A STUDY OF DENTURITRY

Directed by the 1998 General Assembly

Research Report No. 292

LEGISLATIVE RESEARCH COMMISSION
Frankfort, Kentucky
January 2000

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Prepared by

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FOREWORD

The 1998 General Assembly enacted SB 65 relating to dentistry. As part of that legislation the Legislative Research Commission was directed to conduct a study of denturitry. This report is the result of that directive.

Michael Greer and Ann Mayo Peck prepared the report. Progress reports were made to the Interim Joint Committee on Licensing and Occupations in July and October of 1999, and findings and recommendations were submitted to the 2000 General Assembly.

Robert Sherman

Director

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CHAPTER I

INTRODUCTION

There are over 50 million people in the United States who are missing all of their permanent teeth, a condition known as edentulism.[1] Most of these people have dentures or will receive dentures, but many do not. Those that are without dentures do not have them for a variety of reasons, but two primary reasons are availability of denture services and cost. In an effort to reduce cost and increase the supply of denture providers, six states and Canada have legalized "denturists," non-dentists who provide dentures directly to the public. Other states, including Kentucky, have attempted to recognize denturists but such efforts have failed. The 1998 Kentucky General Assembly enacted SB 65 which directed a study of the denturitry issue, and this report is the product of that study.

Study Methodology

This study provides information that may be useful in determining whether denturists should be legally recognized and allowed to practice independently in Kentucky.

Occupational regulation invokes the police power of the state to restrict the people who can perform certain functions, in order to protect the public health, safety, or welfare. To explore the impact on the public health of allowing denturists to practice, researchers for this study looked at the public health risks presented and at the actual incidence of public harm documented in other jurisdictions where the practice of denturitry is allowed. An extensive literature search was conducted via the internet. A particular effort was made to identify research conducted by organizations with no vested interest in dentistry or denturitry. Input was requested and received

from various professional organizations representing proponents and opponents of denturitry. Inquiries were made of officials from other states and Canada that recognize denturists. Some of the research reports referenced in this study are dated, but they are used as sources because no subsequent research was found to dispute or update the data.

Chapter II looks at the historical background and evolution of the practice of dentistry and the emergence of denturitry. In Chapter III, denturitry laws enacted in other states are examined, and Chapter IV covers past attempts to legalize denturists in Kentucky. Relevant economic issues are explored in Chapter V, and public health issues are covered in Chapter VI. The final chapter, Chapter VII, summarizes the issues and looks at policy options that are available to the 2000 General Assembly to address the matter.

CHAPTER II

EVOLUTION OF DENTAL PRACTICE

Occupational Regulation

The emergence and evolution of an occupational group follows a standard pattern regardless of the nature of the occupation. (The term "occupation" is used generically in this study in reference to both occupational and professional groups.) Understanding this process may be helpful in understanding the denturitry issue. First, the need for the occupation must be recognized. Then, individuals who have demonstrated some ability in performing the activities, generally through experience, find themselves in demand. Next, a body of knowledge is created and formal education programs developed to prepare persons to engage in the occupation. Finally, the practitioners within the occupation organize and seek government sanctions to permit exclusively their group to engage in the occupation and to prevent others from doing so in order to protect the public.

Generally, the "scope of practice" for the occupation is defined in very broad terms. If the occupational group is the first within its field to seek regulation, the scope of practice usually includes any activity that might fall within that field. A broad scope of practice is not problematic as long as practitioners can keep pace with the evolution of the occupation. Often, when knowledge grows to the point where a practitioner cannot keep pace with changes, two things can happen. First, specialists within the occupation may begin to emerge, and second, auxiliary personnel not members of the original occupation may begin to perform discreet sets of tasks within the established scope of practice. These are usually tasks that practitioners do not have time to perform, or do not desire to perform and they normally require less knowledge and/or skill. Preparation for these emerging, task-oriented groups is usually less stringent and

often outside the formal education paradigm recognized by the regulated practitioners and specialists.

These new occupations are usually accepted and even encouraged by the original practitioners if they meet a demand that the practitioners cannot meet, and if the original practitioners retain control over the full "scope of practice." In many cases, the emerging group will ultimately want to practice independently which usually precipitates scope of practice disputes. There have been many long, hard-fought battles in most occupational fields for independent practice, and these will continue as long as occupations continue to evolve.

The practice of medicine is a good example of how this evolutionary process works. Doctors have been practicing medicine since recorded time. An early doctor learned by apprenticing with another doctor who had acquired the skills also by apprenticeship. Over the years a scientific body of knowledge developed which in turn led to the establishment of medical schools. It was not until the mid 1800's, however, that formally trained doctors organized to have states regulate the practice of medicine to keep untrained, incompetent persons from practicing. In regulating physicians, the scope of practice for medicine was defined broadly. The current definition of medicine in Kentucky law still reflects the breadth and depth of the scope of practice:

> Practice of medicine and osteopathy means the diagnosis, treatment, or correction of *any and all human conditions*, ailments, diseases, injuries or infirmities by any and all means, methods, devices, or instrumentalities. (emphasis added) [KRS 311.550]

Since the initial licensure of physicians, many ancillary medical occupations have emerged and each has had to define its scope of practice within the broad definition of medicine. These groups include podiatrists, chiropractors, optometrists, nurses, physician assistants, nurse

practitioners, nurse anesthetists, nurse midwives, emergency medical technicians, and a burgeoning number of practitioners in behavioral medicine. Some of these have acquired the ability to practice independently, while others have not.

