Report
Of the Commissioner of Professional and Financial Regulation

To the Joint Standing Committee on Business, Research and Economic Development

Sunrise Review of the Expanded Scope of Practice for Maine Denturists

Submitted Pursuant to P.L. 2004 Ch. 669

December 1, 2005

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Sunrise Review

Expanding the Scope of Practice of Denturists to Include Fabrication and Insertion of Partial Dentures and Dentures over Implants

I. Charge from the Committee

The Joint Standing Committee on Business, Research and Economic Development of the 121st Maine Legislature directed the Department of Professional and Financial Regulation to conduct an independent study concerning an expansion in the scope of practice of Maine denturists (LD 1958 enacted as PL 2004 Chapter 669.) The sunrise review is intended to assess whether the scope of practice of denturists should be expanded to include fabrication and insertion of partial dentures and dentures over implants.

The department's study is to be conducted in accordance with the state's sunrise review statute contained in Title 32, chapter 1-A. The sunrise review statute identifies specific questions that the department must address in its report.

II. Commissioner's Independent Assessment

Sunrise review is designed to be a tool for state policymakers to systematically assess proposals to expand the scope of practice of a regulated profession or establish new regulatory requirements for a previously unregulated profession. The purpose of the review is to analyze whether the proposed regulation is necessary to protect the health, safety and welfare of the public. In making this determination the sunrise review evaluates the education and training required for practitioners to achieve and maintain competence for performing the functions they are licensed to undertake.

A sunrise review also attempts to identify the potential impact of the proposed regulation on the availability and cost of services to consumers. The rationale underlying the requirement for sunrise review is that the state of Maine should impose only the minimum level of regulation necessary to ensure public health and safety. These regulations should not be used for economic purposes to create unnecessary barriers of entry to a profession that could limit access to services or increase their cost. The department's conclusion in each sunrise review study is an attempt to balance the competing demands of maximizing access, minimizing cost and adequately protecting the public health, safety and welfare.

The requirements for an independent assessment by the commissioner of the Department of Professional and Financial Regulation are set forth in 32 MRSA § 60-K. The commissioner is required to apply the specified evaluation criteria set forth in 32 MRSA § 60-J to all answers and information submitted to, or collected by, the department. After

conducting the independent assessment, the commissioner must submit a report to the legislative committee setting forth recommendations, including any draft legislation necessary to implement the report's recommendations.

III. Evaluation Criteria

As part of the independent assessment process, the commissioner must review the responses to the evaluation criteria submitted by the applicant group and interested parties. In this instance, the Maine Society of Denturists is considered the "applicant group." Because denturists are licensed by the Maine Board of Dental Examiners, the commissioner solicited and received information from the Dental Examiners Board, as well as a number of national and international associations of dentists, denturists and dental hygienists.

The department's analysis is structured utilizing the evaluation criteria set forth in 32 MRSA § 60-J, and is presented in this report as follows:

1. The evaluation criteria, as set forth in the statute;
2. A summary of the responses received from interested parties; and
3. The department's independent assessment of the responses to the evaluation criteria.

This tripartite format is used to analyze each of the 13 questions identified in the evaluation criteria.

IV. Process

Following the enactment of PL 2004 Ch. 669, the department developed a sunrise review survey containing nine groups of questions based on the statutory criteria contained in 32 MRSA § 60-J. This questionnaire was distributed to individuals who had expressed an interest in the issue during the legislative process, as well as the following organizations:

- Maine Denturist Society;
- Maine Dental Association;
- Maine Dental Hygienists Association;
- Maine Board of Dental Examiners;
- American Association of Dental Examiners;
- American College of Prosthodontists;
- Denturist Society of Canada;
- International Federation of Denturists.

On October 29, 2004, the department held a public hearing on the issue at its offices in Gardiner. In preparation for the hearing, the department developed a list of more than 40

questions that had arisen from the sometimes conflicting survey responses. At the public hearing, the department was able to further explore and clarify the written survey responses. Participants at the public hearing were invited to provide further follow-up information in response to the department's questions and the discussion among participants. This follow-up material was accepted through December 1, 2004.

At the conclusion of the public hearing, the department asked representatives from the two principal associations – the Maine Denturist Society and the Maine Dental Association – to get together and explore whether there were possible compromise proposals that would be acceptable to both associations. The dental and denturist associations reported that they subsequently did meet but were unable to reach a resolution or identify possible incremental expansions in the scope of practice of denturists that would be mutually acceptable.

To supplement the information provided in the survey responses and at the public hearing, department staff conducted independent research that included:

- a review of other state statutes concerning the scope of practice of denturists;
- a review of Canadian provincial laws concerning the practice of denturism;
- a review of medical research literature on the practice of denturism;
- a review of similar sunrise review studies commissioned by Canadian provincial authorities; a study by the British Office of Fair Trade of the dentistry market in the United Kingdom (March 2003); a report by the General Dental Council of the United Kingdom, *Developing the Dental Team* (September 2004); and a review of the Federal Trade Commission/Department of Justice report *Improving Health Care: A Dose of Competition* (July 2004).

V. History of Denturism in Maine

Maine is one of a small number of states that over the past three decades has opened the dental profession and permitted the independent practice of allied health professionals. In Maine these changes have affected both denturists and dental hygienists. This evolution in the law concerning the practice of dentistry has been part of a world-wide trend. While Canada and Australia have moved the farthest in this regard, changes have occurred in a limited number of European countries and currently are under consideration in the United Kingdom.

