

MINUTES OF THE SENATE PUBLIC HEALTH AND WELFARE.

The meeting was called to order by Chairperson Senator Susan Wagle at 1:30 p.m. on January 31, 2001 in Room 231-N of the Capitol.

All members were present except:

Committee staff present: Ms. Emalene Correll, Legislative Research Department  
Mr. Hank Avila, Legislative Research Department  
Ms. Lisa Montgomery, Revisor of Statutes  
Ms. Margaret Cianciarulo, Committee Secretary

Conferees appearing before the committee: Mr. Mack Smith, Executive Secretary  
State Board of Mortuary Arts of Kansas  
Ms. Teresa Higgins, President,  
Kansas Dental Hygienist Association  
Ms. Ann Bedroll, RDH, BS  
Manager of Dental Hygiene Education  
American Hygienist Association  
Ms. Denise Baseman, RDH, BS,  
Dental Hygiene Department Chairperson  
Wichita State University  
Ms. Margaret LoGiudice, RDH, MS,  
Director, Dental Hygiene Program  
Johnson County Community College  
Ms. Gracemary Melvin, Dean of Curriculum  
Colby Community College  
Mr. Ron Gaches, Lobbyist,  
Gaches, Braden, Barbee & Associates

Others attending: See Attached Guest List

**Introduction of bill**

Upon calling the meeting to order, Chairperson Wagle recognized Mr. Mack Smith, Executive Secretary, State Board of Mortuary Arts of Kansas. Mr. Mack came before the board for a bill introduction, (Irs0565) regarding "an act concerning the Kansas state board of mortuary arts regulating crematories; amending K.S.A. 65-1723 and 67-1732 & KS A. 2000 Supp. 65-1727 & repealing the existing sections." A copy of the amendment is (Attachment #1) attached hereto and incorporated into the Minutes by reference. Mr. Mack was thanked for his time and coming before the board.

**Hearing on SB 50 - elimination of the dental assistant sunset provision.**

The Chairperson then continued on to **SB 50** recognizing Ms. Teresa Higgins, President of Kansas Dental Hygienist Association. Ms. Higgins gave opponent testimony to the Committee. A written copy of her testimony and handout are (Attachment #2 and 3) attached hereto and incorporated into the Minutes by reference.

Ms. Ann Bedroll, RDH, BS, Manager of Dental Hygiene Education, was the next to give opponent testimony to the Committee. A copy of the written testimony and handouts are (Attachments #4 and 5) attached hereto and incorporated into the Minutes by reference.

The next speaker to come before the Committee was Ms. Denise Baseman, Dental Hygiene Department Chairperson, Wichita State University. The testimony Ms. Baseman gave was much the same as the previous two speakers, but included the extensive educational program of which some programs included are general education, biomedical sciences, dental sciences, and dental hygiene sciences. The total number of college credit hours for the degree is 81 credit hours. A copy of the testimony is (Attachment #6) attached hereto and incorporated into Minutes by reference.

MINUTES OF THE SENATE PUBLIC HEALTH AND WELFARE COMMITTEE, Room 231-N,  
Statehouse at 1:30 p.m. on January 31, 2001

Page 2

Ms. Margaret LoGiudice, RDH, MS, Director, Dental Hygiene Program, offered opponent testimony to the Committee. She was able to include in her testimony that technical schools, which offer the dental assistant scaling programs are not accredited by the same accrediting agencies that accredit the colleges offering the dental assistant scaling programs and therefore anyone completing these courses cannot transfer these credits for hygiene courses. A copy of the testimony is (Attachment #7) is attached hereto and incorporated into the Minutes by reference. She also included with her testimony a "Report of the Dental Hygienist Training Committee" from January 11, 1999. (See Attachment #8)

Next to come before the Committee to give opponent testimony was Ms. Gracemary Melvin, Dean of Curriculum, Colby Community College. Ms. Melvin's presentation was based on material as to whether or not to start a dental hygiene program and how to determine if one was needed or not; things to do and not to do; players; status, accomplishments; grant support progress; to "what is next?" A copy of Ms. Melvin's presentation is (Attachment #9) attached hereto and incorporated into the Minutes by reference

Last but not least to present opponent testimony to the Committee was Mr. Ron Gashes, Lobbyist, Gashes, Braden, Barbee & Associates, on behalf of the Kansas Dental Hygienists' Association. Mr. Gashes spoke to the Committee about the 2020 Plan, which is a new dental workforce creating three tiers of dental assistants. A copy of Mr. Gashes testimony and handout are (Attachment #10 and 11) attached hereto and incorporated into the Minutes by reference.

With all of the testimony presented, the Committee then was able to present their questions to the conferees. Questions were asked by Senators, Harrington, Steineger, Praeger and Chairwoman Wagle. The questions ranged from statistics showing harm done, to details of the problem nationwide.

### **Adjournment**

As the Senate was meeting on the floor at 2:30 p.m., Chairperson Wagle adjourned the meeting and said they would address Senator Salmans questions at the next Committee meeting. The meeting adjourned at 2:35 p.m.

The next meeting is scheduled for February 1, 2001.



SENATE PUBLIC HEALTH AND WELFARE COMMITTEE

GUEST LIST

DATE: Wednesday, Jan 31

NAME	REPRESENTING
Mack Smith	Kansas State Board of Mortuary Arts
Jerri Freed	KS Dental Bd.
Teresa Higgins	KDHA.
Margaret LoGiudice	Johnson County Community College
Maryann Melvin	Cally Community College
Denise Maseman	to self
Ann Battrell	American Dental Hyg. Assoc.
Kathy Schroder	" " " "
Tom Caches	KDHA
Carol McDowell	Delta Dental of Kansas
Pep Franze	KIA

By

AN ACT concerning the Kansas state board of mortuary arts; regulating crematories; amending K.S.A. 65-1723 and 65-1732 and K.S.A. 2000 Supp. 65-1727 and repealing the existing sections.

Be it enacted by the Legislature of the State of Kansas:

New Section 1. As used in this act, unless the context clearly shows otherwise:

(a) "Alternative container" means a receptacle, other than a casket, in which human remains are transported to the crematory and placed in the cremation chamber for cremation. An alternative container shall be (1) composed of readily combustible materials suitable for cremation, (2) able to be closed in order to provide a complete covering for the human remains, (3) resistant to leakage or spillage, (4) rigid enough for handling with ease, and (5) able to provide protection for the health, safety and personal integrity of crematory personnel.

(b) "Authorizing agent" means a person legally entitled to authorize the cremation and final disposition of specific human remains as defined in K.S.A. 2000 Supp. 65-1734, and amendments thereto.

(c) "Board" means the state board of mortuary arts.

(d) "Cremated remains" means all human remains recovered after the completion of the cremation, which may possibly include the residue of any foreign matter including casket material, bridgework or eyeglasses, that was cremated with the human remains.

(e) ~~"Cremation" means the technical process, using heat and flame, that reduces human remains to bone fragments. The or movement of the body during the process to facilitate reduction, the processing of the remains after removal from the cremation chamber, placement of the processed remains in a cremated remains container, and release of the cremated remains to an appropriate party.~~ *reduction of a dead human body to essential elements through direct exposure to intense heat and flame and the repositioning of the remains after removal from the cremation chamber, placement of the processed remains in a cremated remains container, and release of the cremated remains to an appropriate party.*

(f) ~~"Cremation chamber" means the enclosed space within which the cremation process takes place. Such chambers shall be used exclusively for the cremation of human remains. The cremation chamber shall be clearly identified by signs on all~~ *cremation of a dead human body is performed. Such chambers shall be used exclusively for the cremation of human remains.*

Senate Public Health & Welfare Committee  
Meeting Date 1-21-01  
Attachment 1-1

~~entrance doors; shall be separate from any display room, chapel or visitation rooms, and shall not be a part of any living quarters.~~

(g) "Crematory" means a business premises that houses the cremation chamber and holding facility where dead human bodies are cremated. A crematory shall be maintained at a fixed and specific street address.

(h) "Funeral director" means a person known by the title of "funeral director" or "funeral director and embalmer" or other similar words or titles, licensed by the state to practice funeral directing or funeral directing and embalming.

(i) "Funeral establishment" means a building or separate portion of a building having a specific street address and location and devoted to activities relating to the shelter, care, custody and preparation of a deceased human body and may contain facilities for funeral or wake services.

(j) "Holding facility" means an area within or adjacent to a licensed crematory designated for the retention of human remains prior to the act of cremation that shall:

- (1) Comply with any applicable public health statute, regulation or ordinance;
- (2) preserve the dignity of the human remains;
- (3) recognize the integrity, health and safety of the licensed crematory personnel operating the crematory; and
- (4) be secure from access by anyone other than authorized personnel.

(k) "Potentially hazardous implant" means any device previously placed within the now deceased human body that would result in potential harm at any time during the cremation process.

(l) "Professional incompetency" means one or more instances involving: (1) Failure to adhere to the applicable standard of practice as a licensee to a degree which constitutes gross negligence as determined by the board; (2) repeated instances involving failure to adhere to the applicable standard of care to

a degree which constitutes ordinary negligence as determined by the board; and (3) a pattern of practice or other behavior which demonstrates a manifest incapacity or incompetence to practice as a licensee.

(m) "Temporary container" means a receptacle for cremated remains, usually composed of cardboard, plastic or similar material, that can be closed in a manner that prevents the leakage or spillage of the cremated remains or the entrance of foreign material, and is a single container of sufficient size to hold the cremated remains, ~~until an urn is acquired or the cremated remains are scattered.~~

(n) "Unprofessional or dishonorable conduct" means misrepresentation, fraud or an act of moral turpitude in the conduct of the licensee's business.

(o) "Urn" means a receptacle designed to encase the cremated remains.

New Sec. 2. (a) No person shall operate a crematory to cremate a dead human body or cause any dead human body to be cremated in this state without being licensed by the state board of mortuary arts.

(b) Any building used as a crematory shall comply with all applicable local and state building codes, zoning laws, ordinances and environmental standards. A crematory shall have, on site, a motorized mechanical device for processing cremated remains either in the building or adjacent to it, a holding facility for the retention of human remains awaiting cremation. The holding facility shall be secure from access by anyone except authorized personnel of the crematory, shall preserve the dignity of the remains and shall protect the health and safety of the crematory personnel.

(c) All applications for licensure as a crematory shall be on forms furnished and prescribed by the state board of mortuary arts.

(d) An application to operate a crematory in existence prior to the effective date of this act or to operate a new crematory

shall be made by the crematory operator in charge of the crematory and provided to the state board of mortuary arts.

New Sec. 3. No crematory or crematory operator in charge shall cremate or cause to be cremated any dead body until it has received:

(a) A cremation authorization form signed by an authorizing agent. The written authorization shall include:

(1) The identity of the human remains and the time and date of death;

(2) the name of the funeral director or assistant funeral director and the funeral establishment or branch establishment, or the authorizing agent if self motivated, that obtained the cremation authorization;

(3) notification as to whether the cause of death occurred from a disease declared by the department of health and environment to be infectious, contagious, communicable or dangerous to the public health;

(4) the name of the authorizing agent and the relationship between the authorizing agent and the decedent;

(5) authorization for the crematory to cremate the human remains;

(6) a representation that the human remains do not contain a pacemaker or any other material or implant that may be potentially hazardous or cause damage to the cremation chamber or the person performing the cremation;

(7) the name of the person authorized to receive the cremated remains from the crematory operator; and

(8) the signature of the authorizing agent, attesting to the accuracy of all representations contained on the cremation authorization form.

(b) A completed and executed coroner's permit to cremate, as is provided in K.S.A. 65-2426a and amendments thereto, indicating that the human remains are to be cremated.

New Sec. 4. (a) No body shall be cremated with a pacemaker or other potentially hazardous implant in place. The authorizing



agent for the cremation of the human remains shall be responsible for informing the licensed funeral director, assistant funeral director or embalmer about a pacemaker or other potentially hazardous implant. The authorizing agent shall be ultimately responsible for ensuring that any pacemakers or hazardous implants are removed before delivery of the human remains to the crematory. Bodies with pacemakers or hazardous implants in the custody of a crematory operator shall have pacemakers or hazardous implants removed by an embalmer at a funeral establishment or branch establishment with an embalming preparation room unless the removal is to take place at a medical facility by the appropriate medical personnel.

(b) A crematory shall hold human remains, prior to their cremation, according to the following provisions of this subsection:

(1) Whenever a crematory is unable to cremate the human remains immediately upon taking custody thereof, the crematory operator in charge shall place the human remains in a refrigeration facility at 40 degrees fahrenheit or less, unless the human remains have been embalmed, or shall store the human remains in a cremation container at a funeral establishment or branch establishment that is inspected and licensed by the state board of mortuary arts; and

(2) a crematory operator shall not be required to accept for holding a cremation container from which there is any evidence of leakage of body fluids from the human remains therein.

(c) No unauthorized person shall be permitted in the crematory area while any human remains are in the crematory area awaiting cremation, being cremated or being removed from the cremation chamber.

(d) The simultaneous cremation of more than one dead human body within the same cremation chamber is prohibited without specific written authorization to do so from all authorizing agents for the human remains to be so cremated. Such written authorization shall exempt the crematory operator in charge from

all liability for the comingling of the cremated remains during the cremation process.

*the crematory will maintain an identification system that will insure that the human remains can be identified, as indicated on the cremation authorization, throughout all phases of the cremation process.*

(e) ~~Immediately prior to being placed within the cremation chamber, the identification of the human remains, as indicated on the cremation container, shall be verified by the crematory operator in charge. The identification shall then be removed from the cremation container and placed near the cremation chamber control panel where it shall remain in place until the cremation process is complete.~~

(f) Upon completion of the cremation, and insofar as practicable, all of the recoverable residue of the cremation process shall be removed from the cremation chamber. If possible, the noncombustible materials or items shall be separated from the cremated remains and disposed of, in a lawful manner, by the crematory. The cremated remains shall be reduced by motorized mechanical device to granulated appearance appropriate for final disposition.

(g) Cremated remains shall be packed as follows:

(1) The cremated remains with proper identification shall be placed in a temporary container or urn, unless specific written authorization has been received from the authorizing agent or as provided in paragraph (2) of this subsection. The temporary container or urn contents shall be packed with clean packing materials;

(2) if the cremated remains will not fit within the dimensions of a temporary container or urn, the remainder of the cremated remains shall be returned to the authorizing agent or its representative in a separate container attached to the first container or urn identifying such containers as belonging together;

(3) when a temporary container is used to return the cremated remains, that container shall be, at a minimum, a cardboard box with all seams taped closed to increase the security and integrity of that container. The outside of the container shall be clearly identified with the name of the

crematory and an indication that the container is a temporary container; and

(4) if the cremated remains are to be shipped, the temporary container or designated receptacle ordered by the authorizing agent shall be securely packed in a suitable, sturdy, non-fragile container and sealed properly. Cremated remains shall be shipped only by a method which has an internal tracing system available and which provides a receipt signed by the person accepting delivery.

New Sec. 5. (a) An authorizing agent signing a cremation authorization form shall be deemed to warrant the truthfulness of any facts set forth in such cremation authorization form, including the identity of the deceased whose remains are sought to be cremated and such authorization agent's authority to order such cremation. Any person signing a cremation authorization form as an authorizing agent shall be personally and individually liable for all damage occasioned thereby and resulting therefrom. A crematory operator and a funeral director may rely upon the representations of the authorizing agent in the cremation authorization form.

(b) A funeral director or assistant funeral director shall have the authority to arrange the cremation of human remains upon the receipt of a cremation authorization form signed by an authorizing agent. A crematory operator shall have authority to cremate human remains upon the receipt of a cremation authorization form signed by an authorizing agent. A funeral director, assistant funeral director or crematory operator who pursuant to a cremation authorization arranges a cremation, cremates human remains then releases or disposes of the cremated remains shall not be liable for such acts.

(c) A funeral director or assistant funeral director who refuses to arrange a cremation and a crematory operator who refuses to accept a body or to perform a cremation shall not be liable for refusing to accept the body or to perform the cremation until they receive a court order or other suitable

confirmation that the cause of the refusal has been settled. Circumstances causing such a refusal may include:

- (1) Awareness of a dispute concerning the cremation of the human remains; or
- (2) a reasonable basis for questioning any of the representations made by the authorizing agent; or
- (3) any other lawful reason.

New Sec. 6. If an authorizing agent informs the funeral director or assistant funeral director and the crematory operator on the cremation authorization form of the presence of a pacemaker in the human remains, then the funeral director or assistant funeral director shall also be responsible for ensuring that all necessary steps have been taken to remove the pacemaker before delivering the human remains to the crematory. Should the funeral director or assistant funeral director who delivers the human remains to the crematory fail to ensure that the pacemaker has been removed from the human remains pursuant to subsection (a) of section 3 and amendments thereto, prior to delivery, and should the human remains be cremated with the pacemaker, then the funeral director or assistant funeral director who delivered the human remains to the crematory shall also be liable for all resulting damages along with the authorizing agent.

New Sec. 7. (a) The state board of mortuary arts shall adopt rules and regulations for the administration and implementation of this act. Such rules and regulations shall include the conditions under which human remains of persons dying from an infectious, contagious, communicable or dangerous disease can be transported from any place in the state to a crematory for the purpose of cremation; shall establish minimal standards of sanitation, required equipment and fire protection for all crematories as deemed necessary for the protection of the public; shall define, construe and interpret the provisions of this act.

(b) A crematory operator in charge may enact reasonable policies, not inconsistent with this act or rules and regulations adopted by the board, for the management and operation of a

crematory, the types of cremation containers it will accept, authorization forms required, authorized personnel who may be witnesses to a cremation and similar provisions. Nothing in this provision shall prevent a crematory operator from enacting policies which are more stringent than the provisions contained in this act.

