models and direct access available in some form in most states, Taylor recommends conducting and publishing research documenting the safety and quality protection practices, along with cost analyses as a means to encourage regulatory changes.[22] Previous research has not demonstrated that licensure improves the overall quality of care or the health and safety of the public. While consumer complaints may be registered with state boards, only a small percentage of these

complaints result in disciplinary action, while increased dental hygiene licensing requirements have been shown to increase the average cost of the dental visit to consumers by seven to eleven percent.[2]

Dower et al. also supported the need to restructure scope of practice regulations for health professions, indicating that regulatory flexibility is needed to support changes in education, competence, and practice.[23] National organizations such as the Institute of Medicine and National Governors Association have called for reforms including easing scope of practice restrictions and improving reimbursement policies for health care providers. However, the legal aspects of practice can impose artificial barriers preventing providers, such as dental hygienists and nurse practitioners, from practicing to the fullest extent of their education.[23] Current health practices do not fit into this outdated regulatory scheme.[23] A realignment of the scope of practice with professional competence, adopting regulatory flexibility to accommodate new roles, recognizing and accommodating overlapping scopes of practice, and establishing a national clearinghouse, is needed.[23] Dower et al. also encourage the development of "model" practice acts that are either exemplary current state practice acts or ideal practice acts based on professional competence, similar to those created by physical therapy, occupational therapy, pharmacy, and social work.[23] Dental hygiene could consider testing these model practice acts within regulatory boards and committees and then determine whether or not the authority of the dental hygiene committee is sufficient to regulate the profession.

Another option is to consider the development of interstate compacts, a reciprocity agreement structure in which states construct multi-state licensing agreements using a common set of qualifications for all compact members. In this structure, states bridge the existing gaps in licensing requirements which in turn, facilitates portability. Nursing and physical therapy are examples of healthcare professions utilizing this arrangement.[2] Recent legislation in the state of Arizona (House Bill 2569) recognizes licensed professionals from any state and grants licensure to practice in Arizona provided the applicant is establishing residency in Arizona and has practiced their profession in another state in good standing for a minimum of one year. This legislation reflects recommendations from a recent US Health and Human Services report, "Reforming America's Healthcare System Through Choice and Competition" designed to establish new ways to provide quality care to the public at affordable costs.[24]

This study has limitations. Every effort was made to ensure that all data gathered from the dental regulatory board websites were current for 2019. However, some websites displayed outdated information on their official site. In such cases, either the PI or a co-investigator contacted a licensing specialist of the governing board to verify the data represented on the official site. Also, either the PI or a co-investigator reviewed the published rules and regulations to verify consistency and accuracy of licensure information. At least 20 boards were contacted personally to review and verify information. Further research into licensure and regulatory practice could examine the need for dental regulatory bodies to govern dental hygiene scope of practice. If dental hygiene committees can make decisions regarding the licensure, practice, and discipline of dental hygiene, oversight by a dental (dentist) board may not be necessary. Additionally, if entry-level dental hygiene education programs teach to competence, further investigation should be conducted to identify the relevance of various forms of a national clinical examination to support the portability of licensure across state lines.

## Conclusion

Data regarding current requirements for entry-level licensure to practice dental hygiene was collected from dental and dental hygiene licensing boards in the US and the Virgin Islands. While the majority of regulatory bodies require completion of entry level dental hygiene education from a CODA-accredited program along with successful completion of national board and regional clinical examinations, additional requirements for initial licensure vary. No differences in entry-level licensure requirements were identified between the dental boards and the self-regulating dental hygiene board. Further research is recommended to examine the need for dental regulatory boards to govern dental hygiene scope of practice and to explore the relevance of a national clinical examination to support portability of dental hygiene licensure across states.

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***Kristen Johnson, RDH, MS*** is a graduate of the Idaho State University Master of Science in dental hygiene program; ***JoAnn Gurenlian, RDH, MS***, ***PhD, AFAAOM*** is a professor and graduate program director in the Department of Dental Hygiene; ***Kandis Garland, RDH, MS*** is an associate professor in the Department of Dental Hygiene; ***Jacqueline Freudenthal, RDH, MHE*** is a professor and Dental Hygiene Department Chair; all at Idaho State University, Pocatello, ID.

Corresponding author: Kristen Johnson, RDH, MS; kjohnsonrdhap@gmail.com

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