In the United States, most states have resisted this trend. Denture makers first gained legitimacy in the 1970s, when lab technicians launched grass-roots campaigns for the right to directly serve consumers. These campaigns were vigorously opposed by dental associations and achieved limited success. In its survey response to the department's sunrise review, the American College of Prosthodontists stated that it and the American Dental Association continue to define a denturist as an "individual who is educationally

unqualified to practice dentistry in any form" and consider denturism to be "the unqualified practice of dentistry."[1]

Only five states, in addition to Maine, license denturists: Oregon, Idaho, Montana, Washington and Arizona. In two of these states, denturists are required to work under the supervision of dentists. A total of approximately 300 denturists are licensed nationwide.

Four states considered licensing denturists last year: Pennsylvania, Minnesota, Massachusetts and California. In 2004 a lawsuit was filed in California seeking to overturn that state's ban on the use of denturists to provide dentures and denture-related services (Sharrer v. Joseph, U.S. Dist. Court – N. Cal., No. 04-0042-BZ). And in states around the country, some denturists openly practice in defiance of state laws prohibiting their direct contact with customers. In the past few years prosecutors have won cases against denturists for unlicensed practice in Wyoming, Tennessee and Georgia.

In 1977 the Maine legislature established a registration program for denturists. This program required denturists to work under the direct supervision of a dentist. Supervising dentists were required to diagnosis the condition to be treated, authorize the procedure to be performed, remain on the premises while the clinical procedures were performed and approve the work performed before the patient was dismissed. This law was amended in 1995 (Chapter 590) to provide greater autonomy to denturists. Maine adopted the use of oral health certificates, which permitted denturists to treat patients after receiving an oral health certificate from a dentist stating that the patient's oral cavity was substantially free from disease and mechanically sufficient to receive a denture. Oral health certificates remained valid for 30 days after a dental examination.

In 2001(Chapter 337), the state of Maine changed from a registration to a licensure program, permitting licensed denturists to offer their services directly to the public without supervision of a dentist. This remains the current standard. Licensed denturists in Maine are permitted to make, alter and repair complete upper or complete lower prosthetic dentures that are fitted to an edentulous arch, that is, an arch devoid of teeth, roots or implants. This includes the process of taking denture impressions and bite registrations. (See Appendix 1 for the complete statute regulating the practice of dentistry in Maine.)

To become a licensed denturist, the statute requires that an individual:

a) Be a high school graduate or possess the equivalent of a high school degree;
b) Graduate from a board-approved denturism postsecondary institution or have completed an equivalent denturist educational program approved by the board;
c) Pass a denturist examination that consists of a clinical examination and a written examination concerning, but not limited to, dental materials, denture technology, United States Department of Health and Human Services Centers for Disease Control guidelines, basic anatomy and basic pathology.

[1] Correspondence of October 14, 2004, to the Department of Professional and Financial Regulation from Larry H. West, DDS, chair of the Dental Laboratory & Denturism Committee, American College of Prosthodontists, on behalf of the ACP.

Typically, denturists in Maine receive their education in Canada by obtaining a 3-year degree from George Brown College in Toronto. Although much of it can be done by correspondence, 270 hours of clinical training is required.[2] It's also unclear how many of the currently licensed denturists have obtained the educational requirements rather than being grandfathered based upon experience in an earlier law.

To qualify for relicensure, denturists must provide evidence of 20 hours of continuing education.

Currently, there are 47 denturists licensed in Maine, only 14 of whom are active and list a Maine address.

VI. Assessment of Sunrise Review Criteria

The responses that the department received in response to its survey questions strictly followed professional lines. Denturists asserted that with proper training and education they can competently provide partial dentures and dentures over implants directly to the public. Dentists unanimously opposed this expansion in the denturist scope of practice. They argued that there are no accredited educational programs for denturists in the United States, and that the education and training denturists receive is neither comparable to the education provided in dental schools nor sufficient for the complex tasks of manufacturing and installing partial dentures and dentures over implants. The one response that the department received from a dental hygienist supported the expanded scope of practice on condition that the board-approved educational institutions offer appropriate curricula and adequate laboratory and clinical experience. The hygienist deferred on expressing an opinion whether the current curricula, laboratory and clinical experiences are indeed adequate.

The department's sunrise review survey asked respondents to answer the following questions. For the first question, the department has supplied the data. For subsequent questions, the responses received by the proponents of expanding the denturist scope of practice are summarized first, followed by a summary of the responses offered by opponents. The department's analysis concludes each section.

Criteria 1: Data on group subject to regulation. Describe the professional or occupational group proposed for an expanded scope of practice, including the number of individuals who would be subject to regulation; the names and addresses of associations or other groups representing licensees; and an estimate of the number of practitioners in each association or organization.

[2] Correspondence of October 26, 2005, to the Department of Professional and Financial Regulation from Daniel Walker, Esq., attorney for the Maine Society of Denturists.

1.1 DEPARTMENT RESPONSE

There were 46 denturists licensed as of October 1, 2004, by the Maine Board of Dental Examiners, of whom 14 were actively practicing in the state. The remaining 32 reported addresses in other states, Canadian provinces and the United Kingdom.

The Maine Society of Denturists serves as the association representing licensees in Maine.

Maine Society of Denturists
12 Stillwater Avenue
Bangor, ME 04401

The International Federation of Denturists (IFD) reports that 42 Maine-licensed denturists are members of the IFD.

International Federation of Denturists
P.O. Box 46132 RPO Westdale
Winnipeg MB
R3R 3S3
Canada

Criteria 2: Specialized skill. Explain whether practice of the profession proposed for an expansion of regulation requires such a specialized skill that the public is not qualified to select a competent practitioner without assurances that minimum qualifications have been met. Describe the specialized skill and knowledge required to fabricate and insert partial dentures and dentures over implants. Do the training and education requirements that denturists must meet in order to obtain licensure in Maine provide assurance of these skills?