Dentistry

Dentistry itself is an occupation that has emerged from medicine even though the practice of dentistry may indeed be as old as humanity. Cro-Magnon skulls show evidence of tooth decay, and the earliest recorded reference to oral disease is from an ancient Sumerian text that describes "tooth worms" as a cause of dental decay. As early as 700 BCE the Etruscans were able to make dental appliances. They consisted of wide bands of pure gold that were soldered together to fit over natural teeth and a substitute tooth made of ivory or bone inserted into place.[2]

During the Renaissance in Europe, dentistry was not considered a separate area of practice. It was the province of physicians and surgeons and remained so until the "Father of Dentistry," Pierre Fauchard, wrote a comprehensive work in the 18th century detailing the practice of dentistry. It was within this document, *Le Chirugien Dentiste*, that the term dentist was applied to those medical professionals that dealt almost exclusively with teeth. Fauchard wrote that surgeons did not wish to practice dentistry and that the technical training required to fill and replace teeth was not to their tastes.[3] Dentistry then became a specialty of medicine.

During this period, medicine was self-regulated by professional associations that functioned as guilds. The power of these groups to control the practice of medicine fluctuated with political and social circumstances. After the French Revolution, for example, controls over all medical professions were removed and anyone who wished to practice could do so. This

resulted in egregious harm to the public, and Napoleon Bonaparte in 1802 imposed controls to resolve the problem including making the practice of dentistry in France a specialty of surgery.[4]

As in Europe, surgeons originally pulled teeth in the United States, but as medicine evolved, most surgeons turned to other procedures while a few specialized in tooth extraction. In the mid-1800's, this latter group split from the physicians and surgeons and formed the practice of dentistry. By 1889, Charles Gordon organized a dental congress in the United States and during this time, porcelain dentures became available in America.[5] The first government regulation of dentistry did not occur until the 1920's.

The scope of practice for dentists is therefore a sub-set of medicine and the overlap from time to time still causes problems. For example, in 1998 the Tennessee Board of Dentistry promulgated a regulation allowing oral surgeons to perform elective cosmetic surgery. The rationale behind this move was that oral surgeons were trained in facial reconstructive surgery and therefore competent to perform these expanded functions. The Tennessee Medical Association objected and filed suit to stop implementation of the regulation on the grounds only a graduate of a medical school with a license to practice medicine was competent to perform plastic surgery.

Denturitry

With the continuing evolution of dentistry, dentists have gravitated more to procedures for saving and restoring natural teeth than pulling teeth and making dentures. Technological advancements have given dentists new methods and materials to fill, cap, and bond teeth, and even dental implants as an alternative to dentures. While retaining the production of dentures as part of the practice of dentistry, dentists began to delegate certain functions such as the actual fabrication of the dentures to trained specialists. As the population of this country aged and the

need for dentures increased, the practice of denturitry emerged. The practice of denturitry involves taking impressions of the upper and lower jaws, fabricating the dentures to complement the patient's facial features, and fitting the fabricated denture in the patient's mouth. It also involves, in most states and foreign countries that recognize denturists, the examination of the oral cavity to determine that no abnormalities exist and the mouth is fit for dentures.

In other countries, notably Australia, Denmark, Finland, Iraq, Israel, and Switzerland, dentures are legally available through the services of denturists. In Denmark, denturists were never prohibited from providing services directly to the public and were formally licensed in 1976. According to the World Health Organization's Division of Non communicable Diseases/Oral Health, in 1987, 60% of the world's population age 65-74 were edentulous. In 1990-91, there were 800 licensed dental laboratory technicians registered worldwide and of that number 650 of them served the public as denturists.[6]

The Canadian Experience

Canada has legally recognized denturitry since denturists were licensed in British Columbia in 1958.[7] The first attempts at legislation to enable denturists to deal directly with the public came in 1955 but were limited in scope to the repair of broken dentures. Public sentiment was the driving force behind the legislation to legalize denturitry, led by consumer advocates with support from the media.[8] Even before the consumer push for legislation in British Columbia, denturists were practicing illegally. This was accomplished by practicing without publicly advertising services, to avoid the charges of practicing dentistry without a license.