(c) The state board of mortuary arts may refuse to issue or renew a license, revoke or suspend a license or publicly or privately censure a licensee, upon a finding that a licensee or applicant for a license:

(1) Has maintained or operated a building or structure within the state as a crematory in violation of the provisions of this act or the rules and regulations adopted by the board of mortuary arts;

(2) has held oneself out to the public as a crematory operator in charge without being licensed under this act;

(3) has performed a cremation without a cremation authorization form signed by an authorizing agent;

(4) has made any misleading, deceptive, untrue or fraudulent statements in applying for or securing an original or renewal license;

(5) has been convicted of a felony or an offense of moral turpitude, and has not demonstrated to the board's satisfaction that such licensee or applicant has been sufficiently rehabilitated to warrant the public trust;

(6) has committed an act of unprofessional or dishonorable conduct or professional incompetency;

(7) has violated any law, ordinance or rule and regulation affecting the handling, custody, care or transportation of dead human bodies or cremated remains;

(8) has been rendered unfit to operate a crematory by reason of illness, alcohol, chemicals or other types of substances, or as a result of any mental or physical condition;

(9) has failed or refused to properly protect or guard against contagious, communicable or infectious disease, or the



spreading thereof;

(10) has or such person's agent, employee or representative has advertised, solicited or sold merchandise or services in a manner which is fraudulent, deceptive or misleading in form or content;

(11) has been found by a court of competent jurisdiction to be mentally ill, mentally disabled, not guilty by reason of insanity or incompetent to stand trial by a court of competent jurisdiction;

(12) has failed to furnish the board, its investigators or representatives, information requested by the board;

(13) has failed to report to the board any adverse action taken against the licensee by another state or licensing jurisdiction, professional association or society, governmental agency, law enforcement agency or a court for acts or conduct which would constitute grounds for disciplinary action under this section;

(14) has an adverse judgment, award or settlement against the licensee resulting from the practice of cremation which relate to acts or conduct which would constitute grounds for disciplinary action under this section or has failed to report such matter to the board;

(15) has knowingly submitted any misleading, deceptive, untrue or fraudulent representation on a claim form, bill, statement or similar information to an authorizing agent, consumer or representative of the board;

(16) has had a license to operate a crematory revoked or suspended, been censured or had other disciplinary action taken against oneself or had an application for a license denied by the proper licensing authority of another state, territory, District of Columbia or other country. A certified copy of the record of the action of the other jurisdiction being conclusive evidence thereof;

(17) has violated any rules and regulations adopted by the board or any state or federal law related to the practice of

operating a crematory; or

(18) has failed to pay any fee required under this act.

(d) All administrative proceedings taken by the board pursuant to this section shall be conducted in accordance with the provisions of the Kansas administrative procedure act.

(e) A violation of any other provision of this act is hereby declared to be a class A nonperson misdemeanor.

New Sec. 8. This act shall be construed and interpreted as a comprehensive cremation statute, and the provisions of this act shall take precedence over any existing laws that govern dead human bodies and human remains that do not specifically address cremation.

New Sec. 9. (a) The crematory operator in charge of a crematory, located or doing business within the state, shall apply for and obtain a crematory license from the board for each crematory.

(b) An application for a new license is required if the crematory has a change in ownership, name, location or a change in the crematory operator in charge. Such application shall be made to the board at least 30 days prior to the change of ownership, name or location or change in the crematory operator in charge.

(c) The crematory license fee and crematory license renewal fee shall be fixed by the board under K.S.A. 65-1727 and amendments thereto. The disposition of all funds collected under the provisions of this act shall be in accordance with the provisions of K.S.A. 65-1718 and amendments thereto.

(d) A crematory license shall expire every two years on a date established by the board. To continue operation of a crematory, a crematory operator in charge shall submit a biennial renewal application form and the crematory license renewal fee to the board before the expiration date of such license.

(e) A crematory license shall be judged delinquent on midnight of the expiration date and may only be renewed after that day by payment of a renewal fee and a reinstatement fee in

an amount equal to the renewal fee.

(f) It is unlawful for any person who does not hold a crematory license to operate, offer to operate, advertise or hold oneself out as operating a crematory.

(g) The Kansas university medical center shall be exempt from this statute for the purpose of cremating remains donated for dissecting, demonstrating or teaching purposes.

Section 10. K.S.A. 65-1723 is hereby amended to read as follows: 65-1723. The state board of mortuary arts shall have the power to adopt and enforce all necessary rules and regulations not inconsistent with this act for examining and licensing funeral directors and assistant funeral directors, issuing licenses by reciprocity, establishing ethical standards and practices and regulating the general practice of funeral directing and cremation. The board shall have the power to inspect funeral establishments, ~~including~~ branch establishments and crematories, and to require that funeral establishments, ~~including~~ branch establishments and crematories, be maintained, operated and kept in a clean and sanitary condition in accordance with the provisions of this act, rules and regulations of the board and the any applicable rules and regulations of the secretary of health and environment. If a person applies for a ~~funeral--director's~~ license for the purpose of opening a new funeral establishment or branch establishment, ~~or~~ for the purpose of operating a funeral establishment ~~or~~, branch establishment or crematory which has not been heretofore inspected and approved by the board, or if a licensed funeral director or crematory operator makes structural alterations or additions to an existing funeral establishment ~~or~~, branch establishment or crematory, the board shall have the right to withhold the issuance or renewal of any license until any such funeral establishment ~~or~~, branch establishment or crematory has been inspected and approved by the board or its representatives. All references herein to "board" shall refer to the state board of mortuary arts of the state of Kansas unless otherwise clearly indicated. The board is hereby

Attachment 1-12

authorized and empowered to do all things necessary and proper in the administration of all the provisions of this act. Members of the state board of mortuary arts shall be allowed the same fees and expenses as are allowed for administering the embalmers' license law.

Sec. 11. K.S.A. 2000 Supp. 65-1727 is hereby amended to read as follows: 65-1727. (a) On or before October 15 of each year, the state board of mortuary arts shall determine the amount of funds that will be required during the next ensuing two years to properly administer the laws which the board is directed to enforce and administer under the provisions of article 17 of chapter 65 of the Kansas Statutes Annotated, and acts amendatory of the provisions thereof and supplemental thereto, and by rules and regulations shall fix fees in such reasonable sums as may be necessary for such purposes within the following limitations:

Embalmers examination fee, not more than.....	\$200	\$300
Embalmers endorsement application fee, not more than.....		400
Embalmers reciprocity application fee, not more than.....	300	400
Funeral directors examination fee, not more than.....	200	300
Funeral directors reciprocity application fee, not more than.....		300
Embalmers/funeral directors reciprocity application fee, not more than.....	300	400
Assistant funeral directors application fee, not more than.....		400
Embalmers license and renewal fee, not more than.....	100	200
Funeral directors license and renewal fee, not more than.....	150	250
Assistant funeral directors license and renewal fee, not more than.....	200	300
Apprentice embalmers registration fee, not more than.....	100	150
Funeral establishment license fee, not more than.....	500	800
Branch establishment license fee, not more than.....	500	800
Crematory license fee, not more than.....		800
Crematory renewal fee, not more than.....		800
Funeral establishment/crematory license fee, not more than.....		1000
Branch establishment/crematory license fee, not more than.....		1000
Duplicate licenses.....		20
Rulebooks.....		20
Continuing education program sponsor applications.....		25
Continuing education program licensee applications.....		25

At least 30 days prior to the expiration date of any license issued by the board, the board shall notify the licensee of the applicable renewal fee therefor.

(b) The fees established by the board under this section immediately prior to the effective date of this act shall continue in effect until such fees are fixed by the board by

rules and regulations as provided in this section.

(c) The state board of mortuary arts may license embalmers via endorsement from another state: (1) if the individual has been licensed for at least five years and has completed at least five consecutive years of active practice in embalming; (2) has passed the national examination written by the international conference of funeral service examining boards; and (3) has not had any adverse action taken against such licensee by the state board in which licensure is held. The original fee for such endorsement license and the renewal fee shall be in the amounts fixed by the board in accordance with the provisions of this section.

(d) Fees paid to the board are not refundable.

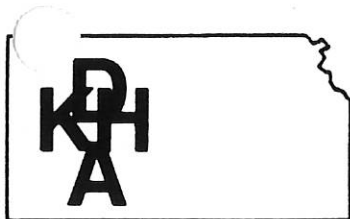
Sec. 12. K.S.A. 65-1732 is hereby amended to read as follows: 65-1732. With respect to the cremation of dead bodies, as such term is defined in subsection (4) (5) of K.S.A. 65-2401 and amendments thereto, if after a period of ~~120~~ 90 days from the time of cremation the cremated remains have not been claimed, the funeral establishment, branch establishment or crematory may dispose of the cremated remains: (a) If the funeral establishment, branch establishment or crematory has sent by certified mail, return receipt requested, at least 30 days prior to the end of such period of time to the last known address of the ~~responsible-person-who-directed-and-provided-for--the--method-of-final-disposition-of-the-dead-human-remains~~ authorizing agent, a notice that such remains will be disposed of in accordance with the provisions of this section unless claimed prior to the end of the ~~one-hundred-twenty-day~~ 90-day period of time; and (b) if the remains have not been claimed prior to the end of such period of time. Such disposal shall include burial by placing the remains in a ~~church columbarium~~ columbarium or cemetery plot, ~~or by scattering the cremated remains over a scatter garden, or pond, or church columbarium~~ scatter or otherwise disposing of the remains as provided by rule and regulation of the board of mortuary arts; and (c) this disposition may include the commingling of the cremated remains



with other cremated remains and thus the cremated remains would not be recoverable.

Sec. 13. K.S.A. 65-1723 and 65-1732 and K.S.A. 2000 Supp. 65-1727 are hereby repealed.

Sec. 14. This act shall take effect and be in force from and after January 1, 2002, and its publication in the statute book.



# THE KANSAS DENTAL HYGIENISTS' ASSOCIATION

CONSTITUENT OF THE AMERICAN DENTAL HYGIENISTS' ASSOCIATION

2007 SW REGENCY PARKWAY • TOPEKA, KS 66604

Ph. 785/273-3551 • Fax: 785/273-3551

Good Afternoon Chairman Wagle and Committee:

I am Teresa Higgins RDH, BS President of the Kansas Dental Hygienists' Association. I am here today giving testimony opposing SB50. We believe that eliminating the Sunset provision to KSA65-1423 part B subsection (h)(5) would not be in the best interests of our Kansas Citizens. I am here, this afternoon, not only as the President of my Association but also as a 27 year actively practicing clinical dental hygienist. I want to tell you a story about what this license, that I am wearing, means to me and what it SHOULD mean for you, the citizen of Kansas.

What makes my profession as a Registered Dental Hygienist so different than a scaling assistant? Part of the answer came from a very important publication released in June 2000. The Surgeon General of the United States' report *-Oral Health in America*, was an official paper that summarized research studies about the connection of life threatening diseases of the body and their connection to oral health. Many of these diseases show up in the mouth long before they are detected in a general health exam. It also placed oral diseases within the ranks of communicable disease categories. Today, the leading chronic transmittable disease in young children is decay. Gum disease was also found to be contagious and transferred from one person to another through saliva. Heart disease, strokes, respiratory infections, diabetes, premature and low birth weight babies, and organ rejection after a transplant are all linked to peridontal gum disease. With these connections to very serious ailments, reducing the standard of care should not be allowed for the sake of creating numbers.

I thought it might be entertaining to describe what my day as a Registered Dental Hygienist is like. I usually see seven to ten patients a day. Appointments are scheduled by procedure, but usually last 45 minutes to an hour. In that hour a complete assessment is done. We always start by reviewing with the patient their medical history. So much is revealed by asking questions in this area. We find out the name of their medical doctor and what medicines they have prescribed. We also list past medical conditions that the patient may have. We find out if they have any over the counter medicines they use as well. Many medications that are prescribed have adverse affects in the mouth.

**Teresa C. Higgins RDH, B.S**  
President  
2007 SW Regency Parkway  
Topeka, KS 66604  
785-273-3551  
terrie51@swbell.net

**Denise A. Maus RDH, B.S**  
Legislative Chair  
1334 N. Coach House  
Wichita, KS 67235  
316-721-4780

bpdgmaus@aol.com  
Senate Public Health & Welfare Committee  
Meeting, Date 1-30-01  
Attachment 2-1

They also can interfere with my treatment that I will be providing; this review helps me protect the patient from harm. For example, if the patient were on a drug that would thin his blood for improving circulation due to heart disease, I would have to call his physician and get permission to proceed with my care or else the patient could bleed without stopping. Some patients even have to be pre-medicated with an antibiotic before they can have their teeth cleaned because bacteria I clean out gets into the blood and can affect their heart or other areas in the body. Information that I gather from a medical interview must be done before any other parts of this appointment can proceed. I then give an Oral Cancer Screening exam. This exam evaluates the inside and outside of the face and neck and the floor of the mouth for signs of any life threatening disease. All of the procedures I have done are recorded into the patient's record and then I begin to examine the teeth for defects in the portion of the teeth that are visible. In this exam I look for decay, broken fillings, and I even use a fiber optic light to trans-illuminate for shadows in between teeth and to look for vertical fractures in a tooth that will not show up in plain sight. This information is charted in the patient's record. I then will examine the gum line and note in the chart tissue tone, color, and signs of infection. We use a probe (a small ruler) that measures the space between the gum and the tooth. These space measurements and any bleeding from this procedure indicate levels of disease of the gums. I place these measurements on a special periodontal chart and they can be used to compare at each future visit. I then take radiographs that I develop and mount and review for the Doctor and place my concerns for him when he enters at the exam time. I then can begin the cleaning process with instruments that are used above and below the gum line. They remove food debris and deposits above the gum line; other instruments are used for below the gum line to remove a substance called biofilm, which is the substance that holds the invisible bad bacterial growth that will destroy the support system of your teeth. Then we polish the teeth to remove surface stains and then finally provide a fluoride treatment to put back protection against decay.

When I am finished, I then call the Dentist to review with me the findings and then he can make a proper diagnosis and treatment for restoring the teeth. He also will collaboratively agree to my periodontal assessments and my preventive recommendation for further treatment with the gum line. All during this appointment, I also deal with patient education. How the patient can care for his gums and teeth at home and instructions for any medications we might need to help control bacteria is a prime concern that we do on every visit. I also can be called into another treatment room to help the Dentist give anesthesia (to numb) to an area on one of his patients if he is behind in his restorative work.

The dental hygienist's educational curriculum gives us the resources and knowledge to deliver preventive services within our scope of practice and allows the dentist more productive time what he is doing in another area in restorative work. This collaborative effort makes us a team and it is efficient.

Now, This scenario changes when using unlicensed, unregulated, minimally trained scaling assistants. In 90 hours this person is given a basic skill for above the gum line care, a cosmetic procedure, and then in a 10-15 minute period, the Dentist must leave his area of treatment to give this time to do an exam and most often to finish the scaling procedure that was not done below the gum line. How can the dentist, in this short of time, produce the same quality without cutting corners or reducing the efficiency of his own time for restorative care. Is this complete care?

When HB2724 was brought before the 1998 Kansas Legislature, Adding the Sunset provision was a way to be a temporary measure for addressing manpower and access to oral health care for the citizens of Kansas until additional Registered Dental Hygienists could be produced. Nationally Dental Hygiene Curriculums have increased and are having an effect in the number of dental hygienists being produced. Just like the national figures the Kansas Dental Hygiene population has increased. The majority of dental hygienists are under the age of 35. On the other hand, nationally, the dental curriculums have decreased and that is decreasing the dental provider supply. In Kansas, the majority of dental providers are over 45 years old. This difference in ages will likely create a disparity in providers. Employment concerns will be much greater than now. Dentists complain they cannot find Dental Hygienists but Dental hygienists are complaining they cannot find employment. I have concerns for these issues, but I also must address a greater concern and that is I want to achieve quality preventive services for all Kansans from Kansas City to Elkhart.

I do not believe that the dental scaling assistant program will have a significant impact on access to care. First the scaling assistant is under direct supervision by a dentist meaning the dentist must be present in the office while the scaling assistant performs this task of above the gum line care. Second the majority of scaling assistants are not in designated underserved or rural areas. I believe with the creation of the scaling assistants there will be competition for the traditional positions that dental hygienists seek. I also believe the scaling assistant program will adversely affect future students seeking a career in Dental Hygiene. Why go through traditional educational systems when you can go 90 hours and clean teeth.

The real bottom line is this! Will the average citizen of Kansas be able to discern the difference of care? Will they be able to know who is giving them care? Are you getting a cosmetic above the gum line care or the true therapeutic complete prophylaxis? There will be no immediate and visible affect of scaling above the gum; time will only be the answer for proving the inaccuracies of care.

Is too much to ask that all citizens of Kansas deserve quality oral health care? The Kansas Dental Hygienists' Association is committed to providing consumers with access to quality preventive care and we strongly urge you, this committee to vote "NO" to SB 50 or at the least to conduct a comprehensive Legislative post-audit study to find

the impact of the scaling assistant programs in Kansas.

Thank you for letting me present our concerns

Respectfully Submitted,

Teresa C. Higgins RDH, BS  
President of Kansas Dental Hygienists' Association  
January 31, 2001



---

# Oral Health in America: A Report of the Surgeon General

## EXECUTIVE SUMMARY

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
U.S. PUBLIC HEALTH SERVICE

*Senate Public Health & Welfare Committee  
Meeting Date 1-31-01  
Attachment 3-1*

# Foreword

The growth of biomedical research since World War II has wrought extraordinary advances in the health and well-being of the American people. The story is particularly remarkable in the case of oral health, where we have gone from a nation plagued by the pains of toothache and tooth loss to a nation where most people can smile about their oral health. The impetus for change—to take on the challenge of addressing oral diseases as well as the many other health problems that shorten lives and diminish well-being—led to the postwar growth of the National Institutes of Health. In 1948 the National Institute of Dental Research—now the National Institute of Dental and Craniofacial Research—joined the National Cancer Institute and the National Heart, Lung, and Blood Institute as the third of the National Institutes of Health.

The Institute's research initially focused on dental caries and studies demonstrating the effectiveness of fluoride in preventing dental caries, research that ushered in a new era of health promotion and disease prevention. The discovery of fluoride was soon complemented by research that showed that both dental caries and periodontal diseases were bacterial infections that could be prevented by a combination of individual, community, and professional actions. These and other applications of research discoveries have resulted in continuing improvements in the oral, dental, and craniofacial health of Americans. Today, armed with the high-powered tools, automated equipment, and imaging techniques of genetics and molecular and cell biology, scientists have set their sights on resolving the full array of craniofacial diseases and disorders, from common birth defects such as cleft lip and palate to the debilitating chronic oral-facial pain conditions and oral cancers that occur later in life.