2.1 PROPONENT RESPONSE

All respondents acknowledge that the practice of fabricating and inserting partial dentures and dentures over implants requires specialized skill and the establishment of minimum qualifications. Denturists maintain that "the vast majority of licensed denturists in Maine are already qualified by virtue of their training." They note that the Maine Board of Dental Examiners requires denturists to be graduates of board-approved programs. These board-approved programs are all offered in Canada, and they include training in fabrication and insertion of partial dentures and dentures over implants.

The International Federation of Denturists (IFD) states that the three denturist colleges approved by the Maine board – George Brown College in Toronto, College Edouard-Montpetit in Longueuil, Quebec, and Northern Alberta Institute of Technology – all meet the standards of the International Baseline Competencies for Denturists and are accredited by the Denturist Association of

Canada. These competencies, which were developed by the IFD, require denturist training in all types of removable prostheses, including partial dentures and dentures over implants.

George Brown, the Toronto City College, offers a three-year (six semesters) denturism program that leads to an Ontario College Advanced Diploma. The College states that its students are trained in the denturist's scope of practice. This includes treatment planning, design, construction and fitting of full, partial and immediate dentures, and implant-supported dentures. Its curriculum includes study of basic science, dental science, health promotion, management and denturist practice.

The Denturist Association of Canada asserts that students in the George Brown denturist program spend more than 1,900 hours learning to fabricate and fit dental prosthetics. This focus on the fabrication and fitting of dentures may enable denturists to provide prosthetics that, in fact, are superior to those provided by some dentists, the association claims.

2.2 OPPONENT RESPONSE

Opponents emphasized that the legislation asks the department to assess two distinctly different expansions in the scope of practice of denturists. Fabricating and installing partial dentures involves a different process and different skill set than fabricating and inserting dentures over implants. Each procedure requires a separate discussion to understand the specialized skills and knowledge needed to perform the two procedures.

2.2.1 Partial Dentures

The purpose of restoring a mouth with one or more lost teeth is not simply the replacement of the teeth or improved appearance. The most important objective is to restore arch stability to prevent drifting of the remaining teeth. Teeth that drift out of their natural anatomic position are at greater risk for periodontal (gum) disease, decay and excessive loading from a defective bite (termed occlusal trauma). Therefore, optimal treatment for missing teeth involves preservation of stability of the dental arches, rather than merely the replacement of what has been lost.

Partial dentures are classified as either *fixed partial dentures* or *removable partial dentures*. Fabrication and insertion of fixed partial dentures, commonly called a fixed bridge, involves the administration of local anesthesia, preparation of hard tooth structure by cutting or abrading with a high-speed handpiece, soft tissue manipulation to secure an impression and placement of an interim (temporary) restoration to cover and protect the natural teeth. A dental laboratory fabricates the denture (or prosthesis). The finished prosthesis is then cemented to the prepared natural teeth after the fit and the contact with the adjacent natural teeth

has been assessed and corrected and the bite has been adjusted to a stable position.

During the department's public hearing, some of the participating denturists indicated that they were not seeking an expanded scope of practice that would allow them to remove tooth structure or reshape the tooth. Dentists cautioned that this limitation is not noted in the legislation directing the department's review and that confusion over the intention of a legislative proposal could arise if the drafting were not more precise.

If, indeed, denturists are not seeking authority to remove tooth structure or reshape the tooth, then the expansion of the scope of practice should be clarified to include "fabricating and inserting removable partial dentures."

Two types of removable partial dentures exist. One is known as an *interim removable partial denture* (also known as a temporary, provisional or all-acrylic removable partial denture). The other is a *definitive removable partial denture*, also known as a metal-based or long term removable partial denture. Both types of partial dentures require some degree of irreversible mouth preparation to minimize harm. Properly accomplished mouth preparation involves cutting hard tooth structure to make room for certain features that allow the metal framework to adapt to the supporting teeth. A properly adapted framework has very little space between it and the teeth to collect food, thus reducing the chances of future decay and periodontal problems.

Because of unclear treatment outcome, *interim partial dentures* are made as a stopgap or convenience appliance. They represent a compromise because uncertain treatment results do not justify an additional financial investment in a more expensive definitive removable prosthesis. Mouth preparations are minimal because the design for the definitive partial denture is not known, and the dentist wants to avoid any irreversible harm. Minimal preparation usually means poor adaptation to the teeth and a consequent higher risk of decay, ineffective control of biting forces and periodontal disease in the long term.

Interim partial dentures are normally made out of a flexible tissue-colored plastic base (acrylic) that has artificial teeth and wire clasps attached to it. The wire clasps attempt to hold the appliance in place, but the resistance to chewing is borne by the gums. They generally are not very stable.

Interim removable partial dentures have an intentionally brief service life because it is recognized that teeth and tissue have a great risk of trauma if this appliance is worn for a substantial period of time (years as opposed to the intended months.) Because they are flexible and do not have an intimate fit to the adjacent teeth, they can not effectively contribute to the stability of the dental arch. Because of intentionally minimal mouth preparation, an all-acrylic interim removable partial denture significantly increases leverage forces on the remaining natural teeth and can contribute to their demise, sometimes leading to the need for a complete

denture. An all-acrylic removable partial denture that is purposefully fabricated and inserted with the intention of having a long service life, similar to a definitive partial denture, is generally considered to be below the standard of care in general dentistry and prosthodontics in the United States.

Definitive removable partial dentures are significantly different in purpose and fabrication. The resistance to chewing forces is carried by the teeth; thus the teeth must be healthy. "Healthy" is defined as free from active decay, free from active periodontal disease and having sufficient bone to resist the added stresses of a prosthesis. With proper mouth preparation, consistent with the design of the definitive partial denture, teeth are more suitable than the gums to carrying the vertical stresses of chewing without long-term injury. The intimate contact of teeth with a rigid material is more suitable to preserving arch integrity. Since the service life of a definitive partial denture is many years, it must be rigid to stabilize the dental arches and prevent trauma. To meet these prerequisites, a non-allergic unyielding metal must be used for the backbone of the prosthesis; hence the term "metal-based." To function without harm, there are certain tried-and-true design principles that practitioners must observe to achieve a successful treatment outcome. Therefore, the optimal long term treatment for a patient who has lost some teeth is to stabilize their arches and do no further harm. This is best accomplished with a metal-based definitive removable partial denture.