Other Canadian provinces shortly followed suit: Alberta, 1961; Manitoba, 1970; Quebec, Nova Scotia, and Ontario, 1973; and New Brunswick, 1978.[9] By 1979, there were only two provinces in Canada that prohibited denturist's services. The Denturist Association of Canada states that as of September 1999, denturists have been recognized by legislation in every

jurisdiction in Canada except for Prince Edward Island. The dentists and denturists in Canada work closely together to provide denture services to the public. Thirteen percent (13%) of Canadian denturists' patients are referred by dentists, and the public has been generally supportive of denturitry.[10]

In the beginning of legalized denturitry in Canada, denturists were grandfathered in by examination. This was done so that people who were trained and/or practiced denturitry prior to the enactment of the law could be licensed.[11] This practice was discontinued in 1981. To be a certified denturist in Canada, applicants must now submit academic credentials and proof of graduation. In the academic year 1974-1975, the only education program for denturists was a five semester program at George Brown College of Applied Arts and Technology in Toronto. Today, there are five colleges of denturitry operating in Canada.[12]

CHAPTER III

DENTURITRY IN OTHER STATES

In the United States, dentures are still provided almost exclusively through dentists. Most dentists make impressions in their offices and then send them with instructions to a dental laboratory where a dental laboratory technician actually fabricates the dentures. A dental laboratory technician receives certification based upon training or practical experience in either a licensed dentist's office or in a commercial dental laboratory, or by having a degree from a two year course of study. The dentist later fits the finished product but may send it back to the lab for further alterations. By contrast, denturists deal directly with the patient by making the impressions, fabricating the dentures, and providing alterations after the fittings.

There are six states that currently allow the practice of denturitry in the United States: Arizona, Idaho, Maine, Montana, Oregon, and Washington. A breakdown of major provision of denturitry laws in these states contained in Table 1.

Authorization

Maine enacted the first denturitry law in 1977. Two states, Arizona and Oregon, followed suit in 1978. Denturitry laws were then enacted in Idaho in 1982 and Montana in 1984. The most recently enacted law was in Washington in 1994. In four of the six states that have enacted denturitry laws, public initiative or referendum has been the medium through which it has been accomplished, indicating a similar grass roots consumer support that drove the legalization in Canada.

TABLE 1
STATE DENTURITRY LAWS*

	ARIZONA	IDAHO	MAINE	MONTANA	OREGON	WASHINGTON
Date Authorized	1978 By Legislation	1982 By Initiative 1983 By Legislation	1977 By Legislation Amended 1994	1984 By Initiative 1985 By Legislation	1978 By Initiative	1994 By Initiative 1995 By Legislature
Required Supervision	In dentist's office; under gen'l superv'n; initial & final OK by dentist	None	None	None	None	None
Oral Health Certificate Required	No	No	Yes--by DDS <30 days	No	Yes--by MD or DDS**	No
Range of Services	Make/repair full & partial	Make/repair full; repair partial only	Make/repair full only	Make/repair full & partial	Make/repair full & partial	Make/repair full & partial
Type of Regulation	Certification	Licensure	Licensure	Licensure	Licensure	Licensure
Regulating Authority	Board of Dental Examiners	Board of Denturitry	Dental Examiners	Dental Board	State Advisory Council on Denture Technology	Board of Denture Technology
Composition of Authority	6 dentists 2 hygienists	3 denturists 2 lay members	5 dentists 1 hygienist 1 lay member	6 dentists 1 denturist 1 hygienist 2 lay members	1 dentist 4 denturists 2 lay members	1 dentist 4 denturists 2 lay members
Required Training	2 yr degree exam	2 yr degree exam 2 yr internship	2 yr degree exam	2 yr degree exam 1 yr internship	2 yr degree exam 2 yr internship	2 yr degree exam
Continuing Education Required	None	12 hrs/yr	20 hrs/2 yrs	36 hrs/3 yrs	30 hrs/3 yrs	None
"Grandfather" Clause (original)	None	5 yrs experience	10 yrs experience;	5 years practical experience	4,000 hrs practical experience	graduate of denturism program;exam
Number of Denturists	12	29	15	13	130	103

***** Statute analysis and table preparation completed by LRC staff.***

***** No oral health certificate required if the denturist has completed additional training in oral pathology***

Supervision

Only one state that has legalized denturitry requires supervision by a dentist. In Arizona, the denturist must practice in a dentist's office under the general supervision of the dentist. The dentist must give the initial okay for denture procedures to be done by the denturist and must give the final authorization for the completed procedures. In the remaining states where denturitry is legal, there is no requirement for any type of supervision of the denturist by a dentist.

Oral Health Certificate

Maine and Oregon both require that a patient present an oral health certificate obtained from a dentist or a physician to the denturist before the denturist can provide services to the patient. Generally an oral health certificate is valid for one year from the examination date. In Maine, a patient must have an oral examination by a dentist within thirty days of using the services of a denturist. Oregon requires that patients have an oral examination by a dentist or a physician before denture services are obtained through a denturist. However, if a denturist has proof of additional training in oral pathology, the oral health certificate requirement does not apply. The supervision requirement in Arizona makes the requirement of an oral health certificate redundant, but the remaining states of Idaho, Montana and Washington have no oral health certificate requirement.