The National Institute of Dental and Craniofacial Research has served as the lead agency for the development of this Surgeon General's Report on Oral Health. As part of the National Institutes of Health, the Institute has had ready access to ongoing federal research and the good fortune to work collaboratively with many other agencies and individuals, both within and outside government. The establishment of a Federal Coordinating Committee provided a formal mechanism for the exchange of ideas and information from other departments, including the U.S. Department of Agriculture, Department of Education, Department of Justice, Department of Defense, Department of Veterans Affairs, and the Department of Energy. Active participation in the preparation and review of the report came from hundreds of individuals who graciously gave of their expertise and time. It has been a pleasure to have had this opportunity to prepare the report, and we thank Surgeon General David Satcher for inviting us to participate.

Despite the advances in oral health that have been made over the last half century, there is still much work to be done. This past year we have seen the release of Healthy People 2010, which emphasizes the broad aims of improving quality of life and eliminating health disparities. The recently released General Accounting Office report on the oral health of low-income populations further highlights the oral health problems of disadvantaged populations and the effects on their well-being that result from lack of access to care. Agencies and voluntary and professional organizations have already begun to lay the groundwork for research and service programs that directly and comprehensively address health disparities. The National Institutes of Health has joined these efforts and is completing an agencywide action plan for research to reduce health disparities. Getting a healthy start in life is critical in these efforts, and toward that end, a Surgeon General's Conference on Children and Oral Health, The Face of a Child, is scheduled for June 2000. Many other departmental and agency activities are under way.

The report concludes with a framework for action to enable further progress in oral health. It emphasizes the importance of building partnerships to facilitate collaborations to enhance education, service, and research and eliminate barriers to care. By working together, we can truly make a difference in our nation's health—a difference that will benefit the health and well-being of all our citizens.

*Ruth L. Kirschstein MD*  
Acting Director  
National Institutes of Health

*Harold C. Slavkin DDS*  
Director  
National Institute of Dental  
and Craniofacial Research



# Preface

*from the Surgeon General  
U.S. Public Health Service*

As we begin the twenty-first century we can be proud of the strides we have made in improving the oral health of the American people. At the turn of the last century most Americans could expect to lose their teeth by middle age. That situation began to change with the discovery of the properties of fluoride, and the observation that people who lived in communities with naturally fluoridated drinking water had far less dental caries (tooth decay) than people in comparable communities without fluoride in their water supply. Community water fluoridation remains one of the great achievements of public health in the twentieth century—an inexpensive means of improving oral health that benefits all residents of a community, young and old, rich and poor alike. We are fortunate that additional disease prevention and health promotion measures exist for dental caries and for many other oral diseases and disorders—measures that can be used by individuals, health care providers, and communities.

Yet as we take stock of how far we have come in enhancing oral health, this report makes it abundantly clear that there are profound and consequential disparities in the oral health of our citizens. Indeed, what amounts to a “silent epidemic” of dental and oral diseases is affecting some population groups. This burden of disease restricts activities in school, work, and home, and often significantly diminishes the quality of life. Those who suffer the worst oral health are found among the poor of all ages, with poor children and poor older Americans particularly vulnerable. Members of racial and ethnic minority groups also experience a disproportionate level of oral health problems. Individuals who are medically compromised or who have disabilities are at greater risk for oral diseases, and, in turn, oral diseases further jeopardize their health.

The reasons for disparities in oral health are complex. In many instances, socioeconomic factors are the explanation. In other cases, disparities are exacerbated by the lack of community programs such as fluoridated water supplies. People may lack transportation to a clinic and flexibility in getting time off from work to attend to health needs. Physical disability or other illness may also limit access to services. Lack of resources to pay for care, either out of pocket or through private or public dental insurance, is clearly another barrier. Fewer people have dental insurance than have medical insurance, and it is often lost when individuals retire. Public dental insurance programs are often inadequate. Another major barrier to seeking and obtaining professional oral health care relates to a lack of public understanding and awareness of the importance of oral health.

We know that the mouth reflects general health and well-being. This report reiterates that general health risk factors common to many diseases, such as tobacco use and poor dietary practices, also affect oral and craniofacial health. The evidence for an association between tobacco use and oral diseases has been clearly delineated in every Surgeon General’s report on tobacco since 1964, and the oral effects of nutrition and diet are presented in the Surgeon General’s report on nutrition (1988). Recently, research findings have pointed to possible associations between chronic oral infections and diabetes, heart and lung diseases, stroke, and low-birth-weight, premature births. This report assesses these emerging associations and explores factors that may underlie these oral-systemic disease connections.

To improve quality of life and eliminate health disparities demands the understanding, compassion, and will of the American people. There are opportunities for all health professions, individuals, and communities to work together to improve health. But more needs to be done if we are to make further improvements in America’s oral health. We hope that this Surgeon General’s report will inform the American people about the opportunities to improve oral health and provide a platform from which the science base for craniofacial research can be expanded. The report should also serve to strengthen the translation of proven health promotion and disease prevention approaches into policy development, health care practice, and personal lifestyle behaviors. A framework for action that integrates oral health into overall health is critical if we are to see further gains.

*David Satcher MD, PhD  
Surgeon General*



# Executive Summary

Publication of this first Surgeon General's Report on Oral Health marks a milestone in the history of oral health in America. The report elaborates on the meaning of oral health and explains why oral health is essential to general health and well-being. In the course of the past 50 years, great progress has been made in understanding the common oral diseases—dental caries (tooth decay) and periodontal (gum) diseases—resulting in marked improvements in the nation's oral health. Most middle-aged and younger Americans expect to retain their natural teeth over their lifetime and do not expect to have any serious oral health problems.

The major message of this Surgeon General's report is that oral health is essential to the general health and well-being of all Americans *and* can be achieved by all Americans. However, *not all* Americans are achieving the same degree of oral health. In spite of the safe and effective means of maintaining oral health that have benefited the majority of Americans over the past half century, many among us still experience needless pain and suffering, complications that devastate overall health and well-being, and financial and social costs that diminish the quality of life and burden American society. What amounts to "a silent epidemic" of oral diseases is affecting our most vulnerable citizens—poor children, the elderly, and many members of racial and ethnic minority groups (U.S. General Accounting Office 2000). (See box entitled "The Burden of Oral Diseases and Disorders.")

The word *oral* refers to the mouth. The mouth includes not only the teeth and the gums (gingiva) and their supporting tissues, but also the hard and soft palate, the mucosal lining of the mouth and throat, the tongue, the lips, the salivary glands, the chewing muscles, and the upper and lower jaws. Equally important are the branches of the nervous, immune, and vascular systems that animate, protect,

and nourish the oral tissues, as well as provide connections to the brain and the rest of the body. The genetic patterning of development in utero further reveals the intimate relationship of the oral tissues to the developing brain and to the tissues of the face and head that surround the mouth, structures whose location is captured in the word *craniofacial*.

A major theme of this report is that **oral health means much more than healthy teeth**. It means being free of chronic oral-facial pain conditions, oral and pharyngeal (throat) cancers, oral soft tissue lesions, birth defects such as cleft lip and palate, and scores of other diseases and disorders that affect the oral, dental, and craniofacial tissues, collectively known as the *craniofacial complex*. These are tissues whose functions we often take for granted, yet they represent the very essence of our humanity. They allow us to speak and smile; sigh and kiss; smell, taste, touch, chew, and swallow; cry out in pain; and convey a world of feelings and emotions through facial expressions. They also provide protection against microbial infections and environmental insults.

The craniofacial tissues also provide a useful means to understanding organs and systems in less accessible parts of the body. The salivary glands are a model of other exocrine glands, and an analysis of saliva can provide telltale clues of overall health or disease. The jawbones and their joints function like other musculoskeletal parts. The nervous system apparatus underlying facial pain has its counterpart in nerves elsewhere in the body. A thorough oral examination can detect signs of nutritional deficiencies as well as a number of systemic diseases, including microbial infections, immune disorders, injuries, and some cancers. Indeed, the phrase *the mouth is a mirror* has been used to illustrate the wealth of information that can be derived from examining oral tissues.



New research is pointing to associations between chronic oral infections and heart and lung diseases, stroke, and low-birth-weight, premature births. Associations between periodontal disease and diabetes have long been noted. This report assesses these associations and explores mechanisms that might explain the oral-systemic disease connections.

The broadened meaning of *oral health* parallels the broadened meaning of *health*. In 1948 the World Health Organization expanded the definition of health to mean “a complete state of physical, mental, and social well-being, and not just the absence of infirmity.” It follows that oral health must also include well-being. Just as we now understand that nature and nurture are inextricably linked, and mind and body are both expressions of our human biology, so, too, we must recognize that oral health and general health are inseparable. We ignore signs and symptoms of oral disease and dysfunction to our

detriment. Consequently, a second theme of the report is that **oral health is integral to general health**. You cannot be healthy without oral health. Oral health and general health should not be interpreted as separate entities. Oral health is a critical component of health and must be included in the provision of health care and the design of community programs.

The wider meanings of *oral* and *health* in no way diminish the relevance and importance of the two leading dental diseases, caries and the periodontal diseases. They remain common and widespread, affecting nearly everyone at some point in the life span. What has changed is what we can do about them.

Researchers in the 1930s discovered that people living in communities with naturally fluoridated water supplies had less dental caries than people drinking unfluoridated water. But not until the end

### The Burden of Oral Diseases and Disorders

Oral diseases are progressive and cumulative and become more complex over time. They can affect our ability to eat, the foods we choose, how we look, and the way we communicate. These diseases can affect economic productivity and compromise our ability to work at home, at school, or on the job. Health disparities exist across population groups at all ages. Over one third of the U.S. population (100 million people) has no access to community water fluoridation. Over 108 million children and adults lack dental insurance, which is over 2.5 times the number who lack medical insurance. The following are highlights of oral health data for children, adults, and the elderly. (Refer to the full report for details of these data and their sources.)

#### Children

- Cleft lip/palate, one of the most common birth defects, is estimated to affect 1 out of 600 live births for whites and 1 out of 1,850 live births for African Americans.
- Other birth defects such as hereditary ectodermal dysplasias, where all or most teeth are missing or misshapen, cause lifetime problems that can be devastating to children and adults.
- Dental caries (tooth decay) is the single most common chronic childhood disease—5 times more common than asthma and 7 times more common than hay fever.
- Over 50 percent of 5- to 9-year-old children have at least one cavity or filling, and that proportion increases to 78 percent among 17-year-olds. Nevertheless, these figures represent improvements in the oral health of children compared to a generation ago.
- There are striking disparities in dental disease by income. Poor children suffer twice as much dental caries as their more affluent peers, and their disease is more likely to be untreated. These poor-nonpoor

differences continue into adolescence. One out of four children in America is born into poverty, and children living below the poverty line (annual income of \$17,000 for a family of four) have more severe and untreated decay.

- Unintentional injuries, many of which include head, mouth, and neck injuries, are common in children.
- Intentional injuries commonly affect the craniofacial tissues.
- Tobacco-related oral lesions are prevalent in adolescents who currently use smokeless (spit) tobacco.
- Professional care is necessary for maintaining oral health, yet 25 percent of poor children have not seen a dentist before entering kindergarten.
- Medical insurance is a strong predictor of access to dental care. Uninsured children are 2.5 times less likely than insured children to receive dental care. Children from families without dental insurance are 3 times more likely to have dental needs than children with either public or private insurance. For each child without medical insurance, there are at least 2.6 children without dental insurance.
- Medicaid has not been able to fill the gap in providing dental care to poor children. Fewer than one in five Medicaid-covered children received a single dental visit in a recent year-long study period. Although new programs such as the State Children's Health Insurance Program (SCHIP) may increase the number of insured children, many will still be left without effective dental coverage.
- The social impact of oral diseases in children is substantial. More than 51 million school hours are lost each year to dental-related illness. Poor children suffer nearly 12 times more restricted-activity days than children from higher-income families. Pain and suffering due to untreated diseases can lead to problems in eating, speaking, and attending to learning.



of World War II were the investigators able to design and implement the community clinical trials that confirmed their observations and launched a better approach to the problem of dental caries: prevention. Soon after, adjusting the fluoride content of community water supplies was pursued as an important public health measure to prevent dental caries.

Although this measure has not been fully implemented, the results have been dramatic. Dental caries began to decline in the 1950s among children who grew up in fluoridated cities, and by the late 1970s, decline in decay was evident for many Americans. The application of science to improve diagnostic, treatment, and prevention strategies has saved billions of dollars per year in the nation's annual health bill. Even more significant, the result is that far fewer people are edentulous (toothless) today than a generation ago.

The theme of prevention gained momentum as pioneering investigators and practitioners in the 1950s and 1960s showed that not only dental caries but also periodontal diseases are bacterial infections. The researchers demonstrated that the infections could be prevented by increasing host resistance to disease and reducing or eliminating the suspected microbial pathogens in the oral cavity. The applications of research discoveries have resulted in continuing improvements in the oral health of Americans, new approaches to the prevention and treatment of dental diseases, and the growth of the science.

The significant role that scientists, dentists, dental hygienists, and other health professionals have played in the prevention of oral disease and disability leads to a third theme of this report: **safe and effective disease prevention measures exist that everyone can adopt to improve oral health and prevent disease.** These measures include daily oral hygiene

#### Adults

- Most adults show signs of periodontal or gingival diseases. Severe periodontal disease (measured as 6 millimeters of periodontal attachment loss) affects about 14 percent of adults aged 45 to 54.
- Clinical symptoms of viral infections, such as herpes labialis (cold sores), and oral ulcers (canker sores) are common in adulthood, affecting about 19 percent of adults 25 to 44 years of age.
- Chronic disabling diseases such as temporomandibular disorders, Sjögren's syndrome, diabetes, and osteoporosis affect millions of Americans and compromise oral health and functioning.
- Pain is a common symptom of craniofacial disorders and is accompanied by interference with vital functions such as eating, swallowing, and speech. Twenty-two percent of adults reported some form of oral-facial pain in the past 6 months. Pain is a major component of trigeminal neuralgia, facial shingles (post-herpetic neuralgia), temporomandibular disorders, fibromyalgia, and Bell's palsy.
- Population growth as well as diagnostics that are enabling earlier detection of cancer means that more patients than ever before are undergoing cancer treatments. More than 400,000 of these patients will develop oral complications annually.
- Immunocompromised patients, such as those with HIV infection and those undergoing organ transplantation, are at higher risk for oral problems such as candidiasis.
- Employed adults lose more than 164 million hours of work each year due to dental disease or dental visits.
- For every adult 19 years or older without medical insurance, there are three without dental insurance.
- A little less than two thirds of adults report having visited a dentist in the past 12 months. Those with incomes at or above the poverty level are twice as likely to report a dental visit in the past 12 months as those who are below the poverty level.

#### Older Adults

- Twenty-three percent of 65- to 74-year-olds have severe periodontal disease (measured as 6 millimeters of periodontal attachment loss). (Also, at all ages men are more likely than women to have more severe disease, and at all ages people at the lowest socioeconomic levels have more severe periodontal disease.)
- About 30 percent of adults 65 years and older are edentulous, compared to 46 percent 20 years ago. These figures are higher for those living in poverty.
- Oral and pharyngeal cancers are diagnosed in about 30,000 Americans annually; 8,000 die from these diseases each year. These cancers are primarily diagnosed in the elderly. Prognosis is poor. The 5-year survival rate for white patients is 56 percent; for blacks, it is only 34 percent.
- Most older Americans take both prescription and over-the-counter drugs. In all probability, at least one of the medications used will have an oral side effect—usually dry mouth. The inhibition of salivary flow increases the risk for oral disease because saliva contains antimicrobial components as well as minerals that can help rebuild tooth enamel after attack by acid-producing, decay-causing bacteria. Individuals in long-term care facilities are prescribed an average of eight drugs.
- At any given time, 5 percent of Americans aged 65 and older (currently some 1.65 million people) are living in a long-term care facility where dental care is problematic.
- Many elderly individuals lose their dental insurance when they retire. The situation may be worse for older women, who generally have lower incomes and may never have had dental insurance. Medicaid funds dental care for the low-income and disabled elderly in some states, but reimbursements are low. Medicare is not designed to reimburse for routine dental care.



procedures and other lifestyle behaviors, community programs such as community water fluoridation and tobacco cessation programs, and provider-based interventions such as the placement of dental sealants and examinations for common oral and pharyngeal cancers. It is hoped that this Surgeon General's report will facilitate the maturing of the broad field of craniofacial research so that gains in the prevention of craniofacial diseases and disorders can be realized that are as impressive as those achieved for common dental diseases.

At the same time, more needs to be done to ensure that messages of health promotion and disease prevention are brought home to all Americans. In this regard, a fourth theme of the report is that **general health risk factors, such as tobacco use and poor dietary practices, also affect oral and craniofacial health.** The evidence for an association between tobacco use and oral diseases has been clearly delineated in almost every Surgeon General's report on tobacco since 1964, and the oral effects of nutrition and diet are presented in the Surgeon General's report on nutrition (1988). All the health professions can play a role in reducing the burden of disease in America by calling attention to these and other risk factors and suggesting appropriate actions.

Clearly, promoting health and preventing disease are concepts the American people have taken to heart. For the third decade the nation has developed a plan for the prevention of disease and the promotion of health, embodied in the U.S. Department of Health and Human Services (2000) document, Healthy People 2010. As a nation, we hope to eliminate disparities in health and eradicate cancer, birth defects, AIDS and other devastating infections, mental illness and suicide, and the chronic diseases of aging. To live well into old age free of pain and infirmity, and with a high quality of life, is the American dream.

Scientists today take that dream seriously in researching the intricacies of the craniofacial complex. They are using an ever-growing array of sophisticated analytic tools and imaging systems to study normal function and diagnose disease. They are completing the mapping and sequencing of human, animal, microbial, and plant genomes, the better to understand the complexities of human development, aging, and pathological processes. They are growing cell lines, synthesizing molecules, and using a new generation of biomaterials to revolutionize tissue repair and regeneration. More than ever before, they are working in multidisciplinary teams to bring new knowledge and expertise to the goal of understanding complex human diseases and disorders.