The clinical practice of definitive metal-based removable partial dentures requires comprehensive skills that are taught as part of a dentist's professional education. The minimum specialized skills needed to successfully fabricate and insert a partial denture are:

1) Ability to understand and assess the patient's bite (occlusion);
2) Ability to assess the patient's periodontal condition and be able to recognize normal conditions from pathologic conditions;
3) Be able to make and interpret x-rays to evaluate the presence of caries (decay), the patient' periodontal health, bone health, the absence of root tips leftover from extractions, the presence of abscesses left over from infected teeth and in order to determine the patient's suitability for treatment or need for referral for other dental care;
4) Knowledge of oral physiology to understand and be able to differentiate between the normal and limits of function of the mouth;
5) Knowledge of oral pathology to detect and evaluate abnormal, precancerous and cancerous lesions;
6) Knowledge of oral microbiology to understand periodontal disease causes (etiology) and progression;
7) Ability to perform mouth preparations by cutting hard tooth structure;
8) Knowledge to instruct a patient in the proper self-care of their mouth, teeth and appliance;
9) Knowledge to perform effective follow-up evaluations to ensure that the patient is not being harmed by the denture and is complying with the prescribed self-care regimen.

2.2.2 Dentures over Implants

Implants are artificial tooth roots. There are two types of implants: root form and screw-in. Root form implants are placed by an invasive surgical procedure in predetermined locations. These implants are not perfect; they can and do fail. The implants are subject to similar pathologic conditions as teeth. They require meticulous self-care by the patient and regular professional care and evaluation for optimal service life.

Screw-in implants are usually inserted without a surgical procedure. They are considered temporary or transitional in function, intended as a short-term solution. In general, screw-in implants are narrower in diameter than root form implants. Small diameter implants are very susceptible to destructive side-to-side forces and therefore require frequent follow-up. Since screw-in implants are a new technology, long-term data about them is not yet available.

Implant restorations generally are classified as either *implant-retained* or *implant-supported* dentures. Implants can be used in a variety of types of restorations, including individuals who wear complete dentures.

Dentures are evaluated in terms of *retention* (the ability of a denture to stay in place against vertical forces) and *stability* (the ability of a denture to resist horizontal forces.) Individuals with severe bone loss often have great difficulty successfully wearing complete dentures, because they have neither retention nor stability in their dentures. In these circumstances dental implants can provide the crucial resistance and retention functions and allow the patient to wear their dentures comfortably.

An *implant-retained* denture is a modification of a complete denture that uses implants to help hold it in place. Most implant-retained dentures are made for the lower arch and utilize two implants that are unconnected. Either root form or screw-in implants can be used. The denture is removable so that the patient can maintain it. The function of the implants must be carefully observed; they must only hold the denture in place. The implants must not be used to resist chewing forces placed on the denture. Even if a denture is properly inserted, the supporting soft tissue will change over time, and the relationship of the denture to the implants will change in a potentially destructive way. Therefore, continuing evaluation is necessary to ensure that the implant remains functioning as intended.

Alternately, an *implant-supported* denture uses implants to resist the forces of chewing. To carry the stresses of chewing, four to five implants are needed. Root form implants are the only suitable implant for an implant-supported denture. The implants are generally connected together in some fashion by a substructure to distribute the biting forces. The substructure must have a very precise fit because implants are not able to resist lateral forces. They do, however, resist vertically applied forces very well. Some implant-supported dentures are removable by the patient, while others are secured in place with

screws and cannot be removed by the patient for self-care. These latter dentures must be removed and replaced by a dental professional.

The minimum specialized skills that are needed to successfully fabricate and insert dentures over implants are:

1) Ability to understand, detect and assess normal and pathologic oral conditions;
2) Knowledge of oral physiology to understand the normal and pathologic limits of functions of the mouth;
3) Understanding of bone physiology to comprehend the normal and limits of function of the bone that supports the implants;
4) Understanding of the medical indications and contraindications for implant candidates;
5) Ability to make and interpret x-rays to evaluate the presence of caries, the patient's periodontal health, and the condition of the bone for the purpose of determining the suitability for treatment or the need for referral for other dental care. This is important because the presence of periodontal disease has been shown to contribute to the early loss of implants. X-rays are necessary to asses the health of the implant on follow-up visits.
6) Since placement of implants is a surgical procedure, knowledge of wound healing is essential to understand the soft tissue conditions after initial placement, as well as in failing implants;
7) The ability to assess the health of the implants and to be able to recognize a failing implant;
8) Knowledge of implant case planning, restorative design and treatment sequencing;
9) The ability to effectively communicate with other dental disciplines regarding the optimal placement of the implants;
10) Knowledge of oral microbiology to understand peri-implant disease etiology (causes) and progression;
11) Knowledge to perform effective follow-up evaluations over time to ensure that the patients and their implants are not being harmed by the denture.
12) Knowledge to properly instruct patients in self-care. Caring for an implant is not the same as caring for a natural tooth. The ability to assess whether a patient is complying with the prescribed self-care regime, which has been designed to enhance the success of the patient's treatment.

Opponents of the expanded scope of practice questioned whether the training denturists receive on removable partial dentures and implant dentures is adequate. Many respondents emphasized that it was unlikely to be of the same quality and breadth of scope as that provided to dentists in American Dental Association (ADA) accredited teaching institutions.