Range of Services

Four states--Arizona, Montana, Oregon, and Washington--have the same requirements for the types of services that a denturist can provide to the public. They all allow for the construction and repair of full and partial dentures. In Idaho, the denturist can make and repair

full dentures, but may only repair partials. In Maine, the statutory definition of the practice of denturitry allows the denturist to make and repair full dentures only.

Type of Regulation

Arizona is the only state that certifies denturists rather than licensing them. However, the term *certification* used in the Arizona statutes may be misleading since denturists are specifically told that to practice their trade they must be certified; hence the model becomes in actuality a licensing model. In all the remaining states that have legalized the practice of denturitry, the regulatory model used is licensing.

Regulating Authority and Composition

In Arizona the regulating authority is the State Dental Board composed of six dentists, two dental hygienists, and three lay members. Idaho has a Board of Denturitry composed of three denturists and two lay members. Maine is regulated by the Dental Examiners Board consisting of five dentists, one dental hygienist, and one lay member. In Montana denturists operate under the auspices of the Dental Board, which consists of six dentists, one denturist, one dental hygienist, and two lay members. Oregon has a State Advisory Council on Denture Technology as the regulatory authority. It consists of one dentist, four denturists, and two lay members. Washington has a Board of Denture Technology comprised of one dentist, four denturists, and two lay members.

There is some disparity between the memberships of the boards regulating the practice of denturitry in the states where the practice is legal. Arizona and Maine have no denturists as board members but include dental hygienists, and Idaho operates the Board of Denturitry without the benefit of dentist members or dental hygienist members. All boards include lay members.

Required Training

The educational requirements for licensing are fairly consistent throughout the six states where denturitry is a legal practice. All six states require a minimum of a two year degree plus an examination for licensing or certification. In addition to those requirements, Idaho and Oregon require a two year internship with a licensed denturist and Montana requires a one year internship.

Continuing Education

Arizona and Washington are the only states that do not require continuing education for denturists. Idaho requires proof of 12 hours of continuing education each year. Maine requires proof of twenty hours of continuing education every two years. Montana denturists must have 36 hours of continuing education within a three year period and Oregon requires denturists to show proof of 30 hours within three years. Thus, Idaho and Montana have the highest continuing education requirements of all six states where denturitry is a legalized practice.

Grandfather Clause

Five states allow for the grandfathering in of denturists. Arizona is the only state with no provision for grandfathering. Idaho requires five years experience. Maine allows denturists to be licensed with ten years experience. Montana requires five years practical experience. Oregon requires 4,000 hours and Washington requires graduation from a formal "denturism program" and successfully passing a board-approved written and clinical examination.

Other States

In addition to these six states, there are other states that have provisions for various auxiliary dental personnel to perform denture related functions. In Colorado, current law provides that certain tasks related to denturitry may be performed by auxiliary personnel under the dentist's direct supervision; that is, the dentist must authorize the procedures but need not be present on the premises while the procedures are performed. Furthermore, the dentist must certify the oral fitness of the patient before the auxiliary personnel proceed with any work pertaining to dentures. (Colo. Rev. Stat. sec.12-35-109, 1999)

The state of Florida allows dentists to delegate the task of taking preliminary impressions to auxiliary personnel, but the final impressions and any other denture fitting procedures are reserved for the dentist.[13] In 1996, Florida introduced legislation to legitimize and regulate the practice of denturitry in that state. Although it was placed on the calendar, the bill died when the legislature adjourned without taking action [14]

Other states have tried to legalize denturitry and have failed in those attempts. Most recently, Mississippi introduced legislation to license denturists in the 1999 General Assembly. The title of the introduced bill was the "Mississippi Freedom of Choice Dentures Act." This title seems to reflect the trend in legislative attempts to legalize the profession of denturitry. This attempt failed in committee.[15]

CHAPTER IV

DENTURITRY IN KENTUCKY

Legislative History

The first attempt to license denturists in Kentucky was HB 336, introduced in the 1978 General Assembly. While this bill did not pass, it marked the beginning of a twenty year period during which unsuccessful attempts would be made to recognize denturists during each legislative session. These attempts took the form of denturitry bills, denturitry amendments, and study resolutions. Bills included HB 541 in 1980, HB 563 in 1982, SB 355 in 1986, HB 130 in 1988, HB 421 in 1992, HB's 805 and 827 in 1994, HB 86 in 1996, and HB 182 in 1998. These bills ranged from the establishment of a comprehensive regulatory process to license denturists to very brief, simple bills which merely defined denturitry and exempted it from the practice of dentistry. All of these bills failed, as did amendment attempts.