## THE CHALLENGE

This Surgeon General's report has much to say about the inequities and disparities that affect those least able to muster the resources to achieve optimal oral health. The barriers to oral health include lack of access to care, whether because of limited income or lack of insurance, transportation, or the flexibility to take time off from work to attend to personal or family needs for care. Individuals with disabilities and those with complex health problems may face additional barriers to care. Sometimes, too, the public, policymakers, and providers may consider oral health and the need for care to be less important than other health needs, pointing to the need to raise awareness and improve health literacy.

Even more costly to the individual and to society are the expenses associated with oral health problems that go beyond dental diseases. The nation's yearly dental bill is expected to exceed \$60 billion in 2000 (Health Care Financing Administration 2000). However, add to that expense the tens of billions of dollars in direct medical care and indirect costs of chronic craniofacial pain conditions such as temporomandibular disorders, trigeminal neuralgia, shingles, or burning mouth syndrome; the \$100,000 minimal individual lifetime costs of treating craniofacial birth defects such as cleft lip and palate; the costs of oral and pharyngeal cancers; the costs of autoimmune diseases; and the costs associated with the unintentional and intentional injuries that so often affect the head and face. Then add the social and psychological consequences and costs. Damage to the craniofacial complex, whether from disease, disorder, or injury, strikes at our very identity. We see ourselves, and others see us, in terms of the face we present to the world. Diminish that image in any way and we risk the loss of self-esteem and well-being.

Many unanswered questions remain for scientists, practitioners, educators, policymakers, and the public. This report highlights the research challenges as well as pointing to emerging technologies that may facilitate finding solutions. Along with the quest for answers comes the challenge of applying what is already known in a society where there are social, political, economic, behavioral, and environmental barriers to health and well-being.

## THE CHARGE

The realization that oral health can have a significant impact on the overall health and well-being of the nation's population led the Office of the Surgeon General, with the approval of the Secretary of Health and Human Services, to commission this report.



Recognizing the gains that have been made in disease prevention while acknowledging that there are populations that suffer disproportionately from oral health problems, the Secretary asked that the report “define, describe, and evaluate the interaction between oral health and health and well-being [quality of life], through the life span in the context of changes in society.” Key elements to be addressed were the determinants of health and disease, with a primary focus on prevention and “producing health” rather than “restoring health”; a description of the burden of oral diseases and disorders in the nation; and the evidence for actions to improve oral health to be taken across the life span. The report also was to feature an orientation to the future, highlighting leading-edge technologies and research findings that can be brought to bear in improving the oral health of individuals and communities.

### THE SCIENCE BASE FOR THE REPORT

This report is based on a review of the published scientific literature. Standards established to determine the quality of the evidence, based on the study design and its rigor, were used where appropriate. In addition, the strength of the recommendations, where they are made, is based on evidence of effectiveness for the population of interest. The scope of the review encompassed the international English literature. Recent systematic reviews of the literature are referenced, as are selected review articles. A few referenced articles are in press, and there are occasional references to recent abstracts and personal communications.

The science base in oral health has been evolving over the past half century. Initial research in this area was primarily in the basic sciences, investigating mechanisms of normal development and pathology in relation to dental caries and periodontal diseases. Prevention research has included controlled clinical studies, with and without randomization, as well as community trials and demonstration research. More recent research has broadened the science base to include studies of the range of craniofacial diseases and disorders and is moving from basic science to translational, clinical, and health services research.

The clinical literature includes the full range of studies, from randomized controlled studies to case studies. Most of the literature includes cross-sectional and cohort studies, with some case-control studies. General reviews of the literature have been used for Chapters 2 through 10. Chapter 4 includes both published and new analyses of national and state databases that have been carefully designed and for which

quality assurance has been maintained by the Centers for Disease Control and Prevention. Studies of smaller populations are also included where relevant. In Chapter 5, tables present information on the association of oral infections and systemic conditions, and in Chapter 7, tables exhibit oral disease prevention and health promotion measures. The published literature related to the development of new technologies, their potential impact, and the need for further research are described in the course of addressing the requested futures orientation.

The report was generated with the advice and support of a Federal Coordinating Committee composed of representatives of agencies with oral health components and interests. The chapters were based on papers submitted by experts working under the guidance of a coordinating author for each chapter. Independent peer review was conducted for all sections of the report at various stages in the process, and the full manuscript was reviewed by a number of senior reviewers as well as the relevant federal agencies. All who contributed are listed in the Acknowledgments section of the full report.

### ORGANIZATION OF THE REPORT

The report centers on five major questions, which have been used to structure the report into five parts.

#### Part One: What Is Oral Health?

The meaning of oral health is explored in Chapter 1, and the interdependence of oral health with general health and well-being is a recurrent theme throughout the volume.

Chapter 2 provides an overview of the craniofacial complex in development and aging, how the tissues and organs function in essential life processes, and their role in determining our uniquely human abilities. Our craniofacial complex has evolved to have remarkable functions and abilities to adapt, enabling us to meet the challenges of an ever-changing environment. An examination of the various tissues reveals elaborate designs that serve complex needs and functions, including the uniquely human function of speech. The rich distribution of nerves, muscles, and blood vessels in the region as well as extensive endocrine and immune system connections are indicators of the vital role of the craniofacial complex in adaptation and survival over a long life span. In particular, the following findings are noted:

- Genes controlling the basic patterning and segmental organization of human development, and specifically the craniofacial complex, are highly con-



served in nature. Mutated genes affecting human development have counterparts in many simpler organisms.

- There is considerable reserve capacity or redundancy in the cells and tissues of the craniofacial complex, so that if they are properly cared for, the structures should function well over a lifetime.

- The salivary glands and saliva subserve tasting and digestive functions and also participate in the mucosal immune system, a main line of defense against pathogens, irritants, and toxins.

- Salivary components protect and maintain oral tissues through antimicrobial components, buffering agents, and a process by which dental enamel can be remineralized.

### **Part Two: What Is the Status of Oral Health in America?**

Chapter 3 is a primer describing the major diseases and disorders that affect the craniofacial complex. The findings include:

- Microbial infections, including those caused by bacteria, viruses, and fungi, are the primary cause of the most prevalent oral diseases. Examples include dental caries, periodontal diseases, herpes labialis, and candidiasis.

- The etiology and pathogenesis of diseases and disorders affecting the craniofacial structures are multifactorial and complex, involving an interplay among genetic, environmental, and behavioral factors.

- Many inherited and congenital conditions affect the craniofacial complex, often resulting in disfigurement and impairments that may involve many body organs and systems and affect millions of children worldwide.

- Tobacco use, excessive alcohol use, and inappropriate dietary practices contribute to many diseases and disorders. In particular, tobacco use is a risk factor for oral cavity and pharyngeal cancers, periodontal diseases, candidiasis, and dental caries, among other diseases.

- Some chronic diseases, such as Sjögren's syndrome, present with primary oral symptoms.

- Oral-facial pain conditions are common and often have complex etiologies.

Chapter 4 constitutes an oral health status report card for the United States, describing the magnitude of the problem. Where data permit, the chapter also describes the oral health of selected population

groups, as well as their dental visit behavior. The findings include:

- Over the past five decades, major improvements in oral health have been seen nationally for most Americans.

- Despite improvements in oral health status, profound disparities remain in some population groups as classified by sex, income, age, and race/ethnicity. For some diseases and conditions, the magnitude of the differences in oral health status among population groups is striking.

- Oral diseases and conditions affect people throughout their life span. Nearly every American has experienced the most common oral disease, dental caries.

- Conditions that severely affect the face and facial expression, such as birth defects, craniofacial injuries, and neoplastic diseases, are more common in the very young and in the elderly.

- Oral-facial pain can greatly reduce quality of life and restrict major functions. Pain is a common symptom for many of the conditions affecting oral-facial structures.

- National and state data for many oral and craniofacial diseases and conditions and for population groups are limited or nonexistent. Available state data reveal variations within and among states in patterns of health and disease among population groups.

- Research is needed to develop better measures of disease and health, to explain the differences among population groups, and to develop interventions targeted at eliminating disparities.

### **Part Three: What Is the Relationship Between Oral Health and General Health and Well-being?**

Chapters 5 and 6 address key issues in the report's charge—the relationship of oral health to general health and well-being. Chapter 5 explores the theme of the mouth as reflecting general health or disease status. Examples are given of how oral tissues may signal the presence of disease, disease progression, or exposure to risk factors, and how oral cells and fluids are increasingly being used as diagnostic tools. This is followed by a discussion of the mouth as a portal of entry for infections that can affect local tissues and may spread to other parts of the body. The final sections review the literature regarding emerging associations between oral diseases and diabetes, heart disease and stroke, and adverse pregnancy outcomes. The findings include:



- Many systemic diseases and conditions have oral manifestations. These manifestations may be the initial sign of clinical disease and as such serve to inform clinicians and individuals of the need for further assessment.

- The oral cavity is a portal of entry as well as the site of disease for microbial infections that affect general health status.

- The oral cavity and its functions can be adversely affected by many pharmaceuticals and other therapies commonly used in treating systemic conditions. The oral complications of these therapies can compromise patient compliance with treatment.

- Individuals such as immunocompromised and hospitalized patients are at greater risk for general morbidity due to oral infections.

- Individuals with diabetes are at greater risk for periodontal diseases.

- Animal and population-based studies have demonstrated an association between periodontal diseases and diabetes, cardiovascular disease, stroke, and adverse pregnancy outcomes. Further research is needed to determine the extent to which these associations are causal or coincidental.

Chapter 6 demonstrates the relationship between oral health and quality of life, presenting data on the consequences of poor oral health and altered appearance on speech, eating, and other functions, as well as on self-esteem, social interaction, education, career achievement, and emotional state. The chapter introduces anthropological and ethnographic literature to underscore the cultural values and symbolism attached to facial appearance and teeth. An examination of efforts to characterize the functional and social implications of oral and craniofacial diseases reveals the following findings:

- Oral health is related to well-being and quality of life as measured along functional, psychosocial, and economic dimensions. Diet, nutrition, sleep, psychological status, social interaction, school, and work are affected by impaired oral and craniofacial health.

- Cultural values influence oral and craniofacial health and well-being and can play an important role in care utilization practices and in perpetuating acceptable oral health and facial norms.

- Oral and craniofacial diseases and their treatment place a burden on society in the form of lost days and years of productive work. Acute dental conditions contribute to a range of problems for employed adults, including restricted activity, bed days, and work loss, and school loss for children. In addition, conditions such as oral and pharyngeal can-

cers contribute to premature death and can be measured by years of life lost.

- Oral and craniofacial diseases and conditions contribute to compromised ability to bite, chew, and swallow foods; limitations in food selection; and poor nutrition. These conditions include tooth loss, diminished salivary functions, oral-facial pain conditions such as temporomandibular disorders, alterations in taste, and functional limitations of prosthetic replacements.

- Oral-facial pain, as a symptom of untreated dental and oral problems and as a condition in and of itself, is a major source of diminished quality of life. It is associated with sleep deprivation, depression, and multiple adverse psychosocial outcomes.

- Self-reported impacts of oral conditions on social function include limitations in verbal and non-verbal communication, social interaction, and intimacy. Individuals with facial disfigurements due to craniofacial diseases and conditions and their treatments can experience loss of self-image and self-esteem, anxiety, depression, and social stigma; these in turn may limit educational, career, and marital opportunities and affect other social relations.

- Reduced oral-health-related quality of life is associated with poor clinical status and reduced access to care.

#### **Part Four: How Is Oral Health Promoted and Maintained and How Are Oral Diseases Prevented?**

The next three chapters review how individuals, health care practitioners, communities, and the nation as a whole contribute to oral health. Chapter 7 reviews the evidence for the efficacy and effectiveness of health promotion and disease prevention measures with a focus on community efforts in preventing oral disease. It continues with a discussion of the knowledge and practices of the public and health care providers and indicates opportunities for broad-based and targeted health promotion. The findings include:

- Community water fluoridation, an effective, safe, and ideal public health measure, benefits individuals of all ages and socioeconomic strata. Unfortunately, over one third of the U.S. population (100 million people) are without this critical public health measure.

- Effective disease prevention measures exist for use by individuals, practitioners, and communities. Most of these focus on dental caries prevention, such as fluorides and dental sealants, where a combi-



nation of services is required to achieve optimal disease prevention. Daily oral hygiene practices such as brushing and flossing can prevent gingivitis.

- Community-based approaches for the prevention of other oral diseases and conditions, such as oral and pharyngeal cancers and oral-facial trauma, require intensified developmental efforts.

- Community-based preventive programs are unavailable to substantial portions of the underserved population.

- There is a gap between research findings and the oral disease prevention and health promotion practices and knowledge of the public and the health professions.

- Disease prevention and health promotion approaches, such as tobacco control, appropriate use of fluorides for caries prevention, and folate supplementation for neural tube defect prevention, highlight opportunities for partnerships between community-based programs and practitioners, as well as collaborations among health professionals.

- Many community-based programs require a combined effort among social service, health care, and education services at the local or state level.

Chapter 8 explores the role of the individual and the health care provider in promoting and maintaining oral health and well-being. For the individual, this means exercising appropriate self-care and adopting healthy behaviors. For the provider, it means incorporating the knowledge emerging from the science base in a timely manner for prevention and diagnosis, risk assessment and risk management, and treatment of oral diseases and disorders. The chapter focuses largely on the oral health care provider. The management of oral and craniofacial health and disease necessitates collaborations among a team of care providers to achieve optimal oral and general health. The findings include:

- Achieving and maintaining oral health require individual action, complemented by professional care as well as community-based activities.

- Individuals can take actions, for themselves and for persons under their care, to prevent disease and maintain health. Primary prevention of many oral, dental, and craniofacial diseases and conditions is possible with appropriate diet, nutrition, oral hygiene, and health-promoting behaviors, including the appropriate use of professional services. Individuals should use a fluoride dentifrice daily to help prevent dental caries and should brush and floss daily to prevent gingivitis.

- All primary care providers can contribute to improved oral and craniofacial health. Interdisci-

plinary care is needed to manage the oral health–general health interface. Dentists, as primary care providers, are uniquely positioned to play an expanded role in the detection, early recognition, and management of a wide range of complex oral and general diseases and conditions.

- Nonsurgical interventions are available to reverse disease progression and to manage oral diseases as infections.

- New knowledge and the development of molecular and genetically based tests will facilitate risk assessment and management and improve the ability of health care providers to customize treatment.

- Health care providers can successfully deliver tobacco cessation and other health promotion programs in their offices, contributing to both overall health and oral health.

- Biocompatible rehabilitative materials and biologically engineered tissues are being developed and will greatly enhance the treatment options available to providers and their patients.

Chapter 9 describes the roles of dental practitioners and their teams, the medical community, and public health agencies at local, state, and national levels in administering care or reimbursing for the costs of care. These activities are viewed against the changing organization of U.S. health care and trends regarding the workforce in research, education, and practice.

- Dental, medical, and public health delivery systems each provide services that affect oral and craniofacial health in the U.S. population. Clinical oral health care is predominantly provided by a private practice dental workforce.

- Expenditures for dental services alone made up 4.7 percent of the nation's health expenditures in 1998—\$53.8 billion out of \$1.1 trillion. These expenditures underestimate the true costs to the nation, however, because data are unavailable to determine the extent of expenditures and services provided for craniofacial health care by other health providers and institutions.

- The public health infrastructure for oral health is insufficient to address the needs of disadvantaged groups, and the integration of oral and general health programs is lacking.

- Expansion of community-based disease prevention and lowering of barriers to personal oral health care are needed to meet the needs of the population.

- Insurance coverage for dental care is increasing but still lags behind medical insurance. For every child under 18 years old without medical insurance,



there are at least two children without dental insurance; for every adult 18 years or older without medical insurance, there are three without dental insurance.

- Eligibility for Medicaid does not ensure enrollment, and enrollment does not ensure that individuals obtain needed care. Barriers include patient and caregiver understanding of the value and importance of oral health to general health, low reimbursement rates, and administrative burdens for both patient and provider.

- A narrow definition of “medically necessary dental care” currently limits oral health services for many insured persons, particularly the elderly.

- The dentist-to-population ratio is declining, creating concern as to the capability of the dental workforce to meet the emerging demands of society and provide required services efficiently.

- An estimated 25 million individuals reside in areas lacking adequate dental care services, as defined by Health Professional Shortage Area (HPSA) criteria.

- Educational debt has increased, affecting both career choices and practice location.

- Disparities exist in the oral health profession workforce and career paths. The number of underrepresented minorities in the oral health professions is disproportionate to their distribution in the population at large.

- Current and projected demand for dental school faculty positions and research scientists is not being met. A crisis in the number of faculty and researchers threatens the quality of dental education; oral, dental, and craniofacial research; and, ultimately, the health of the public.

- Reliable and valid measures of oral health outcomes do not exist and need to be developed, validated, and incorporated into practice and programs.

### **Part Five: What Are the Needs and Opportunities to Enhance Oral Health?**

Chapter 10 looks at determinants of oral health in the context of society and across various life stages. Although theorists have proposed a variety of models of health determinants, there is general consensus that individual biology, the physical and socioeconomic environment, personal behaviors and lifestyle, and the organization of health care are key factors whose interplay determines the level of oral health achieved by an individual. The chapter provides examples of these factors with an emphasis on barriers

and ways to raise the level of oral health for children and older Americans. The findings include:

- The major factors that determine oral and general health and well-being are individual biology and genetics; the environment, including its physical and socioeconomic aspects; personal behaviors and lifestyle; access to care; and the organization of health care. These factors interact over the life span and determine the health of individuals, population groups, and communities—from neighborhoods to nations.

- The burden of oral diseases and conditions is disproportionately borne by individuals with low socioeconomic status at each life stage and by those who are vulnerable because of poor general health.

- Access to care makes a difference. A complex set of factors underlies access to care and includes the need to have an informed public and policymakers, integrated and culturally competent programs, and resources to pay and reimburse for the care. Among other factors, the availability of insurance increases access to care.

- Preventive interventions, such as protective head and mouth gear and dental sealants, exist but are not uniformly used or reinforced.