Opponents highlighted the ADA accreditation because its Council on Dental Education goes to great lengths, they said, to assure the education content and materials are current and consistent throughout all accredited dental and dental

hygiene schools. This process alleviates regional differences and ensures consistent dental education throughout North America.

2.3 DEPARTMENT ANALYSIS

The specialized skills and knowledge that practitioners must possess in order to perform partial dentures and dentures over implants is significantly greater than that required for the professional services authorized under the denturists' current scope of practice. While improperly made or fitted sets of complete dentures can create significant health problems, the problems are usually reversible, although often at considerable expense. In the case of partial dentures involving natural teeth or implants, however, the likelihood of problems causing irreversible damage is significantly greater.

Denturists and dentists vigorously dispute whether the curricula taught to denturists by the three educational institutions approved by the Maine Board of Dental Examiners is sufficient to guarantee patient health and safety under an expanded scope of practice. A majority of members of the Maine Board of Dental Examiners clearly believes that it is inadequate. The Board's survey response states:

Dentists spend four years of concentrated study in dental school in the design and fabrication of partial dentures and dentures. Integrated with this are the studies relating to dental disease, oral pathology and periodontal disease providing the skills and knowledge required to ascertain which patients are candidates for partial dentures and dentures and which patients are not.

Denturists are educated to do a cursory inspection of the oral cavity for oral pathology, periodontal diseases and dental diseases. Their education is not sufficient to diagnose these oral diseases.

A review of the curriculum of George Brown College provided by the Maine Denturist Society indicates that it covers some of the topics identified by dentists as necessary for performing partial dentures and dentures over implants. It is not possible from the curricula alone, however, for the department to determine the adequacy or depth of the educational instruction.

The United States Department of Education recognizes the Commission on Dental Accreditation (CODA) as the sole national accrediting organization for educational programs for all dental-related occupations. These occupations include dentistry, dental hygiene, dental assisting and dental laboratory technicians. The Commission has not approved any educational programs for the study of denturism in the United States.

Denturists respond that the Commission on Dental Accreditation represents the vested interests of dentists. The department notes that while the Commission operates under the auspices of the American Dental Association (ADA), it

functions independently in matters of developing and approving accreditation standards and making accreditation decisions on educational programs.

The Commission was established in 1975 to provide communities of interest with more direct representation in accreditation decisions and policy issues. Its 30-member board includes representatives from the American Dental Hygienists Association, American Dental Assistants Association, National Association of Dental Laboratories and the general public, as well as representatives from the American Dental Association and American Association of Dental Examiners. CODA's decision to continue to deny accreditation to educational programs in denturism suggests to the department an added reason for caution in considering whether to expand Maine's scope of practice for denturists.

Nearly every dentist who responded to the sunrise survey highlighted the added complexity of treatment that is required for partial dentures and dentures over implants. Denturists themselves indicated during the public hearing that they were not seeking authority to reshape teeth or provide guideplanes or rest seats. This raises questions about the adequacy of care, which the Board articulated in its response:

Denturists are also not allowed by law to reshape the tooth (provide guideplanes and rest seats) which involves removing tooth structure....Partial dentures can be made without reshaping the tooth, but the partial denture will be ill-fitting, and this can lead to loss of teeth....They do not have the necessary education to diagnose and treat oral pathology, dental diseases and periodontal diseases.

The department remains concerned that the denturists' inability to prepare the teeth and interpret x-rays could have serious adverse consequences in determining the appropriate treatment and course of care.

Criteria 3: Threat to public health, safety, or welfare. Describe the nature and extent of potential harm to the public, if any, if the scope of practice for denturists is expanded to include fabrication and insertion of partial dentures and dentures over implants.

3.1 PROPONENT RESPONSE

The Maine Society of Denturists states that there would be no harm to the public if denturists' scope of practice is expanded. They note that denturists in Maine must graduate from accredited denturist programs that teach all aspects of dental prosthetics, including partial dentures and dentures over implants.

3.1.1 The denturists emphasize that they work only within healthy mouths; and they are sufficiently trained and educated to be able to identify healthy mouths. Educational programs train denturists to recognize abnormalities through course work in oral pathology, biology, microbiology and histology. Patients with

abnormalities in the mouth are referred to the appropriate qualified practitioner for treatment.

Denturists offer two supporting arguments as evidence of their ability to safely serve the public.

3.1.2 First, denturists in Canada, Australia and some European countries have practiced under the wider scope of practice being sought in Maine; and there is no evidence that the provision by denturists of partial dentures or dentures over implants in these countries has endangered the public health, safety or welfare. The United Kingdom Clinical Dental Technicians Association asserts in its sunrise review submission that there are four key guidelines for the safe practice of denturism: adequate training; working within a defined scope of practice; strong ethical guidance; and mandatory continuing professional development. As long as these standards exist, an increased scope of practice poses no danger to patients.

3.1.3 Second, the denturist associations repeatedly stated that, to their knowledge, no denturist in any country has ever been found liable for malpractice. Denturists, they claim, pay significantly lower liability insurance premiums, even in jurisdictions that allow denturists to provide partial dentures and dentures over implants.

3.2 OPPONENT RESPONSE

Dentists identified several sources of potential harm to the public:

- Misdiagnosis or failure to diagnose dental disease;
- Inappropriate treatment plan due to misdiagnosis;
- Lack of adequate follow-up after dentures are inserted.

3.2.1 First, dentists challenged the assertion that the educational programs for denturists are adequate to teach them to identify disease and determine which mouths are healthy and safe to work on. The ability to identify disease is all the more important when providing partial dentures, because studies indicate that the use of removable partial dentures may be detrimental to periodontal health. These studies have shown an increase in tooth mobility, gum inflammation and progression of bone loss around the teeth that anchor the partial denture. Teeth that lack sufficient support can be at greater risk of being lost than if they were not supporting the partial denture.