In 1986 Senate Bill 46, a bill to license professional geologists, passed both houses with the house committee substitute. The committee substitute created a new section of KRS Chapter 411 which prohibited a person from being prosecuted or enjoined from performing acts he or she is authorized to perform, even if the acts are included in the practice of another profession. Denturitry opponents realized that this provision could be interpreted as indirectly authorizing denturitry, or at the very least removing it from any enforcement jurisdiction. The opponents prevailed on the Governor to veto the bill, and she did so, and the veto was not overridden.[16]

Study Resolutions

In addition to the attempts to license denturists, there have been several resolutions to study the subject. House Concurrent Resolution 130, introduced in the 1988 session, directed the Legislative Research Commission to "conduct a study of the practice of denturists and dental laboratories and examine the merits and risks to the general public of them either to continue to be regulated by the board of dentistry, to establish their own licensure board, or to be regulated in a different manner." HCR 82 was introduced in the 1996 session directing the Interim Joint Committee on Licensing and Occupations to conduct a similar study. Neither of these resolutions passed, but the 1998 General Assembly enacted SB 65, which became the authority for this study.[17]

Current Kentucky Law

Current Kentucky law specifically prohibits the practice of denturitry. Any person who:

> ..takes impressions of the human teeth or jaws to be used directly in the fabrication of any intraoral appliance, or shall construct, supply, reproduce or repair any prosthetic denture, bridge, artificial restoration, appliance or other structure to be used or worn as a substitute for natural teeth, except upon the written laboratory procedure work order of a licensed dentist and constructed upon or by the use of casts or models made from an impression taken by a licensed dentist, or who shall advertise, offer, sell or deliver any such substitute or the services rendered in the construction, reproduction, supply or repair thereof to any person other than a licensed dentist..." [KRS 313.010(2)]

is considered as "practicing dentistry."

In 1974, this statute was amended to include the definition of a dental laboratory technician, substantially legitimizing the profession and providing for its regulation in the

Commonwealth. (1974 Acts ch. 303, sec. 1) In order to qualify for a certificate of authority from the Board of Dentistry in Kentucky as a dental laboratory technician, one must complete two years of training or acquire two years of practical experience in dental laboratory technology by employment in either a dentist's office or commercial dental laboratory, or have a degree in dental laboratory technology from an accredited school with a two year course of study.

Even though Kentucky law explicitly prohibits the practice of denturitry, denturists have operated in Kentucky for more than twenty-five years and continue to operate. The Kentucky Board of Dentistry has successfully prosecuted denturists for practicing dentistry without a license. The more prominent denturists have continued to practice by employing a licensed dentist to perform the denture functions still reserved for dentists. Other denturists continue to operate illegally, and for this reason the total number of denturists in Kentucky is not known.

CHAPTER V

ECONOMIC ISSUES

Overview

Edentulism results from oral diseases, such as dental caries (cavities) and periodontal disease. But edentulism also reflects attitudes toward oral health, availability and accessibility of dental care, the prevailing standard of care, and availability of health insurance. [18] Other factors that play a role in the prevalence of edentulism are education level, income, residency (urban/rural), and age.

Age is a primary factor. In the United States, 23% of the population aged 65 to 74 is edentulous and of the 75 or older group the rate climbs to nearly 27%. A recent poll of 46 states conducted by the Centers for Disease Control and Prevention found that 44% of Kentuckians 65 or older were edentulous. Kentucky had the second highest rate, ranking behind only West Virginia with 46%. Hawaii had the lowest rate at 13.9%. [19]

The high incidence of edentulism in the 65 and older age range can be partially attributed to the fact that preventative tooth loss measures now in place were not available to that age group in their younger years. Also, a generally held misconception years ago was that tooth loss was an inevitable consequence of the aging process, and dentists were more apt to remove teeth than to restore them.[20] The prevalence of edentulism among persons age 65 and over will probably continue to decline in succeeding generations.[21] However, the United States is an aging population so the number of edentulous people in the 65 or older age range will likely rise in the foreseeable future.[22]

Cost of Dentures

A Federal Trade Commission Report cites several issues to be addressed in researching the unmet dental needs of the population. This report was drafted by the San Francisco office in 1978 and issued by the full commission in 1984. While it is more than 20 years old, it remains the most comprehensive treatment of denturitry issues yet produced. Among the issues contained in this report are certain barriers to obtaining denture care, and price is one of the primary barriers. This report concludes that one of the major reasons for failure to obtain denture care is the high cost of that care, especially for the elderly.[23] Denturists believe that they can competently provide dentures directly to the public for up to half the price charged by a dentist. Denturists maintain that their overhead is lower than dental office practice overhead and that they do not sacrifice quality to keep their prices low.