- Nursing homes and other long-term care institutions have limited capacity to deliver needed oral health services to their residents, most of whom are at increased risk for oral diseases.

- Anticipatory guidance and risk assessment and management facilitate care for children and for the elderly.

- Federal and state assistance programs for selected oral health services exist; however, the scope of services is severely limited, and their reimbursement level for oral health services is low compared to the usual fee for care.

Chapter 11 spells out in greater detail the promise of the life sciences in improving oral health in the coming years in the context of changes in American—and global—society. The critical role of genetics and molecular biology is emphasized.

Chapter 12, the final chapter, iterates the themes of the report and groups the findings from the earlier chapters into eight major categories. These findings, as well as a suggested framework for action to guide the next steps in enhancing the oral health of the nation, are presented below.

### **MAJOR FINDINGS**

Oral diseases and disorders in and of themselves affect health and well-being throughout life. The burden of oral problems is extensive and may be par-



ticularly severe in vulnerable populations. It includes the common dental diseases and other oral infections, such as cold sores and candidiasis, that can occur at any stage of life, as well as birth defects in infancy, and the chronic facial pain conditions and oral cancers seen in later years. Many of these conditions and their treatments may undermine self-image and self-esteem, discourage normal social interaction, and lead to chronic stress and depression as well as incur great financial cost. They may also interfere with vital functions such as breathing, eating, swallowing, and speaking and with activities of daily living such as work, school, and family interactions.

**Safe and effective measures exist to prevent the most common dental diseases—dental caries and periodontal diseases.** Community water fluoridation is safe and effective in preventing dental caries in both children and adults. Water fluoridation benefits all residents served by community water supplies regardless of their social or economic status. Professional and individual measures, including the use of fluoride mouthrinses, gels, dentifrices, and dietary supplements and the application of dental sealants, are additional means of preventing dental caries. Gingivitis can be prevented by good personal oral hygiene practices, including brushing and flossing.

**Lifestyle behaviors that affect general health such as tobacco use, excessive alcohol use, and poor dietary choices affect oral and craniofacial health as well.** These individual behaviors are associated with increased risk for craniofacial birth defects, oral and pharyngeal cancers, periodontal disease, dental caries, and candidiasis, among other oral health problems. Opportunities exist to expand the oral disease prevention and health promotion knowledge and practices of the public through community programs and in health care settings. All health care providers can play a role in promoting healthy lifestyles by incorporating tobacco cessation programs, nutritional counseling, and other health-promotion efforts into their practices.

**There are profound and consequential oral health disparities within the U.S. population.** Disparities for various oral conditions may relate to income, age, sex, race or ethnicity, or medical status. Although common dental diseases are preventable, not all members of society are informed about or able to avail themselves of appropriate oral health-promoting measures. Similarly, not all health providers may be aware of the services needed to improve oral health. In addition, oral health care is not fully integrated into many care programs. Social, economic, and cultural factors and changing population demo-

graphics affect how health services are delivered and used, and how people care for themselves. Reducing disparities requires wide-ranging approaches that target populations at highest risk for specific oral diseases and involves improving access to existing care. One approach includes making dental insurance more available to Americans. Public coverage for dental care is minimal for adults, and programs for children have not reached the many eligible beneficiaries.

**More information is needed to improve America's oral health and eliminate health disparities.** We do not have adequate data on health, disease, and health practices and care use for the U.S. population as a whole and its diverse segments, including racial and ethnic minorities, rural populations, individuals with disabilities, the homeless, immigrants, migrant workers, the very young, and the frail elderly. Nor are there sufficient data that explore health issues in relation to sex or sexual orientation. Data on state and local populations, essential for program planning and evaluation, are rare or unavailable and reflect the limited capacity of the U.S. health infrastructure for oral health. Health services research, which could provide much needed information on the cost, cost-effectiveness, and outcomes of treatment, is also sorely lacking. Finally, measurement of disease and health outcomes is needed. Although progress has been made in measuring oral-health-related quality of life, more needs to be done, and measures of oral health per se do not exist.

**The mouth reflects general health and well-being.** The mouth is a readily accessible and visible part of the body and provides health care providers and individuals with a window on their general health status. As the gateway of the body, the mouth senses and responds to the external world and at the same time reflects what is happening deep inside the body. The mouth may show signs of nutritional deficiencies and serve as an early warning system for diseases such as HIV infection and other immune system problems. The mouth can also show signs of general infection and stress. As the number of substances that can be reliably measured in saliva increases, it may well become the diagnostic fluid of choice, enabling the diagnosis of specific disease as well as the measurement of the concentration of a variety of drugs, hormones, and other molecules of interest. Cells and fluids in the mouth may also be used for genetic analysis to help uncover risks for disease and predict outcomes of medical treatments.

**Oral diseases and conditions are associated with other health problems.** Oral infections can be the source of systemic infections in people with



weakened immune systems, and oral signs and symptoms often are part of a general health condition. Associations between chronic oral infections and other health problems, including diabetes, heart disease, and adverse pregnancy outcomes, have also been reported. Ongoing research may uncover mechanisms that strengthen the current findings and explain these relationships.

Scientific research is key to further reduction in the burden of diseases and disorders that affect the face, mouth, and teeth. The science base for dental diseases is broad and provides a strong foundation for further improvements in prevention; for other craniofacial and oral health conditions the base has not yet reached the same level of maturity. Scientific research has led to a variety of approaches to improve oral health through prevention, early diagnosis, and treatment. We are well positioned to take these prevention measures further by investigating how to develop more targeted and effective interventions and devising ways to enhance their appropriate adoption by the public and the health professions. The application of powerful new tools and techniques is important. Their employment in research in genetics and genomics, neuroscience, and cancer has allowed rapid progress in these fields. An intensified effort to understand the relationships between oral infections and their management, and other illnesses and conditions is warranted, along with the development of oral-based diagnostics. These developments hold great promise for the health of the American people.

## A FRAMEWORK FOR ACTION

All Americans can benefit from the development of a National Oral Health Plan to improve quality of life and eliminate health disparities by facilitating collaborations among individuals, health care providers, communities, and policymakers at all levels of society and by taking advantage of existing initiatives. Everyone has a role in improving and promoting oral health. Together we can work to broaden public understanding of the importance of oral health and its relevance to general health and well-being, and to ensure that existing and future preventive, diagnostic, and treatment measures for oral diseases and disorders are made available to all Americans. The following are the principal components of the plan:

**Change perceptions regarding oral health and disease so that oral health becomes an accepted component of general health.**

- *Change public perceptions.* Many people consider oral signs and symptoms to be less important

than indications of general illness. As a result, they may avoid or postpone needed care, thus exacerbating the problem. If we are to increase the nation's capacity to improve oral health and reduce health disparities, we need to enhance the public's understanding of the meaning of oral health and the relationship of the mouth to the rest of the body. These messages should take into account the multiple languages and cultural traditions that characterize America's diversity.

- *Change policymakers' perceptions.* Informed policymakers at the local, state, and federal levels are critical in ensuring the inclusion of oral health services in health promotion and disease prevention programs, care delivery systems, and reimbursement schedules. Raising awareness of oral health among legislators and public officials at all levels of government is essential to creating effective public policy to improve America's oral health. Every conceivable avenue should be used to inform policymakers—informally through their organizations and affiliations and formally through their governmental offices—if rational oral health policy is to be formulated and effective programs implemented.

- *Change health providers' perceptions.* Too little time is devoted to oral health and disease topics in the education of nondental health professionals. Yet all care providers can and should contribute to enhancing oral health. This can be accomplished in several ways, such as including an oral examination as part of a general medical examination, advising patients in matters of diet and tobacco cessation, and referring patients to oral health practitioners for care prior to medical or surgical treatments that can damage oral tissues, such as cancer chemotherapy or radiation to the head and neck. Health care providers should be ready, willing, and able to work in collaboration to provide optimal health care for their patients. Having informed health care professionals will ensure that the public using the health care system will benefit from interdisciplinary services and comprehensive care. To prepare providers for such a role will involve, among other factors, curriculum changes and multidisciplinary training.

**Accelerate the building of the science and evidence base and apply science effectively to improve oral health.** Basic behavioral and biomedical research, clinical trials, and population-based research have been at the heart of scientific advances over the past decades. The nation's continued investment in research is critical for the provision of new knowledge about oral and general health and disease for years to come and needs to be accelerated if further



improvements are to be made. Equally important is the effective transfer of research findings to the public and health professions. However, the next steps are more complicated. The challenge is to understand complex diseases caused by the interaction of multiple genes with environmental and behavioral variables—a description that applies to most oral diseases and disorders—and translate research findings into health care practice and healthy lifestyles.

This report highlights many areas of research opportunities and needs in each chapter. At present, there is an overall need for behavioral and clinical research, clinical trials, health services research, and community-based demonstration research. Also, development of risk assessment procedures for individuals and communities and of diagnostic markers to indicate whether an individual is more or less susceptible to a given disease can provide the basis for formulating risk profiles and tailoring treatment and program options accordingly.

Vital to progress in this area is a better understanding of the etiology and distribution of disease. But as this report makes clear, epidemiologic and surveillance databases for oral health and disease, health services, utilization of care, and expenditures are limited or lacking at the national, state, and local levels. Such data are essential in conducting health services research, generating research hypotheses, planning and evaluating programs, and identifying emerging public health problems. Future data collection must address differences among the subpopulations making up racial and ethnic groups. More attention must also be paid to demographic variables such as age, sex, sexual orientation, and socioeconomic factors in determining health status. Clearly, the more detailed information that is available, the better can program planners establish priorities and targeted interventions.

Progress in elucidating the relationships between chronic oral inflammatory infections, such as periodontitis, and diabetes and glycemic control as well as other systemic conditions will require a similar intensified commitment to research. Rapid progress can also occur with efforts in the area of the natural repair and regeneration of oral tissues and organs. Improvements in oral health depend on multidisciplinary and interdisciplinary approaches to biomedical and behavioral research, including partnerships among researchers in the life and physical sciences, and on the ability of practitioners and the public to apply research findings effectively.

**Build an effective health infrastructure that meets the oral health needs of all Americans and inte-**

**grates oral health effectively into overall health.** The public health capacity for addressing oral health is dilute and not integrated with other public health programs. Although the Healthy People 2010 objectives provide a blueprint for outcome measures, a national public health plan for oral health does not exist. Furthermore, local, state, and federal resources are limited in the personnel, equipment, and facilities available to support oral health programs. There is also a lack of available trained public health practitioners knowledgeable about oral health. As a result, existing disease prevention programs are not being implemented in many communities, creating gaps in prevention and care that affect the nation's neediest populations. Indeed, cutbacks in many state budgets have reduced staffing of state and territorial dental programs and curtailed oral health promotion and disease prevention efforts. An enhanced public health infrastructure would facilitate the development of strengthened partnerships with private practitioners, other public programs, and voluntary groups.

There is a lack of racial and ethnic diversity in the oral health workforce. Efforts to recruit members of minority groups to positions in health education, research, and practice in numbers that at least match their representation in the general population not only would enrich the talent pool, but also might result in a more equitable geographic distribution of care providers. The effect of that change could well enhance access and utilization of oral health care by racial and ethnic minorities.

A closer look at trends in the workforce discloses a worrisome shortfall in the numbers of men and women choosing careers in oral health education and research. Government and private sector leaders are aware of the problem and are discussing ways to increase and diversify the talent pool, including easing the financial burden of professional education, but additional incentives may be necessary.

**Remove known barriers between people and oral health services.** This report presents data on access, utilization, financing, and reimbursement of oral health care; provides additional data on the extent of the barriers; and points to the need for public-private partnerships in seeking solutions. The data indicate that lack of dental insurance, private or public, is one of several impediments to obtaining oral health care and accounts in part for the generally poorer oral health of those who live at or near the poverty line, lack health insurance, or lose their insurance upon retirement. The level of reimbursement for services also has been reported to be a problem and a disin-



centive to the participation of providers in certain public programs. Professional organizations and government agencies are cognizant of these problems and are exploring solutions that merit evaluation. Particular concern has been expressed about the nation's children, and initiatives such as the State Children's Health Insurance Program, while not mandating coverage for oral health services, are a positive step. In addition, individuals whose health is physically, mentally, and emotionally compromised need comprehensive integrated care.

**Use public-private partnerships to improve the oral health of those who still suffer disproportionately from oral diseases.** The collective and complementary talents of public health agencies, private industry, social services organizations, educators, health care providers, researchers, the media, community leaders, voluntary health organizations and consumer groups, and concerned citizens are vital if America is not just to reduce, but to eliminate, health disparities. This report highlights variations in oral and general health within and across *all* population groups. Increased public-private partnerships are needed to educate the public, to educate health professionals, to conduct research, and to provide health care services and programs. These partnerships can build and strengthen cross-disciplinary, culturally competent, community-based, and community-wide efforts and demonstration programs to expand initiatives for health promotion and disease prevention. Examples of such efforts include programs to prevent tobacco use, promote better dietary choices, and encourage the use of protective gear to prevent sports injuries. In this way, partnerships uniting sports organizations, schools, churches, and other community groups and leaders, working in concert with the health community, can contribute to improved oral and general health.

## CONCLUSION

The past half century has seen the meaning of oral health evolve from a narrow focus on teeth and gingiva to the recognition that the mouth is the center of vital tissues and functions that are critical to total health and well-being across the life span. The mouth as a mirror of health or disease, as a sentinel or early warning system, as an accessible model for the study of other tissues and organs, and as a potential source of pathology affecting other systems and organs has

been described in earlier chapters and provides the impetus for extensive future research. Past discoveries have enabled Americans today to enjoy far better oral health than their forebears a century ago. But the evidence that not all Americans have achieved the same level of oral health and well-being stands as a major challenge, one that demands the best efforts of public and private agencies and individuals.

## REFERENCES

- Health Care Financing Administration (HCFA). National Health Expenditures projections: 1998-2008. Office of the Actuary. <http://www.hcfa.gov/stats/NHE-Proj/>. 2000 Apr 25.
- U.S. Department of Health and Human Services (USDHHS). Healthy People 2010 (Conference Edition, in two volumes). Washington; 2000 Jan.
- U.S. General Accounting Office (GAO). Oral health in low-income populations. GAO/HEHS-00-72. 2000 Apr.

## PROJECT TEAM

- Caswell A. Evans DDS, MPH  
Project Director and Executive Editor  
Assistant Director, Los Angeles County Department of Health Services
- Dushanka V. Kleinman DDS, MScD  
Co-Executive Editor, and Deputy Director  
National Institute of Dental and Craniofacial Research  
National Institutes of Health
- William R. Maas DDS, MPH, MS  
Chief Dental Officer, U.S. Public Health Service  
Director, Division of Oral Health  
Centers for Disease Control and Prevention
- Harold C. Slavkin DDS  
Director  
National Institute of Dental and Craniofacial Research  
National Institutes of Health
- Joan S. Wilentz MA  
Science Writer and Editor
- Roseanne Price ELS  
Editor
- Marla Fogelman  
Editor

May 2000

Statement of  
Ann M. Battrell, RDH, BS  
Manager of Dental Hygiene Education

Representing  
American Dental Hygienists' Association

Before the Senate Public Health and Welfare Committee  
Kansas State Legislature

Regarding Senate Bill 50

January 31, 2001

*Senate Public Health & Welfare Committee  
Meeting Note 1-31-01  
Attachment 4-1*

Good afternoon, Madam Chair and members of the Senate Public Health and Welfare Committee, I am Ann Battrell, manager of dental hygiene education for the American Dental Hygienists' Association (ADHA). I appreciate the opportunity to provide the committee with information related to access to dental hygiene care from a national perspective. In addition to my current role with ADHA, I am a past president of ADHA. I am a dental hygienist by profession, having practiced in a clinical capacity for over 20 years in 4 different states and I have served as a full time dental hygiene educator in both a university dental school setting, as well as in a community college setting.

ADHA is opposed to Senate Bill 50 as it has tremendously negative public health outcomes as well as being detrimental to the professions of dental hygiene and dentistry. It is ADHA's responsibility to ensure that dental hygienists assume their appropriate role in the nation's health care delivery system. In this way, access to oral health care can be made available for all who seek it.

ADHA has been working with the United States Health Resources and Services Administration (HRSA) and the American Dental Education Association (ADEA) to put together the pieces of the puzzle to create greater access to dental health care and the services provided by dental hygienists. A recent HRSA publication spells out clearly what the basic pieces are with the following statement:

**“Effective health policies intended to expand access, improve quality or constrain costs must take into consideration the supply, distribution, preparation and utilization of health workforce.”**

Solving the access puzzle is more complicated than just counting numbers of practitioners. We also need to know if individuals are practicing in areas of need, if they have the necessary education and training to provide a multitude of services and if their services are being utilized effectively.

The Health Services and Resources Administration (HRSA) produced 51 **State Health Workforce Profiles**, each presenting extensive data on a specific state. The Profiles present the most up-to-date health workforce data at the state level.

As you will see in the Kansas State Health Care Workforce Profile, the numbers indicate that the numbers of practicing dentists across the country are decreasing. The American Dental Education document entitled “Trends in Dental Education” states that the number of dental school graduates is expected to remain in the area of 4,050. With a graduation rate of this level, it is evident that the number of dentists per 100,000 population will continue to decline steadily into the twenty first century.

## HRSA State Health Workforce Profile – Kansas

(The data sources for the Kansas State Health Workforce Profile were the Bureau of the Census, Bureau of Labor Statistics and the American Dental Association.) The statistics for dentists, dental hygienists and dental assistants cited in the HRSA State Health Workforce Profile on Kansas (see addendum 1) indicate the following:

- There were 1,127 dentists, 1,340 dental hygienists and 2,420 dental assistants practicing in Kansas in 1998
- There were 42.7 dentists per 100,000 population in Kansas in 1998, below the national average of 48.4/100,000. The per capita ratios of dental hygienists and dental assistants were close the national averages of 50.8 and 91.7 respectively.
- The number of dentists in Kansas declined 8% between 1991 and 1998 while the state's population grew 6%. The result was a 13% decline in dentists per capita compared to a 12% decline nationwide.
- Between 1985-86 and 1995-96, the annual number of dental school graduates in the US declined by 23% while the number of dental hygienist graduates grew by 20%.
- The number of dental hygienists per dentist in Kansas is 1.2 as compared to the national rate of 1.1

### Dental Education Information

According to the American Dental Education Association the estimated additions of dentists to the dental workforce will show a deficit of 1706 dentists by the year 2023.