Dentists state that it is critical that patients with partial dentures be examined by a dentist prior to the fabrication of a partial denture to determine whether tooth decay (caries) is present. If caries is present, it must be filled prior to the fabrication of the partial denture, since the partial may not fit well if the fillings are done after the partial has been fabricated. If a partial denture does not fit well, it can lead to the teeth becoming loose, developing caries or developing gum disease. In addition, the jawbone where the teeth are missing may resorb (the

process by which the bone melts away) at a faster rate with an improperly fitted partial denture.

Dentists also raised concerns about the complexity of problems that can arise with implants and the shortcomings of denturist education to identify and respond to these problems. Dental implants are titanium-coated structures that are surgically placed into human bone. They pass through the gums and are open to the oral cavity and the bacteria that reside there. Improperly designed implant-supported dentures can create serious infections in the bone surrounding the implants. These infections are difficult to treat and potentially life-threatening. If these infections develop, denturists are neither trained nor licensed to treat them.

3.2.2 Dentists challenged the assertion that denturists in other jurisdictions with a broader scope of practice have safely provided partial dentures and dentures over implants. The Maine Board of Dental Examiners highlighted both the number of complaints against denturists in the five other American states that permit denturism and the additional safety requirements that exist in some Canadian provinces but that would not be required under the proposal from Maine denturists.

The Maine dental board reported that it contacted its regulatory counterparts in Washington, Oregon, Montana, Arizona and Idaho and inquired about complaints against denturists. Four of these states – Washington, Oregon, Montana and Arizona – allow denturists to fabricate removable partial dentures, albeit with some conditions that are described below. In Idaho denturists are not allowed to fabricate partial dentures, but can repair existing partial dentures. Only the state of Washington allows denturists to fabricate dentures over implants.

The board reported that even though denturists in four of the other five states do not have scopes of practice as broad as that being sought in Maine, denturists in those states still receive a significant number of complaints. The board provided the following information:

- **Washington** has 136 licensed denturists. There have been 28 complaints against denturists since January 1, 2004.

- **Oregon** has 101 licensed denturists. There have been 8 complaints since January 1, 2004. Four of these complaints are still being investigated, while three complaints resulted in civil penalties.

- **Arizona** has 9 licensed denturists. There have been 2 complaints since January 1, 2004.

- **Montana** has 14 denturists and has received 2 complaints since January 1, 2004.

- **Idaho** has 27 denturists and has received 8 complaints since January 1, 2004.

3.2.3 The Board of Dental Examiners also commented on the claim that denturists have safely fabricated removable partial dentures and dentures over implants in Canada. The board noted that some Canadian provinces have additional requirements to better protect the public. British Columbia, for instance, has three separate classes of active registration. (These would be the equivalent of separate license categories in Maine.) One class requires a certificate of oral health from a dentist, while another class requires a prescription from a dentist in order to provide partial dentures, overdentures (including dentures over implants) and immediate dentures. These additional requirements would not exist in Maine under the proposal offered by the denturists.

The Maine Dental Association similarly noted that other U.S. states that permit denturism also specify conditions and limitations to protect the public when the practice involves partial dentures. Only Washington has a scope of practice as broad as that being sought in Maine.

- **Arizona** requires all work by denturists to be performed in the office of a licensed dentist under the dentist's general supervisions. All mouth preparation must be done by the dentist, and the denturist is prohibited from performing any cutting or surgery on hard or soft tissue in the mouth.

- **Idaho** permits denturists to repair, but not make, partial dentures. Denturists are prohibited from performing any procedures that would alter any oral tissue or natural teeth.

- **Montana** requires denturists to refer patients to a dentist for an evaluation and treatment of periodontal disease, dental diseases, x-rays and tooth preparation before a denturist can fabricate a removable partial denture. After these procedures are completed, the patient is referred back to the denturist so that the partial denture can be made in accordance with the dentist's recommendations.

- **Oregon** requires denturists either to have an oral pathology endorsement on their license, or, if they have not qualified for and received the endorsement, obtain an oral health certificate from a dentist or physician before beginning work on any person. The oral health certificate must be dated within 30 days of treatment and indicate that the person's oral cavity is substantially free from disease and mechanically sufficient to receive a denture.

3.2.4 Finally, opponents of the broader scope of practice emphasized that the proposed expansion would exacerbate the difference in standards of care. The people of Maine, the Maine Dental Association asserted, deserve a single standard of care when it comes to obtaining partial dentures and dentures over implants. It would be a grave disservice, they said, to support the expansion of a two-tiered level of oral health in Maine.

In summary, dentists maintained that the practice of dentistry by denturists without the benefit of a formal education in an accredited dental school, without the supervision of their services by a dentist, and without the benefit of a diagnosis of the patient's oral health status by a dentist, constitutes the practice of dentistry below the standard of care, and is a potential liability to the oral health of the public.

3.3 DEPARTMENT ANALYSIS

The testimony and medical literature convincingly indicate that installing partial dentures and dentures over implants carries greater health risks than providing dentures to edentulous patients. The question is whether denturists have the necessary training to both undertake these procedures in healthy mouths and refer patients to dentists in cases where disease, caries, patient medical history and other complicating factors exist.

The denturists have clarified during this process that they do not want authority to cut or abrade teeth or mouth tissue. The department is not persuaded that denturists can do partials, whether removable or not, without mouth preparation that may require cutting or abrading. It will not be clear until a patient is evaluated.

The department is persuaded that an expansion in the scope of practice raises significant concerns about the ability of the denturists to undertake these activities with the same level of safety provided by dentists unless supervised by a dentist.

The department recognizes that denturists in some Canadian provinces have been providing partial dentures and dentures over implants for many years. Even in Canada, however, this expanded scope of practice has been implemented slowly and incrementally.