The effect of the legalization of denturitry upon the cost of dentures to the public can be reviewed in the light of the Canadian experience, since denturitry has been legal in that country for a little over 40 years. Although the cost of dental services responds to overall inflation, the consumer in Canada continues to realize approximately a 50 percent savings in the cost of dentures from a denturist as compared to the cost from a dentist.[24]

Another example of economic impact is seen in the state of Oregon, where a review of dental insurance data shows that the costs of dentures, which had been rising at the same rate as other dental services, had a much lower rate of increase after passage of the denturitry initiative.[25]

A study conducted in the State of Michigan by the Office of Health and Medical Affairs found that after comparing the cost of obtaining dentures from a denturist in Oregon, Idaho, and Canada with the cost of obtaining dentures from a dentist in Michigan, dentures obtained from a

denturist cost about half of those provided by a dentist in that state. This study also notes that the evidence that denturists provide dentures at a lower cost is important when the "side effects" of state regulation of dental personnel and dental care are considered such as the issue of dentist supervision and dental auxiliary personnel:

> Dr. John E. Kuchman, an associate professor at the University of California at Davis and a consultant on dental care economics to the Federal Trade Commission, has examined the implications of denturist competition. Dr. Kushman's research found that denturists offer lower prices and concludes that 'the economic advantages of introducing competition are great, and significant impairments in quality would be required to offset them.' Dr. Kushman notes that such impairments in quality have not been documented. He dismisses denturists working under the supervision of a dentist as not providing the greatest consumer benefit, since the denturist can be considered another office dental auxiliary.[26]

Insurance Coverage

The Centers for Disease Control and Prevention found that in 1997 edentulism was more prevalent among those persons without dental insurance (27.0%) than among those who had dental insurance (18.3%).[27] In a note to the study by the Center for Disease Control and Prevention the editor states:

> ...the higher prevalence of total tooth loss among persons without dental insurance than among those with dental insurance may, in part, result from reduced use of preventive and restorative dental services. however, dental insurance in the Untied States is almost entirely employment-based, and Medicare does not cover most dental procedures; therefore, relatively few persons aged >65 years have dental insurance.[28]

A special commission of the American Dental Association also noted that : "there are members of the edentulous public who have gained only limited access or no access to the

denture care they desire or need. The cost of denture care places this health service beyond the reach of many individuals of low and low-middle income."[29]

Opponents of legalized denturitry note that Kentucky has two dental schools and a relatively good per capita rate of dentists in its urban areas. They maintain that the competitive market already operates to keep down the price of dentures and that dentures also are available through low-priced services and pro bono programs operated by dentists. Proponents argue that any advantages gained by competition between dentists are nonexistent outside of the state's largest cities. The FTC report notes that "while the emerging advertising of low-priced denture services will have an important impact on the accessibility of denture care, it is likely to be engaged in by too few dentists in too few locations to potentially reach the 13 million Americans who presently have unmet needs for denture care."[30]

Government Savings

Obtaining dentures through the services of denturists could have an economic impact on the state budget since under the current Medicaid program complete upper and lower dentures are an allowable expense. [KRS 205.560(1)] A study by the state of Michigan found that in the fiscal year 1983-84 Michigan Medicaid paid $4.1 million for upper and lower dentures. Even though the projected cost for the fiscal year 1984-85 was $3.4 million due to reduced number of Medicaid eligible people, the study indicates the overall savings to the state of Michigan could amount to as much as $1 million if dentures were available through denturists.[31]

A study by the Washington State Health Coordinating Council of the bill to certify denturists in that state shows that the Medicaid program in that state would be impacted by the legalization of denturitry by a savings of up to 50% of Medicaid expenditures for dentures. "In fiscal year 1985 the state purchased 5,694 complete dentures at a cost of $1,752,320. The state

paid $513,926 for partials, $14,267 for adjustments, $73,227 for repairs, and $204,798 for duplicates."[32] This made the Medicaid expenditures for Washington slightly over $2 million. The study says that "Dealing directly with denturists and their laboratories could save the state close to a million dollars per year."[33]

CHAPTER VI

PUBLIC HEALTH ISSUES

Overview

Advances in medical science and technology are allowing people to keep their natural teeth longer. Fluoridated water supplies, fluoride in toothpaste, and fluoride treatments in schools are examples of interventions that have been highly successful. There is even a vaccine in trial stages that causes the body to produce high levels of an enzyme in saliva that destroys caries, the bacteria that causes cavities.

But there is still that group of people who have not had the advantage of these breakthroughs and who have lost or will lose their natural teeth. Some of these with sufficient means can still benefit from modern medical advances such as dental implants, but the remainder will need dentures if they are to realize a satisfactory quality of life.

Losing one's natural teeth can have a significant impact on both the physical and psychological health of the edentulous person. People may face traumatic experiences when they lose their teeth, such as rejection in the job market where personal appearance can be crucial in obtaining employment. "Tooth loss is associated with advancing age. The loss of one's teeth can precipitate an emotional crisis. The belief that tooth loss will result in a decrease of family love and affection is widespread."[34] In a report that charted behavioral changes in a six year period after good dentures were obtained by a group of 64 patients of various ages, it was discovered that obtaining dentures, "...has had an identifiable impact on the several behavioral variables for which changes were predicted before the study began. There has been general improvement in self-image, confidence, and relaxation...."[35]

While the cultural context of wearing dentures is cosmetic, there are some definite effects on physical health as well, especially for the elderly edentulous. Their food choices may be dictated by the fact that they have either no natural teeth or ill fitting dentures. Poor nutrition may in turn result in a myriad of nutrition-related health problems. In addition, the simple pleasure of eating may be diminished.