- Currently there are 256 dental hygiene educational programs. First year enrollment in dental hygiene stands at a new high of 6,000, with a total enrollment of 11,645 total and 5,023 graduates. In Kansas the number of dental hygiene graduates grew by 19% during that same time period
- Since 1990 the number of dental hygiene programs has increased almost 18%. The last four years have seen a steady 11 percent growth in dental hygiene positions.

Educational trends appear to indicate that dental graduates will continue to decline and dental hygiene graduates will continue to increase.



## **Societal Needs and Demand**

Senate Bill 50 appears to be in direct opposition to the premise of the Surgeon General's Report on Oral Health as well as the US Department of Health and Human Service's Healthy People 2010. The Surgeon General's Report on Oral Health emphasizes the importance of ensuring access to quality oral health services for the public that we serve. Quality oral health services include the services provided by dental hygienists.

The scientific evidence linking several systemic diseases such as diabetes, cardiovascular diseases with periodontal disease continues to mount. The Surgeon General's Report urges all involved to seek methods to increase access to care, but does not, in any way, advocate the reduction in the quality of those services, especially those basic fundamental preventive and therapeutic services such as the prophylaxis (cleaning). Segmenting the oral prophylaxis (cleaning) into two parts – scaling above the gum line and below the gum line - and limiting the participation of the dentist and dental hygienist distorts the concept of the delivery of quality oral health care services.

## **Commission on Dental Accreditation**

The Kansas Scaling Assistant Program is not under any quality control review process of the Commission on Dental Accreditation (CDA). The Commission's accreditation program ensures that quality education is available for dentists, dental specialists and allied dental personnel. Quality education ultimately leads to quality dental care for the public. The Kansas Scaling Assistant Programs do not seem to be based in any way on the ADA Commission on Dental Accreditation Standards.

## **State Initiatives on Increasing Access to Dental Hygiene Services**

Many states have enacted laws designed to increase access to dental and dental hygiene services. The majority of states have examined the supervision and scope of practice for dental hygienists. Currently 35 states allow dental hygienists to provide the oral prophylaxis (cleaning) without the presence of the dentist in all private practice settings. 45 states allow dental hygienist to practice in various settings outside of the private practice under general supervision. Even less restrictive supervision models exist, such as collaborative practice and public health supervision. In Colorado dental hygienists can practice unsupervised. California allows a Registered Dental Hygienist in Alternative Practice (RDHAP) with additional education to provide services with a prescription from a dentist or physician in alternative settings. In New Mexico dental hygienists work

collaboratively with a consulting dentist through a written agreement containing protocols for care. Kansas has been the only state to create a scaling assistant.

Considering the diminishing numbers of available dentists, we will continue to face difficulties in increasing access to care when the provision of dental hygiene services are tied to the physical examination and presence of a dentist. Advances in technology such as Teledentistry are creating opportunities for dental hygiene services to be provided in more remote areas of the country.

### Conclusion

One then must consider the legislative intent of Senate Bill 50. The scaling assistant intended to increase care be under the direct supervision of a dentist. The health workforce numbers indicate that the numbers of dentists are decreasing and the numbers of dental hygienists are increasing.

One must then wonder how this legislation truly impacts access to dental hygiene services. Especially in light of the fact that scaling assistants are only allowed to perform the cosmetic portion of the prophylaxis and this legislation lacks the ability to ensure that the dentist or dental hygienist completes the prophylaxis. We assert that the person most qualified to provide comprehensive dental hygiene preventive and therapeutic services is the licensed dental hygienist.

From the dental economic perspective this legislation lacks merit. How does the dentist or dental hygienist leave the patient they are currently providing care for and move to another patient to complete the dental hygiene cleaning (prophylaxis)? Time is lost and the quality of care is diminished. When faced with the choice of leaving the patient in the middle of a complicated and costly dental procedure to complete a dental hygiene procedure, what choice do you think the dentist will make?

What patient population group is being served? Is it the patients already being seen in the private dental office? What then are we to do about the patient population groups in the rural areas who do not currently have access to a dental office due to a variety of factors, including the possibility that there is a lack of dental providers in their area?

The medical and nursing professions are way ahead of us in truly meeting the needs of the under served. Unfortunately, the dental model still seeks to hold fast to the "private practice" paradigm of dental health care delivery. This legislation reinforces that paradigm that it is the need of the private practice that was served not people. This legislation only serves a portion of the population and not those most in need of care and most importantly, may prove harmful to overall public health.



On behalf of ADHA I thank you for the opportunity to participate in this hearing today.

Bureau of Health Professions  
National Center for  
Health Workforce Information  
and Analysis



STATE HEALTH  
WORKFORCE  
PROFILES



Kansas

U.S. Department of Health and Human Services  
**HRSA**  
Health Resources and Services Administration  
Bureau of Health Professions  
Senate Public Health Workforce Committee  
*Meeting Date 1-31-01  
attachment 5-1*

# DENTISTRY

- √ There were 1,127 dentists, 1,340 dental hygienists, and 2,420 dental assistants practicing in Kansas in 1998.
- √ There were 42.7 dentists per 100,000 population in Kansas in 1998, below the national average of 48.4/100,000. The per capita ratios of dental hygienists and dental assistants were close to the national averages.
- √ In Kansas 9% of the dentists in practice in 1998 were women. Nationally, 99% of dental hygienists were women and 96% of dental assistants were women.
- √ In 1996-97 in Kansas, the majority of dental hygienist graduates (85%) and dental assistant graduates (88%) were Non-Hispanic white. The state had no dental school graduates.
- √ The number of dentists in Kansas declined 8% between 1991 and 1998 while the state's population grew 6%. The result was a 13% decline in dentists per capita compared to a 12% decline nationwide.
- √ Between 1985-86 and 1995-96, the annual number of dental school graduates in the US declined by 23% while the number of dental hygienist graduates grew by 20%.

## DENTISTS

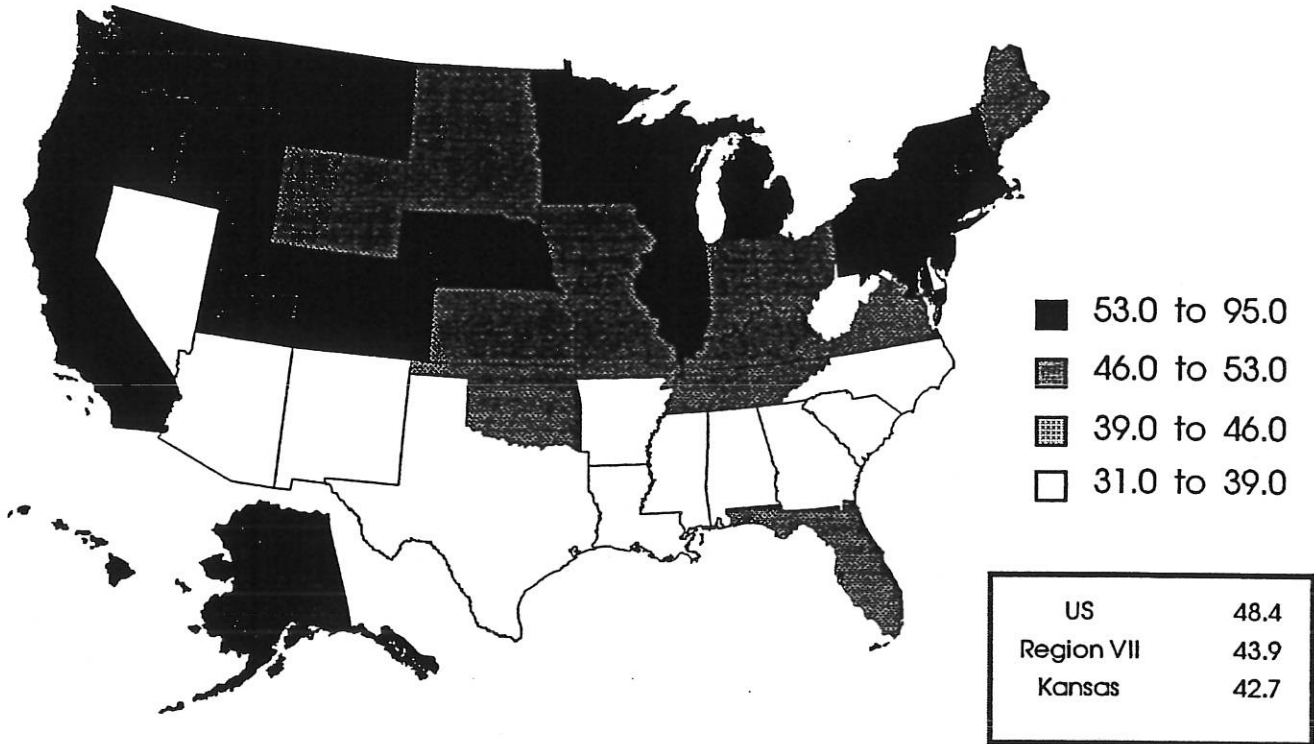
### Dentists, 1998

	Kansas	Region VII	US	KS rank
Dentists	1,127	5,529	130,836	31/50
Per 100,000 population	42.7	43.9	48.4	30/50
Percent female	9.0%	9.6%	12.6%	35/50

Source: American Dental Association; Bureau of the Census.

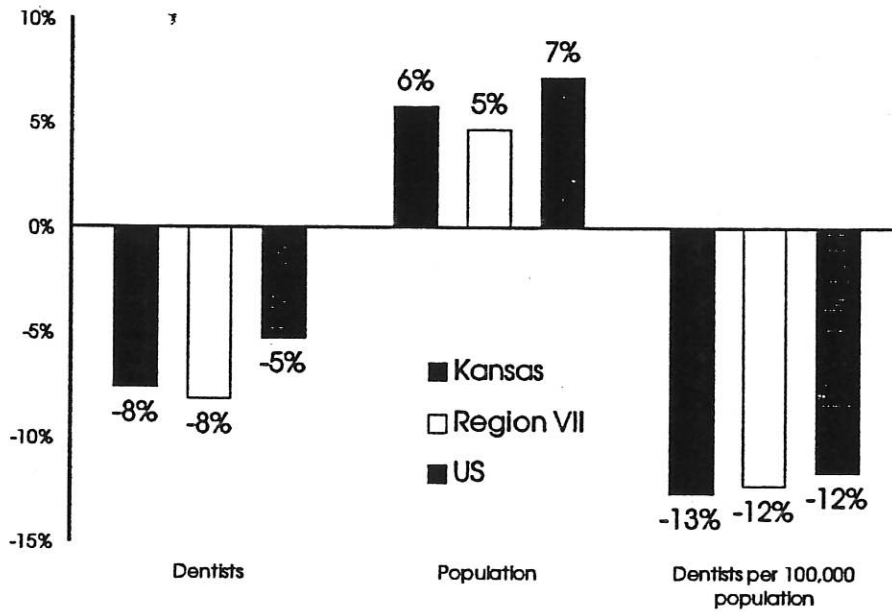
Note: Unless otherwise specified, figures presented for dentists include only active, non-federal dentists in private practice.

## Dentists per 100,000 population, 1998



Source: American Dental Association; Bureau of the Census.

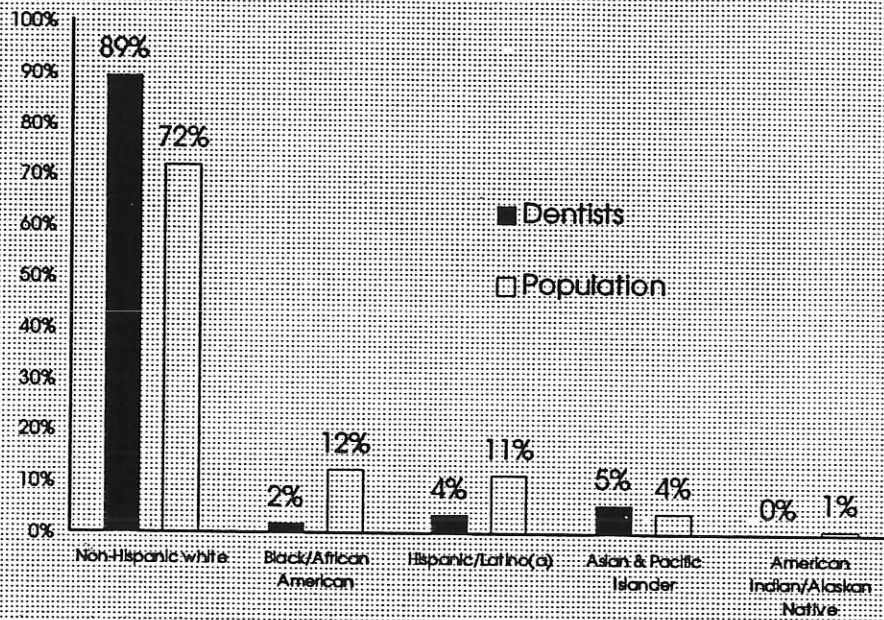
## Percentage change in Dentists, population & Dentists per 100,000 population, 1991-1998



Source: American Dental Association; Bureau of the Census.



# Race/ethnicity of dentists & the population, U.S., 1999



Source: Bureau of Labor Statistics; Bureau of the Census.

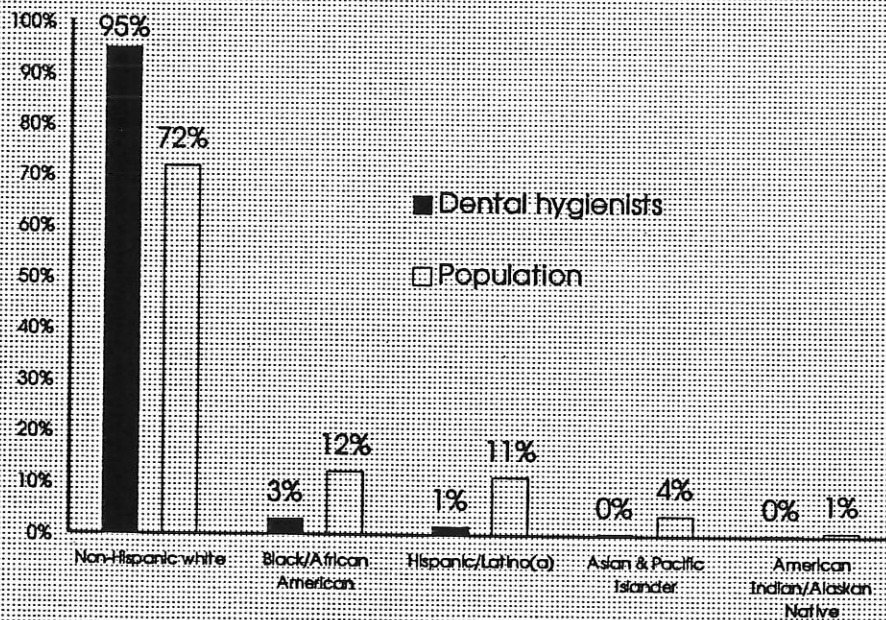
# DENTAL HYGIENISTS

## Dental hygienists, 1998

	Kansas	Region VII	US	KS rank
Dental hygienists	1,340	5,360	140,750	25/50
Per dentist	1.2	1.0	1.1	25/50
Per 100,000 population	50.8	42.5	52.1	30/50
Percent female	-	-	99.1%	-

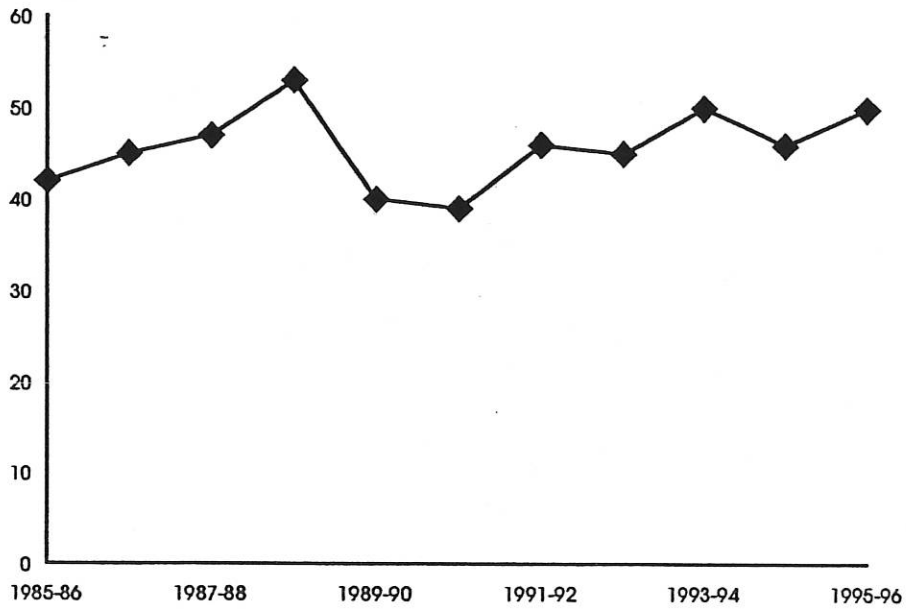
Source: Bureau of Labor Statistics; American Dental Association; Bureau of the Census.  
 Note: 1997 is the most recent year for which data on dental hygienists in Illinois were available.