In other countries expanded scope has occurred much more recently, such as in Australia. The department believes that the prudent course of action is to retain the current scope of practice and continue to evaluate the experience of other jurisdictions with broader scopes of practice. Simply by virtue of permitting the independent practice of denturism, Maine remains in the forefront of states in the U.S.

Criteria 4: Voluntary and Past Regulatory Efforts. Describe the voluntary efforts made by practitioners of the profession to protect the public through self-regulation, private certifications, membership in professional or occupational associations or academic credentials and a statement of why these efforts are inadequate to protect the public.

4.1 DEPARTMENT ANALYSIS

It is universally recognized that the practice of denturism poses a sufficiently significant threat to public health to warrant state regulation, when the independent practice of denturism is permitted at all. No one, including the proponents, has suggested that anything short of state regulation should be considered adequate to protect the public health and safety. While professional associations can play a valuable role in sharing occupational information, and while academic credentials may be necessary as a condition of licensure, the department does not believe that voluntary efforts by practitioners to enhance their skills should replace state oversight and regulation of this profession.

Criteria 5: Cost; Benefit. Describe the extent to which the expanded scope of practice under consideration would affect the costs of goods or services provided by practitioners to consumers.

5.1 PROPONENT RESPONSE

Denturists believe their services are needed by Maine citizens and in the absence of a sufficient number of dentists, the services could be provided by denturists.

5.2 OPPONENT RESPONSE

Opponents believe denturists will provide sub-standard care and cause higher costs in the long run. According to one dentist, an analysis of dentists' incomes indicated that dentures account for less than 1% of dentists incomes. [3]

5.3 DEPARTMENT ANALYSIS

This criterion raises a number of related questions: Do more restrictive occupational licensing statutes enhance the quality of services received by consumers? Do they reduce the growth of practitioner supply? Do they increase the prices of the services provided and raise the earnings of practitioners?

There are two principal views on these questions. One perspective sees more restrictive licensing as an unnecessary barrier to occupational entry that mainly serves the interests of practitioners with little or no benefit to the public.[4] The main effects are assumed to be higher prices, reduced access and, potentially, a negative effect on the quality of services received by consumers, as those who cannot afford the services of licensed professionals seek services from an unregulated black market.

[3] Letter from Joseph Kenneally to the Department of Professional and Financial Regulation dated November 4, 2004.

[4] Lawrence Shephard, "Licensing Restrictions and the Cost of Dental Care." Journal of Law & Economics. 185 (1978).

Another perspective focuses on the role that occupational licensing plays in reducing uncertainty in the minds of consumers about the quality of the product. In this view, licensing is seen as a way of enhancing the quality of services provided by the regulated practitioner. It may also increase the demand for the service, as consumers develop confidence in the quality of the service. Unfortunately, according to one of the most recent studies in this area, no rigorous empirical analysis has been able to address these competing effects for a major occupation in the United States.[5]

The Department is persuaded that given the limited number of denturists actively practicing in Maine, 14, it is unlikely that expansion or retention of scope of practice will affect costs to consumers.

6. Service availability of regulation. The extent to which regulation or expansion of regulation of the profession or occupation would increase or decrease the availability of services to the public.

Although the denturists argue strongly that citizens need these expanded services, it appears unlikely that 14 denturists can have an impact on the demand perceived.

7. Existing laws and regulations. The extent to which existing legal remedies are inadequate to prevent or redress the kinds of harm potentially resulting from nonregulation and whether regulation can be provided through an existing state agency or in conjunction with presently regulated practitioners.

Not applicable.

8. Method of regulation. Why registration, certification, license to use the title, license to practice or another type of regulation is being proposed, why that regulatory alternative was chosen and whether the proposed method of regulation is appropriate.

Denturists are already licensed in Maine. The current request is to expand the scope of practice for denturists without the supervision of a dentist.

9. Other states. A list of other states that regulate the profession or occupation, the type of regulation, copies of other states' laws and available evidence from those states of the effect of regulation on the profession or occupation in terms of a before-and-after analysis.

Only five states, in addition to Maine, license denturists: Oregon, Idaho, Montana, Washington and Arizona. In two of these states, denturists are required to work

[5] Kleiner, Morris M., and Robert T. Kudrle. "Does Regulation Affect Economic Outcomes?: The Case of Dentistry." Journal of Law and Economics. 547 (2000).

under the supervision of dentists. A total of approximately 300 denturists are licensed nationwide. Information from other states is limited and not conclusive.

Dentists challenged the assertion that denturists in other jurisdictions with a broader scope of practice have safely provided partial dentures and dentures over implants. The Maine Board of Dental Examiners highlighted both the number of complaints against denturists in the five other American states that permit denturism and the additional safety requirements that exist in some Canadian provinces but that would not be required under the proposal from Maine denturists.

The Maine dental board reported that it contacted its regulatory counterparts in Washington, Oregon, Montana, Arizona and Idaho and inquired about complaints against denturists. Four of these states – Washington, Oregon, Montana and Arizona – allow denturists to fabricate removable partial dentures, albeit with some conditions that are described below. In Idaho denturists are not allowed to fabricate partial dentures, but can repair existing partial dentures. Only the state of Washington allows denturists to fabricate dentures over implants.

The board reported that even though denturists in four of the other five states do not have scopes of practice as broad as that being sought in Maine, denturists in those states still receive a significant number of complaints. The board provided the following information:

- **Washington** has 136 licensed denturists. There have been 28 complaints against denturists since January 1, 2004.

- **Oregon** has 101 licensed denturists. There have been 8 complaints since January 1, 2004. Four of these complaints are still being investigated, while three complaints resulted in civil penalties.

- **Arizona** has 9 licensed denturists. There have been 2 complaints since January 1, 2004.

- **Montana** has 14 denturists and has received 2 complaints since January 1, 2004.

- **Idaho** has 27 denturists and has received 8 complaints since January 1, 2004.