In regard to public health issues, opponents of denturitry maintain that if dentures are provided directly by denturists, consumers may be injured by ill-fitting dentures, unsanitary facilities will spread diseases, and the rate of edentulism will increase.[36] These issues are explored in the following sections.

Competency

Public health and safety are always the key issues in whether the denturitry should be regulated at all. The first public health question is whether denturists are competent to perform the functions they seek to perform. Opponents of denturitry claim "...denturists know nothing about the practice of dentistry nor the treatment of patients and have no training in the provision of health services."[37] Proponents of denturitry maintain that they are competent by virtue of either formal training or years of experience, some of which have been in a clinical setting with a dentist, or both. Proponents further contend that the only way they can prove their competency is to be given an opportunity to practice.

There is no formal training program for denturitry in Kentucky. Kentucky schools do offer training in dental hygiene and dental assisting, and the Lexington Community College offers a two-year program in dental lab technology. The absence of formal programs in denturitry is not unusual, however, since Kentucky does not officially recognize denturists.

Denturitry proponents point out that there were no programs in Canada prior to the legalizing of denturitry, and now there are five programs. For example, the George Brown College of Applied Arts and Technology in Toronto, Canada offers a six semester degree program in denturitry that includes on-campus classes as well as courses available through distance learning. The George Brown program is flexible and will give credit for community college dental technology courses as well as credit for actual practice experience.

Analysis of Risks

To fully understand the other public health issues with respect to denturitry, one must first look at the functions involved in the practice of denturitry. There are four basic functions:

1. Examination of the oral cavity to determine suitability for dentures;
2. Making of impressions from which the dentures will be fabricated;
3. Fabrication of the dentures; and
4. Fitting and adjustment of the finished dentures.

What public health risks are involved in denturists performing these functions? The third function, fabrication of dentures, does not involve patient contact so there is essentially no health risk. In addition, it is a technical function that is currently performed by dental lab technicians and denturists and, therefore, is not an issue.

The second function, making impressions, does involve patient contact and working in the oral cavity. There is some risk of spreading infectious disease when performing this function unless sanitation standards are applied and enforced. There does not appear, under normal circumstances, to be any health risk related to the actual making of impressions. This is a

technical procedure that dentists currently are required to perform but frequently delegate to auxiliary personnel.

Function four, the fitting and adjustment, does pose some public health risks. Opponents contend that ill fitting dentures may lead to oral cancer and that only dentists are trained and qualified to perform this function. Denturists argue that since they are the ones who actually make the dentures, they are just as competent as dentists to fit and adjust them. They also contend that the fit is usually better because the fitting is done where the dentures are made and adjustments can be made immediately, saving the patient time and money.

There is also a potential health risk posed by a denturist performing the first function, the initial examination of the oral cavity. Before dentures are made and fitted, an examination must be conducted to determine that the oral cavity is fit to receive dentures. Teeth or pieces of teeth, bone protrusions in the jaw or gums, and sores or lesions are examples of the abnormalities that would make the oral cavity unfit for dentures. Dentists argue that their education and training makes them the only group within the dental field competent to perform an oral examination. Denturists counter that they are competent to perform this function through education and experience. Some denturists have completed denturitry programs that cover mouth, neck, and jaw pathology. Others claim that years of experience, including experience working with a dentist, have prepared them to detect abnormalities. They say that they may not be able to identify the specific pathology present but they are competent to detect abnormalities and will make necessary referrals to dentists for proper treatment.

Oral Health

While there is some public health risk involved in the practice of denturitry, a review of the actual documented incidence of public harm may be useful. There are three public health issues that need to be examined:

1. The spread of infectious diseases through improper procedures or unsanitary facilities;
2. An increase in the incidence of oral cancer due to insufficient or improper diagnostic screening; and
3. An increase in the incidence of oral cancer due to ill-fitting dentures.

With regard to the spread of infectious diseases, denturitry opponents point to incidents where inspectors of the Board of Dentistry have observed sanitation violations. In one case a practitioner was observed not wearing latex gloves, and in another case an improper appliance was used to sterilize molds for making impressions. Proponents contend that they observe general sanitation standards and that the citations for violations have been infrequent and relatively minor. They also point out that since denturists are not now regulated, they are not always aware of specific sanitation protocols and they would not object to appropriate standards and training being required of them. According to the FTC report, there has been no increase in the spread of infectious disease attributable to the practice of denturitry in the United States or Canada.[38]

The issue of regular diagnostic examinations for denture wearers is another issue that has public health impact. An argument for opponents of denturitry is that the rate of undetected oral cancer will rise with the legalization of denturitry. They state that patients using the services of a denturist will not have proper access to diagnosis and treatment for oral cancers. Proponents of denturitry maintain that with legalization, a higher level of oral health may actually be attained. They reason that the more mouths that are seen by denturists, the more referrals they can make to

dentists of patients exhibiting potential pathological conditions and with this cooperative approach help protect the public's oral health.