### Race/ethnicity of dental hygienists & the population, U.S., 1999



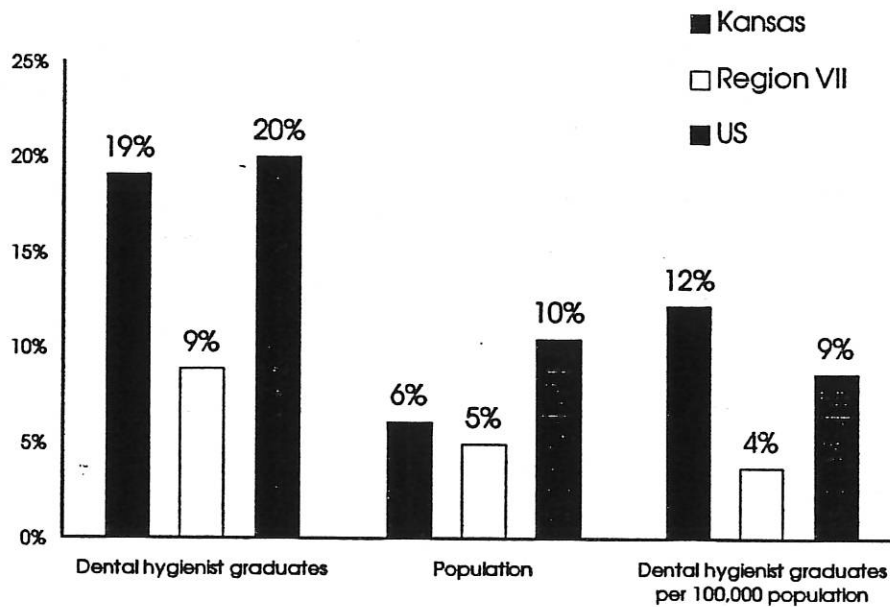
Sources: Bureau of Labor Statistics; Bureau of the Census.

## Dental hygienist graduates, 1985-86 to 1995-96



Source: American Dental Association.

## Percentage change in dental hygienist graduates, population & dental hygienist graduates per 100,000 population, 1985-86 to 1995-96



Source: American Dental Association; Bureau of the Census.



Race/ethnicity & gender of dental hygienist degree recipients  
& the population, 1996-97

	Dental hygienist education program degree recipients	Population
<b>Race/ethnicity</b>		
Non-Hispanic white	85.1%	87.1%
Black/African American	0.0%	5.6%
Hispanic/Latino(a)	8.5%	4.7%
Asian & Pacific Islander	6.4%	1.7%
American Indian/Alaskan Native	0.0%	0.9%
Total	100.0%	100.0%
<b>Gender</b>		
Female	95.8%	50.7%
Male	4.2%	49.3%
Total	100.0%	100.0%

Source: National Center for Education Statistics; Bureau of the Census.

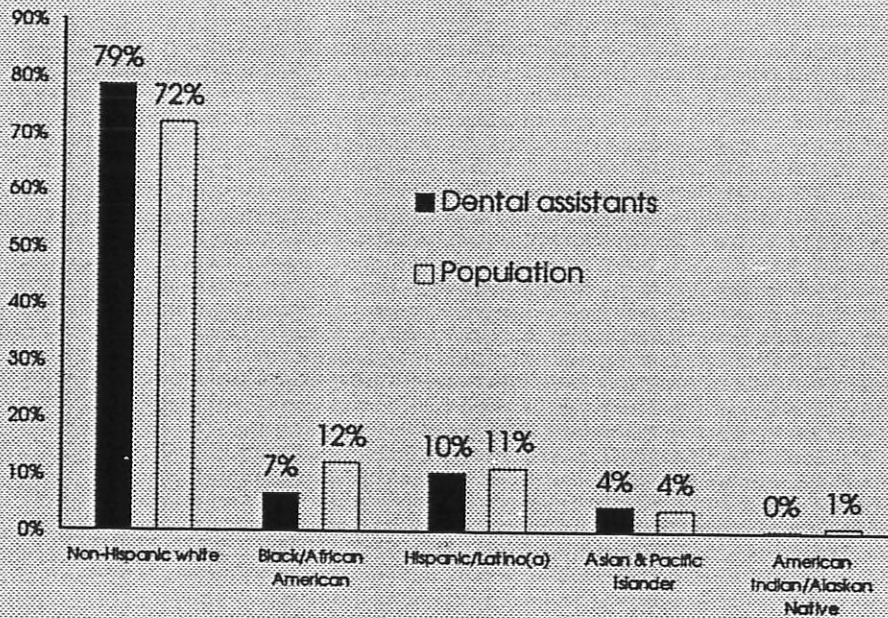
# DENTAL ASSISTANTS

## Dental assistants, 1998

	Kansas	Region VII	US	KS rank
Dental assistants	2,420	10,640	231,380	9/50
Per dentist	2.1	1.9	1.8	9/50
Per 100,000 population	91.7	84.5	85.6	15/50
Percent female	-	-	96.1%	-

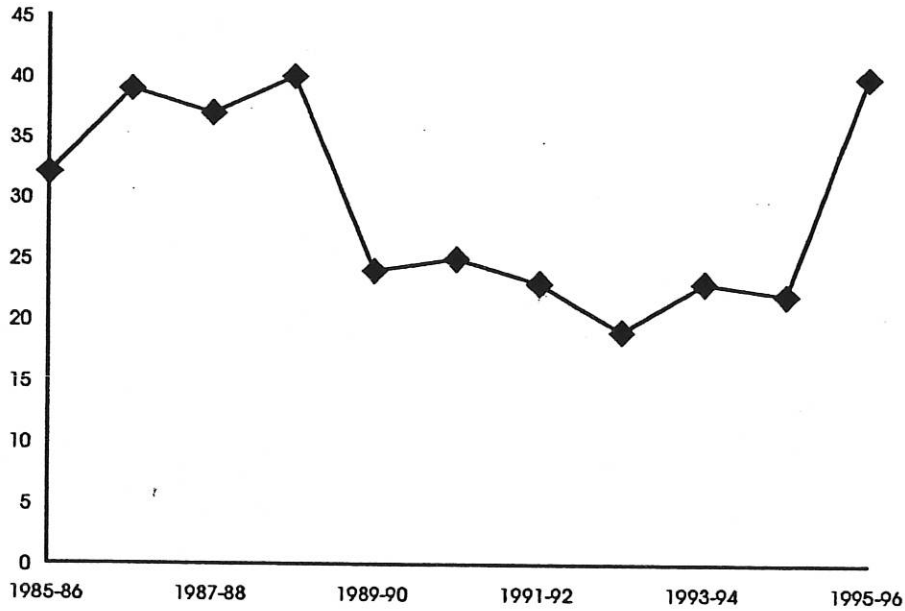
Source: Bureau of Labor Statistics; American Dental Association; Bureau of the Census.

### Race/ethnicity of dental assistants & the population, U.S., 1999



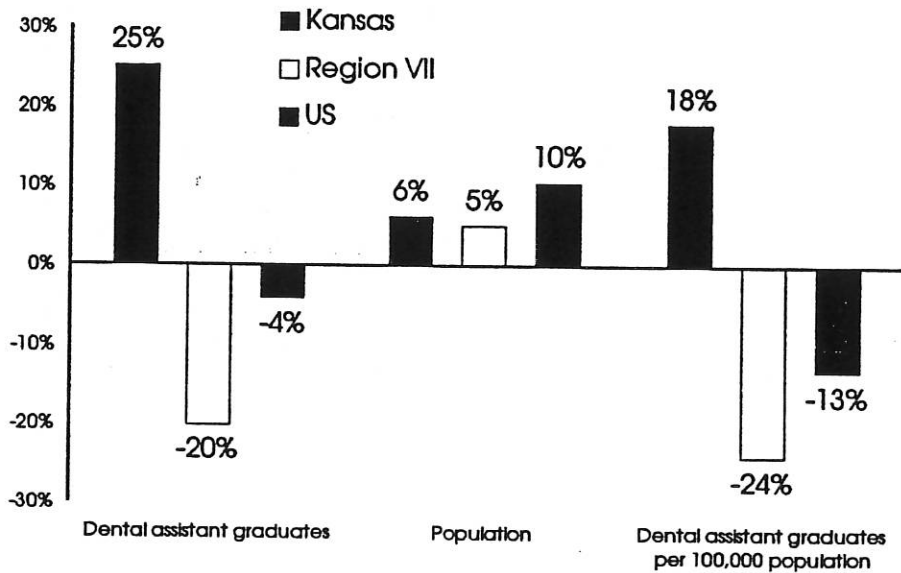
Source: Bureau of Labor Statistics; Bureau of the Census.

### Dental assistant graduates, 1985-86 to 1995-96



Source: American Dental Association.

### Percentage change in dental assistant graduates, population & dental assistant graduates per 100,000 population, 1985-86 to 1995-96



Source: American Dental Association; Bureau of the Census.

## Race/ethnicity & gender of dental assistant degree recipients & the population, 1996-97

	Dental assistant education program degree recipients	Population
<b>Race/ethnicity</b>		
Non-Hispanic white	87.5%	87.1%
Black/African American	6.3%	5.6%
Hispanic/Latino(a)	4.2%	4.7%
Asian & Pacific Islander	2.1%	1.7%
American Indian/Alaskan Native	0.0%	0.9%
Total	100.0%	100.0%
<b>Gender</b>		
Female	100.0%	50.7%
Male	0.0%	49.3%
Total	100.0%	100.0%

Source: National Center for Education Statistics; Bureau of the Census.

Senate Bill 50  
Testimony  
Denise Maseman, RDH,MS

Madam Chairperson, members of the committee. Thank you for the opportunity to present testimony on Senate Bill 50. I speak today as an individual hygienist with 25 years of experience in dental hygiene. I have been a full-time clinician, a dental hygiene educator, a dental hygiene examiner for the Central Regional Dental Testing Service, and served on the Kansas Dental Board. My primary experience has been 20 years of higher education experience with my current position being the Dental Hygiene Department Chairperson at Wichita State University (WSU)). All of those roles have had an impact on my view.

I speak in opposition to the bill for several reasons. As a clinician, trying to separate scaling into above and below the gumline doesn't make sense to me. Scaling is not a procedure that is easily divided. Calculus develops both above and below the gumline often in a continuous line. There is no magic dividing line. Many times you need to get underneath the calculus, typically below the gumline to remove above the gumline calculus. Imagine I gave you an orange to peel but said "You can only remove the yellow outer skin and can't touch the inner white skin". Someone else will remove the white inner lining. Could you easily do it? I don't believe you could. This is what the bill is allowing. I don't believe it is in the interest of the patient to try and divide scaling into different parts.

My primary concern about this bill is the oral health of Kansans. The Surgeon's General Report on the Oral Health of America addresses the concern about periodontal disease. Periodontal disease is the major problem in dentistry. Scaling below the gumline is the primary prevention and treatment for this problem. Allowing dental assistants to scale above the gumline does not advance the fight against periodontal disease. Scaling whether above or below the gumline is a complicated skill that requires didactic, laboratory and clinical education.

As an educator, I can tell you dental hygienists complete extensive educational programs. The curriculum of dental hygiene programs includes general education, biomedical sciences, dental sciences, and dental hygiene sciences. At WSU, students complete 81 college credit hours for the degree that includes 568 clock hours of classroom instruction, 239 clock hours of laboratory instruction, and 736 clock hours of clinical experience. The total time commitment is 1,543 clock hours. In Kansas the first step is to graduate from an accredited institution to complete the licensure process.

The next step involves multiple examinations to obtain a dental hygiene license. Dental hygienists must successfully complete a written comprehensive examination, a clinical examination, and a jurisprudence examination. As an examiner I would tell you that hygienists must take a clinical examination that weights scaling as the most important skill on the clinical examination. The examination does not have a 100% first time pass rate. I have been an examiner for 12 years and have given exams in many of the 11 states in our region. Scaling is the most difficult portion of the examination for hygienists. Dentists as well must be examined on scaling to obtain their license. The scaling assistant sends in a certificate of completion. If the scaling skill is so important

Senate Public Health & Welfare Committee  
Meeting Date 1-31-01  
Attachment 6-1

that hygienists and dentists must pass a clinical examination to practice, why is there no testing for the scaling assistant?

Much has been made of the scaling assistant completing a course of study that is consistent to a Commission on Dental Accreditation (CODA) accredited program. As an educator I have several objections to this issue. Kansas has three accredited dental hygiene and dental assistant programs. Accreditation is an extremely rigorous process. Johnson County Community College and Wichita State University underwent Site Visits in 1999. Roughly 200 pages of narrative and 1000 pages of supporting documentation are provided to the site visitors to evaluate the program. The review includes institutional effectiveness, educational program, administration, faculty, and staff, educational support services, health and safety provisions, and patient care services. While the three dental assisting programs have that status, there are not standards for dental assistants to scale and so this process is not accredited. Is it realistic to expect the dental board to make those assessments? I know firsthand the job of the dental board. The board is very busy with the regular business. Do they have the time for this additional responsibility? Is the dental board assuring the public that these programs are equivalent? What materials do they use to make such a determination?

In conclusion, I urge you to oppose Senate Bill 50. In my view, the bill does not increase access to services, improve the care delivered to Kansans, or provide adequate protection for the public. Thank you for your time.

attachment 6:2





Johnson County Community College  
12345 College Blvd.  
Overland Park, Kansas 66210-1299  
(913) 469-8500 www.jccc.net

January 31, 2001

Senate Public Health and Welfare Committee  
Kansas Statehouse  
Topeka, KS 66612

Honorable Senators:

Thank you for the opportunity to comment on Senate Bill 50, which would eliminate the sunset of the dental assistant scaling program. The KS dental hygiene educators do not support this program or the bill for multiple reasons.

First, let's look at the program itself. The technical schools, which offer the dental assistant scaling programs, are not accredited by the same accrediting agencies as the colleges; therefore, these credits can not be transferred to a dental hygiene program. So, completion of this course can not be used as credit for any dental hygiene courses. Therefore, the scaling assistant is no closer to becoming a licensed dental professional ready to enter the workforce.

In addition, the standards of the scaling programs are inadequate in comparison to those required by the American Dental Association Council on Dental Accreditation (CODA) for accredited dental hygiene programs. I have heard supporters of these programs say they meet CODA standards. The only CODA standard met is the ratio of students to faculty. Scaling of teeth is not a skill included in the accreditation guidelines for dental assisting programs. In dental hygiene programs, scaling is a part of the skills learned in the preclinical course, which are required by CODA to be a minimum of 96 hours in accredited dental hygiene programs. This preclinical course is followed by 700 hours of clinical instruction. There is no comparison between the dental assisting program and the accredited dental hygiene program.

The rules and regulations, which give the details for the assistant scaling program, do not include evaluation of the program. Has any data been collected indicating that the graduates of the assistant scaling program are doing a good job? What is the measure of the efficacy of this program in meeting manpower and access to oral health care needs? I don't think anyone can provide answers to these questions based on facts. The only data available tells the location of the scaling assistants, of which 73% are in urban areas.

Senate Public Health & Welfare Committee  
Meeting Date 1-31-01  
Attachment 7-1

From an educator's view, the scaling assistant program is substandard and unproven to meet the need for more hygienists in rural areas.

In 1998, the Dental Hygienist Training Committee was assigned the task of reporting to the legislature and boards of education on plans for increasing the number of persons in the state being trained as dental hygienists. I served as the co-chair of this committee. The final report was presented in January 1999. I have distributed a copy for the committee today. Eight recommendations were made, of which two have passed into law. The remaining recommendations deal with tuition reimbursement, student exchange programs, access to care under less restrictive supervision in clinics for medically underserved, opening one additional dental hygiene program in the state, and funding of accredited dental hygiene programs. Several of these recommendations will surface again as House bills this year. The reason I bring up this report is to talk about the number of hygienists needed in the state. The Bureau of Labor Statistics projects the need for 60 hygienists per year, which covers attrition and growth. The federal guidelines designate an underserved area as one dentist per 5000 population. There are no federal guidelines for hygienists. Page 9 of the Training committee report states "The committee used the 265 figure only as a place to begin discussion." This number is based on a ratio of one dental hygienist per 2000 population. This ratio represented the need for hygienists in all areas of the state based on the population. The federal guidelines are not in agreement with this number nor are members of the dental professions.

The dental assistant scaling program was established as a temporary means to address manpower needs and access to care. This program has not succeeded. There aren't any more hygienists because of this program nor are the scaling assistants spread out across the state. At the least, an audit is needed to evaluate the scaling assistant program. I urge you to oppose the passage of Senate Bill 50. Thank you for your consideration of my views.

Sincerely,



Margaret LoGiudice, R.D.H., M.S.  
Director, Dental Hygiene Program

# Report of the Dental Hygienist Training Committee

Prepared for the Kansas Legislature  
January 11, 1999

## Charge to the Committee

From House Bill 2724, Section 3:

"The state board of education, the state board of regents and the Kansas dental board shall report to the legislature on or before January 11, 1999, on plans for increasing the number of persons in this state being trained as dental hygienists."

Based on the history of the legislation, the committee worked not only to address its direct charge but also to address the underlying issue, endorsed by both dentists and dental hygienists, of providing access to quality dental care to all Kansans. According to the Kansas Dental Board, 36 Kansas counties are without the services of a practicing hygienist while only 13 counties are without the services of a practicing dentist. The shortage of dental hygienists affects the ability of dentists, particularly in rural Kansas, to deliver care.

It should be noted that the federal government and the Kansas Department of Health and Environment (KDHE) have indicated that only fourteen Kansas counties and the indigent population in Topeka are dentally underserved (*Kansas Statistical Abstract*, 1997). The population of these areas represents 2.7 percent of the population of Kansas. Through its action on HB2724, the legislature has demonstrated its belief that the federal guidelines for designation of underserved areas (1:5000 ratio of dentists to population, *Kansas Statistical Abstract*, 1997) do not coincide with any common sense definition of adequate service, and the committee concurs.

Before making recommendations, this report will first differentiate among dentists, dental hygienists, and dental assistants in terms of training, licensure/certification, and practice. Then it will provide a context for what is happening nationally and in Kansas with regard to providers of dental care. Next, issues will be clarified and alternatives will be identified. Finally, the committee will make its recommendations to the legislature regarding how the committee feels the state can best address the issue of providing access to quality dental care to all Kansans and increasing the number of persons in Kansas being trained as dental hygienists.

## Training, Licensure/Certification, and Practice

Traditional dental school programs require four years of college prior to four years of dental school training. National and clinical board examinations are required

Senate Public Health & Welfare Committee  
Meeting Date 1-31-01  
Attachment 8-1

prior to licensure. Licensure by the state is for one or two years, and continuing education courses are mandatory for renewal in most states.