10. Previous efforts. The details of any previous efforts in this State to implement regulation of the profession or occupation.

Denturists are already licensed in Maine. The current effort is to expand their scope of practice.

11. Mandated benefits. Whether the profession or occupation plans to apply for mandated benefits.

Not known.

12. Minimal competence. Whether the proposed requirements for regulation exceed the standards of minimal competence and what those standards are.

Not applicable. The current effort is to expand the scope of practice for denturists.

13. Financial analysis. The method proposed to finance the proposed regulation and financial data pertaining to whether the proposed regulation can be reasonably financed by current or proposed licensees through dedicated revenue mechanisms.

Denturists are currently licensed and subject to fees designed to support regulation of denturists and other dental professionals. Some commentators expressed concern that an expansion of scope of practice could lead to more complaints and an added investigative financial burden for all dental professionals.

VII. Summary

Sunrise review is designed to be a tool for state policymakers to systematically assess proposals to expand the scope of practice of a regulated profession or establish new regulatory requirements for a previously unregulated profession. The purpose of the review is to analyze whether the proposed regulation is necessary to protect the health, safety and welfare of the public. In making this determination the sunrise review evaluates the education and training required for practitioners to achieve and maintain competence for performing the functions they are licensed to undertake.

The requirements for an independent assessment by the commissioner of the Department of Professional and Financial Regulation are set forth in 32 MRSA § 60-K. The commissioner is required to apply the specified evaluation criteria set forth in 32 MRSA § 60-J to all answers and information submitted to, or collected by, the department.

Following the enactment of PL 2004 Ch. 669, the department developed a sunrise review survey containing nine groups of questions based on the statutory criteria contained in 32 MRSA § 60-J. On October 29, 2004, the department held a public hearing on the issue at its offices in Gardiner.

Maine is one of a small number of states that over the past three decades has opened the dental profession and permitted the independent practice of allied

health professionals. In Maine these changes have affected both denturists and dental hygienists. This evolution in the law concerning the practice of dentistry has been part of a world-wide trend. While Canada and Australia have moved the farthest in this regard, changes have occurred in a limited number of European countries and currently are under consideration in the United Kingdom. In the United States, most states have resisted this trend.

Only five states, in addition to Maine, license denturists: Oregon, Idaho, Montana, Washington and Arizona. In two of these states, denturists are required to work under the supervision of dentists. A total of approximately 300 denturists are licensed nationwide. Currently, there are 47 denturists licensed in Maine, only 14 of whom are active and list a Maine address.

The specialized skills and knowledge that practitioners must possess in order to perform partial dentures and dentures over implants is significantly greater than that required for the professional services authorized under the denturists' current scope of practice. While improperly made or fitted sets of complete dentures can create significant health problems, the problems are usually reversible, although often at considerable expense. In the case of partial dentures involving natural teeth or implants, however, the likelihood of problems causing irreversible damage is significantly greater.

A review of the curriculum of George Brown College provided by the Maine Denturist Society indicates that it covers some of the topics identified by dentists as necessary for performing partial dentures and dentures over implants. It is not possible from the curricula alone, however, for the department to determine the adequacy or depth of the educational instruction.

The United States Department of Education recognizes the Commission on Dental Accreditation (CODA) as the sole national accrediting organization for educational programs for all dental-related occupations. These occupations include dentistry, dental hygiene, dental assisting and dental laboratory technicians. The Commission has not approved any educational programs for the study of denturism in the United States.

Denturists respond that the Commission on Dental Accreditation represents the vested interests of dentists. The department notes that while the Commission operates under the auspices of the American Dental Association (ADA), it functions independently in matters of developing and approving accreditation standards and making accreditation decisions on educational programs.

CODA's decision to continue to deny accreditation to educational programs in denturism suggests to the department an added reason for caution in considering whether to expand Maine's scope of practice for denturists.

Nearly every dentist who responded to the sunrise survey highlighted the added complexity of treatment that is required for partial dentures and dentures over

implants. Denturists themselves indicated during the public hearing that they were not seeking authority to reshape teeth or provide guideplanes or rest seats.

The department remains concerned that the denturists' inability to prepare the teeth and interpret x-rays could have serious adverse consequences in determining the appropriate treatment and course of care.

The testimony and medical literature convincingly indicate that installing partial dentures and dentures over implants carries greater health risks than providing dentures to edentulous patients.

VIII. Conclusions

Both proponents and opponents made a good effort to produce informative useful materials to aid the department in deciding whether to recommend an expansion of practice for the denturists. Based upon that information, I conclude that there is a difference in the training and education received by dentists and denturists. I am persuaded that the fabrication and insertion of partial dentures and dentures over implants requires more than the technical expertise necessary to construct the dentures. The practice of fabricating and inserting partial dentures and dentures over implants requires specialized skills. Safe practice requires knowledge and ability to evaluate the health of a patient's mouth including the health of the gums and remaining teeth. Given the differences in education and clinical training between dentists and denturists, there is a safety risk to patients in allowing denturists to fabricate and insert partial dentures and dentures over implants without the oversight of a dentist.

There is no basis for setting aside the current regulatory structure even in light of a perceived shortage of dentists. Although the denturists argue strongly that citizens need these expanded services, it appears unlikely that 14 denturists can have an impact on the demand. Moreover, there is a lack of evidence that working with a dentist is a significant hardship for denturists.

The department is persuaded that an expansion in the scope of practice raises significant concerns about the ability of the denturists to undertake these activities without the supervision of a dentist with the same level of safety provided by dentists. On balance, the department concludes that the potential harm to patients of expanding the scope of practice for denturists outweighs the potential benefits.

The department believes that the prudent course of action is to retain the current scope of practice and continue to evaluate the experience of other foreign jurisdictions with broader scopes of practice.

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