The final public health issue is the link between oral cancer and the practice of denturitry. Opponents argue that legalizing denturists will result in more ill-fitting dentures and an increase in oral cancer. The relationship of dentures to oral cancer is based on the hypothesis that chronic physical irritation of the oral mucosa (caused by ill-fitting dentures) is a contributing factor in the incidence of oral cancers.

A scientific study conducted in 1984 on denture wearing and oral cancer found no evidence that denture wearing, even wearing ill fitting dentures, is a significant factor in oral cancer.[39] The study was conducted on 400 patients with oral carcinoma seen in the Oral Medicine Clinic, University of California, San Francisco, between 1968 and 1982. This study included recorded data on tumor site and stage, smoking habits, and dental/denture status. "When denture and non denture wearers were compared, there was no apparent risk relationship in regard to tobacco use, tumor state, or delay in diagnosis."[40] This study also concluded that "denture wearing in a population of oral cancer patients does not appear to be associated statistically with an increased risk of the development of a malignancy."[41] The study concludes that there is no correlation between the wearing of dentures and any specific cancer sites. Furthermore, there is no difference between denture wearers and control groups in the occurrence of oral cancer.[42]

Similar results have been observed in certain denturitry jurisdictions. In Alberta, Canada, where denturitry has been legal since 1961, there was no increase in the rate of oral cancer over the next 15 years.[43] According to the FTC report, there has been no increase in the incidence of oral cancer in the United States or Canada associated with the practice of denturitry.[44] In

addition, anecdotal evidence indicates there is no significant difference in the rates of oral cancer when comparing denturitry states that require a certificate of oral health with those that do not.

CHAPTER VII

POLICY OPTIONS

Summary

Denturitry is a technical occupation that has evolved from the practice of dentistry. Six states, Canada, and most western European countries allow denturists to practice independently. Attempts to legalize denturists in Kentucky have been made every legislative session since 1978, but none have been successful. The concern expressed by opponents of denturitry is that denturists are not sufficiently educated to practice independently and that allowing them to do so would be harmful to the public health. Competency of denturists and standards of practice do raise issues for consideration. Available research on the public health issues suggests that health risks are minimal and the actual incidence of health problems is not significantly different between states that allow denturists and states that do not. In regard to economic issues, there is some evidence that legalizing denturists does increase the availability of denture services and reduce the cost.

Policy Options

There are three basic policy options that might be considered by the 2000 General Assembly. The first option is not to license denturists; the option that has been exercised by previous General Assemblies whenever the issue has been before them. This option preserves the status quo, which is that all denture work is performed as part of the practice of dentistry and under the aegis of a dentist. The argument for this approach is that it protects the public from any health risks that might be posed by the independent practice of denturists.

The argument against this option is that the public will not realize the benefits that the denturitry proponents contend will be available. The cost of dentures will not decline. Dentures will not be made for more edentulous citizens. And fewer citizens will have oral examinations, possibly resulting in oral pathology going undetected. The major drawback to this argument, however, is that the question of whether denturists are qualified to independently practice denturitry is still not resolved and the issue will continue to arise regularly as a legislative issue.

The second option is to license denturists. The pros and cons of this option are obviously the reverse of those of the first option. Arguments for licensing would be that more denture services would be available. The cost of dentures would decline and more oral pathology would be detected and patients referred to a dentist. The argument against licensing is that the public could be exposed to a greater health risk.

The third option would be to establish a "pilot project" through which qualified denturists would be licensed for a set period of time and would be allowed to practice under controlled and monitored circumstances. This option would allow denturists to prove their competence but at the same time provide public protections to minimize any potential health risks. To assure a successful outcome, the pilot project would need to be carefully structured. Practice standards, including sanitation standards, would need to be established, and denturists would need to report regularly on their activities. A complaint process would need to be put into place and complaints investigated.

An oversight committee would need to be created to work with the Board of Dentistry to monitor the pilot project. The oversight committee membership should reflect equal representation of dentists and denturists, but should also contain persons not aligned with either group to give representation to consumer interests and provide objectivity.

Denturists contend that they are sufficiently trained and competent to practice independently. Opponents contend they are not. The pilot project approach would provide the opportunity for denturists to prove their claim, but to do so under controlled circumstances designed to protect the public. With a pilot project in place and operating for a period of three to six years, sufficient objective data should be generated to allow a future General Assembly to make an informed decision on permanent licensure.

ENDNOTES

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