Traditional dental hygiene programs are two years in length and award a certificate or associate degree. Baccalaureate degrees are also available in the university setting. Accredited programs require approximately 1,950 clock hours and more than 700 clinical hours of instruction. National and clinical board examinations are required prior to licensure. Licensure by the state is for one or two years, and continuing education courses are mandatory for renewal in most states. Thirty-three states, including Kansas, plus the District of Columbia, allow dental hygienists to practice under general supervision (physical presence of dentist not required). In general, hygienists are trained to perform services on patients. Under general supervision, Kansas dental hygienists can perform oral health assessments, scale, root plane, apply fluoride and sealants, place and remove perio dressings, remove sutures, place and remove temporary restorations, and other activities, including all activities performed by dental assistants.

Certification for dental assistants is available but not required in any state. Most dental assistants are trained in dental offices by dentists. Formal dental assisting programs are nine months in length, and graduates receive a diploma or an associate degree. To become certified, a national board examination is required. To maintain certification, continuing education courses are mandatory. In contrast to a dental hygienist, who works directly on patients, a dental assistant is trained primarily to work chairside with a dentist. Among other responsibilities, assistants also mix dental materials, perform lab procedures, take x-rays, create models, take dental impressions, polish teeth, and bond and remove orthodontic appliances.

### National Context

#### National Trends in Training Dentists

In examining the supply of dental hygienists, it is also necessary to examine the supply of dentists, since dental hygienists are almost exclusively employed by dentists. There have been two major periods of change in the number of dentists graduating nationally. From 1960 to 1978, the number of first-year enrollments grew from approximately 3,500 to over 6,000 (American Association of Dental Schools, 1997). During this period, the baby boomers came of college age, and there was broad national support (scholarships and federal capitation grants) for expanding the number of health care providers.

This surge in enrollment was followed by a period of rapid decline. The American Association of Dental Schools (AADS) noted several reasons for the dropping enrollments (1997). Concerns began to be raised about a possible oversupply of dentists. Stagflation in early 1980 was followed by the recession of 1981. Both demand for dental care and dental incomes are directly linked to the health of the U.S. economy. Federal capitation grants to schools of dentistry were discontinued in

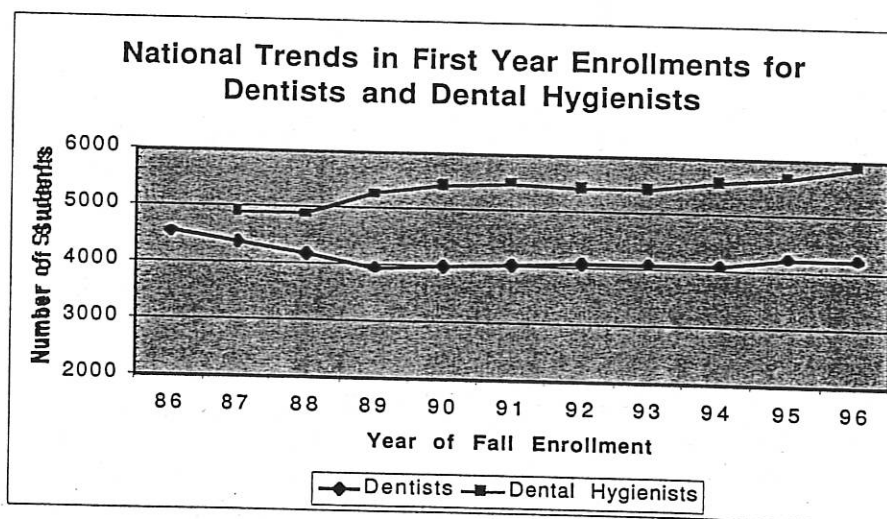


1981. From 1986 through 1993, six dental schools closed and others reduced their enrollments. First-year enrollment in U.S. dental schools dropped from a peak of 6,300 to 3,979 in 1990 (see Figure 1).

The number of applicants to dental schools has increased during the 1990's. This increase is due not to an increase in college age youth, but rather to an escalation in the number of degrees in the biological sciences, resulting in an expanded applicant pool for the health professions (AADS, 1997). In addition, the strong economy is cited as a factor that has led to an increase in dental school applicants. Directly related to the strength of the economy, the average net income of full-time independent dentists in the U.S. increased from \$74,040 in 1986 to \$134,590 in 1995 (July, 1998, *Journal of the American Dental Association*). Increased costs and lowered revenues due to managed care have slowed the growth in dentists' net incomes since 1995.

Although the economy of the country has been strong in the late 1990's and applications are at increased levels, enrollment at U.S. dental schools has remained flat and dental school deans have reported that they do not plan to increase enrollment. Currently, first-year enrollment for all U.S. dental schools remains around 4,200. The ratio of the number of dentists per 100,000 population has been decreasing since the mid-1980's. It is estimated that by 2020 there will be 54.7 dentists per 100,000 people (AADS, 1997), the lowest ratio since World War I (Dugoni, 1995). However, due to advances in the use of technology and allied dental personnel, it must be noted that quality dental care has never been more available than it is today.

Figure 1.



### Dental Hygiene Supply

Enrollments in dental hygiene programs fell to their lowest level in 1988/89. They have been steadily increasing since that time. At its lowest point, first-year enrollment in dental hygiene programs was 4,883 (see Figure 1). The most recent



data indicate a nation-wide first-year enrollment of 5,868 for the 1996-97 academic year (ADA, 1997). Numerous factors have contributed to increased dental hygiene first-year enrollments. Forty-seven new dental hygiene programs have opened their doors since 1990 (Commission on Dental Accreditation, 1998) and seven additional proposed programs will be considered in January, 1999 (Communication from the Commission on Dental Accreditation, 1998). Dental hygiene programs also report the gap between first-year capacity versus first-year enrollment has narrowed. The increased enrollment is also likely due to increased salaries. Based on a 1996 ADA national survey of all dentists, dental hygienists' salaries increased 13 percent between 1990 and 1994, and the average salary in 1995 was \$34,955 (\$759/week times 46 weeks).

The number of dentists graduating is now nearly 33 percent lower than it was in the early 1980's. While the number of dentists graduating has stabilized at approximately 3,800 per year, the number of dental hygienists graduating has been climbing each year since 1988. Due to the national trend toward opening more schools and the narrowing of the gap between capacity and enrollments in existing programs, first-year enrollment in 1996 was 5,868. At least thirty new programs have opened since 1996, further contributing to the national supply of dental hygienists.

While these data suggest that the supply and demand of dental hygienists to dentists should be more equitable now, other factors must be taken into consideration. Since the early 1980's more dentists have added dental hygienists to their practices. The most recent ADA Survey of Dental Practice (1997) indicated that 63 percent of dentists currently employ at least one full-time or one part-time dental hygienist. Of the dental hygienists employed by these dentists, 36% were employed full-time (32 or more hours per week, an average of 34.6 hours per week) and 64% were employed part-time (less than 32 hours per week, an average of 16.3 hours per week).

Another factor that has changed is that the economy has played a role in the strong demand for dental hygienists. "The supply and employment of auxiliary dental personnel will continue to fluctuate in response to changes in market conditions for dental services" (ADA, 1983). This quote from the ADA's *Report on the Future of Dentistry* has been no less true in the 1990's than it was in the 1980's. In a 1995 *Journal of the American Dental Association* editorial, the editor wrote, "The number of dentists graduating from dental schools does not require any adjustment. In the future, if shortages in dental services develop they can be remedied through the judicious use of allied personnel." Thus, the demand for dental hygienists is likely to be even more sensitive to the upswings and downturns of the U.S. economy. It should be noted that this "judicious use of allied personnel" cannot occur in Kansas unless the necessary legislation and modifications to the Kansas Dental Practice Act take place.

On the other hand, the 1995 ADA survey (Lazar, 1997) indicated that dental hygienists had an average of 6.2 years in their current practices and an average of 7.1

years of previous experience, resulting in an average of 13.3 years of dental hygiene practice. With the yearly increase in the number of dental hygiene program graduates, this average will likely increase. Also, dentists who graduated during the peak enrollment years of the early 1980's are now in their most productive practice years, assuming a practice span of 35 to 40 years. Thus, because dental hygienists work for dentists, the ratio of hygienists to dentists will shift upward as the effects of the trend toward smaller dental school graduating classes come into play.

### Kansas Context

Table 1 illustrates the number of Kansans per dentist and per dental hygienist. Displaying the information by region highlights the maldistribution of both dentists and dental hygienists.

Table 1. Ratio of Population to Dentists and Hygienists in Kansas (1998)

Region	Population	No. of Dentists	Population per Dentist	No. of Dental Hyg.	Population per D H
Northwest	133,312	59	2,259.5	31	4,300.4
Northeast	392,721	243	1,616.1	162	2,424.2
Kansas City	781,212	502	1,556.2	376	2,077.7
Southwest	212,332	77	2,757.6	32	6,635.4
Wichita	672,136	305	2,203.7	314	2,140.6
Southeast	255,127	87	2,932.5	43	5,933.2
Total	2,446,840	1273	1,922.1	958	2,554.1

(Data from Kansas Dental Board, 1998 and *Kansas Statistical Abstract*, 1997)  
 (Note: Data include both full- and part-time dentists and dental hygienists.)

### Training Dentists for Kansas

There are 55 dental schools in the United States. The nearest to Kansas are in each of the surrounding states. The University of Colorado Medical Center School of Dentistry is located in Denver. The University of Oklahoma Health Science Center College of Dentistry is located in Oklahoma City. Nebraska offers two programs, the University of Nebraska College of Dentistry in Lincoln and the Creighton University School of Dentistry in Omaha. Finally, perhaps the program most familiar to Kansas dentists is the one at the University of Missouri-Kansas City (UMKC). It is the only dental school in Missouri, after two schools in St. Louis (at Washington University and St. Louis University) closed several years ago. It is estimated that of the graduates of the UMKC program each year, after eliminating those graduates in specialties and those committed to other geographic locations, there are about 45 graduate dentists who go on to serve the two state area as general practitioners (Source: UMKC School of Dentistry, Alumni Records, 1998).

Income information is not available from the ADA for Kansas dentists, but the ADA (July, 1998, *Journal of the American Dental Association*) does give regional

figures. Full-time independent dentists in the West North Central Region (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota) increased from \$65,390 in 1986 to \$121,000 in 1995, an increase of 85%. Increased costs and lowered revenues due to managed care have slowed the growth in dentists' net incomes since 1995.

### Training Kansas Dental Hygienists

The following table summarizes the number of programs and first year capacities for Kansas and its four neighboring states. (Data from the American Dental Association, 1996/97 *Survey of Allied Dental Education*).

Table 2. Comparison of Numbers of Programs and First-year Capacities

State	Population	No. of DH BS Programs	No. of DH AS Programs	1st year capacity
Kansas*	2,446,840	0	2	56
Colorado	3,892,644	1	3	74
Missouri	5,402,058	1	2	82
Nebraska	1,656,570	1	1	35
Oklahoma	3,317,091	1	2	50

\* Data do not include the new program at Colby Community College  
(Data from the American Dental Association, 1996/97 *Survey of Allied Dental Education*)

Kansas' capacity consists of 30 first-year openings at Wichita State University and 26 openings at Johnson County Community College. Not included in the Kansas total is the new program which opened in the fall of 1998 at Colby Community College (CCC), utilizing a satellite feed from Northcentral Technical College in Wisconsin. Due to admissions requirements and late approval for the satellite feed from the Kansas Board of Regents, only six students were admitted this fall. Of those admitted, only three actually matriculated. CCC hopes to admit twelve in Fall, 1999, and to eventually increase the number admitted each year to eighteen. In recent years, an average of six students per year graduating from UMKC's baccalaureate program come back to Kansas to practice. Kansas is the only state listed without a baccalaureate program in dental hygiene. The most significant impact of this fact is that it limits the number of individuals locally available to teach in Kansas associate degree dental hygiene programs. This is a problem experienced by Colby Community College in starting its program. The dental hygiene program at WSU is currently studying the feasibility of implementing a four-year program.

Figures for annual earnings for dental hygienists are not available from the ADA. However, if we use the Bureau of Labor Statistics figure of \$20.63/hour for Kansas hygienists, and use the same method as the ADA to calculate yearly earnings, we arrive at a 1996 average annual earnings for Kansas dental hygienists of \$32,827 (\$713.63/week times 46 weeks).

## Identifying Issues

As should be expected, dentists and dental hygienists do not perceive the issues in the supply of dental hygienists in Kansas in the same way. Dentists are more likely to see it as an issue of cost to them. The demand is high and the supply is too low, creating an artificially high wage for dental hygienists. Dentists would like to see the supply of dental hygienists increase. Dental hygienists have objected to reports that their goal was to make as much money as dentists. However, while hygienists are not plotting to get that huge salary increase, neither do they want to give up their current average wage due to oversupply. The members of the committee began addressing this perception problem by asking, should we be looking at the number of dental hygienists needed to serve dentists in Kansas, or the number of dental hygienists needed to serve those in Kansas needing the services provided by dental hygienists? This was resolved in short order. All committee members agreed that the issue was how to provide access to quality dental care to all Kansans. Still, given that dental hygienists can only practice through a dental practice, we also agreed that some thought must be given to the ratio of dental hygienists to dentists.

## Arriving at a number

The next issue was how to arrive at a target number for dental hygienists that need to be trained. Members of the committee agreed that each of the following attempts to arrive at a number required a lot of assumptions, and some of those are based upon questionable projections.

The first figure the committee discussed was from the *Kansas Occupational Outlook* (U.S. Bureau of Labor Statistics, 1997). The BLS projects that in each year between 1995 and 2005, there will be openings for 60 hygienists in Kansas. This figure is said to include provisions for both attrition and growth. Unfortunately, the BLS figures for 1984 to 1995 overestimated the number of dentists by 35,000 (22.2%) nationally, and underestimated the number of dental hygienists by 23,000 (28.2%) (U.S. Bureau of Labor Statistics, 1997). Still, one member suggested, if one multiplies the seven years left between now and 2005 times 60 per year, the result equals 420 hygienists. If one assumes that half this number will cover attrition and further assumes that the state's population will remain static, this would suggest that we need 210 new hygienists.

On our second attempt at coming up with a number, we noted that although only 63.4 percent of all dentists hire at least one dental hygienist, the national ratio of dental hygienists (full- and part-time) to dentists in all practices is one-to-one (ADA, 1996 *Survey of Dental Practice*). In 1998, there are 1273 dentists in Kansas and 958 full- and part-time hygienists. Thus, by this method, we would say that there is a shortage of 315 hygienists (1273 minus 958).

On the committee's third attempt, we decided to approach it from a more practical stance. We asked, how many patients can a hygienist see in a day? The hygienists on



the committee answered that eight was the right number, which coincided with the 1996 ADA *Survey of Dental Practice* results that said on average a hygienist, in the employ of an independent dentist, sees 42.6 patients per week. This amounts to 2,215 patients per year. Thus, 1,104 hygienists, or an additional 147 hygienists (over the current 958), could provide for only one visit for each Kansan once per year (assuming a state population of 2,446,840).

Finally, the committee examined a series of ratios, including 1:5000, 1:4000, 1:3000, 1:2500, 1:2000, and 1:1000 (see Attachment 1). The 1:2000 ratio was the highest ratio in which all regions identified by the committee showed a need for dental hygienists. This number coincides with the ADA's estimate of the number of active patients required to provide a viable practice. We then looked at the number of dental hygienists in the state by region, figured the number of additional hygienists needed to lower the ratio of the region to 1:2000, and added regional needs to determine the number of hygienists needed statewide. Table 3 illustrates with numbers.

Table 3. Number of Dental Hygienists Needed to Reach 1:2000, by Region

Region	Population	No. of Dental Hyg.	Ratio (/ 2000)	Number DH Needed
Northwest	133,312	31	0.47	36
Northeast	392,721	162	0.83	34
Kansas City	781,212	376	0.96	15
Southwest	212,332	32	0.30	74
Wichita	672,136	314	0.93	22
Southeast	255,127	43	0.34	85
Total	2,446,840	958	0.78	265

It should be noted that though 265 may seem a high number, it is partially the result of a statistical effect in which the number of hygienists needed increases geometrically as the ratio grows smaller. This is shown in Table 4.

Table 4. Number of Dental Hygienists Needed to Meet Specific Population Ratios in Kansas

Ratio	Number of hygienists needed to meet ratio	Increment
1:5000	18	--
1:4000	44	26
1:3000	94	50
1:2500	134	40
1:2000	265	131
1:1000	1488	1223

(Assumes Kansas population of 2,446,840)



As one can see from the table, it would only take 50 hygienists to lower the ratio from 1:4000 to 1:3000, but it takes 171 to lower it from 1:3000 to 1:2000, and 1223 to lower it from 1:2000 to 1:1000. Thus, if the committee had chosen 1:2500, the number of dental hygienists needed in the state would have been 134, or 131 less than 1:2000. Can we quantify the difference in service between 1:2000 and 1:2500? After discussion, committee members agreed to use the 265 figure as a working number. Consistent with the differences in perception, the Kansas Dental Hygienists' Association members have expressed concerns that the number is too high and Kansas Dental Association members have expressed concerns that it is too low. The committee used the 265 figure only as a place to begin discussion.

### Maldistribution

A review of Table 1 and Table 3 clearly shows that rural areas are less well-served than urban areas. This maldistribution of hygienists is worst in the Southwest Region, followed closely by the Southeast and the Northwest. To compound the problem, these three regions are also the most underserved in the number of dentists.

### Summary

The committee established the issues to be both a shortage and a maldistribution of hygienists. It recognized that the same issues exist with respect to dentistry, but alas, the state has little or no control over that aspect of the problem. One solution is, as the original charge to the committee indicates, to train more hygienists. We will also look at other ways to increase the number of dental hygienists in Kansas to help alleviate the shortage. However, without at least attempting to address the maldistribution issue, the goal of providing access to quality dental care to all Kansans is still remote at best.

### Addressing the Issues

#### Training More Hygienists

The committee identified three avenues by which to train more Kansans for dental hygiene:

- Increase the number of graduates from schools we already have.
- Work cooperatively with other states (notably Missouri and Nebraska) to reserve positions in programs close to Kansas borders.
- Create one or more additional dental hygiene programs around the state.

Increasing the output of current programs. Currently, Wichita State University admits 30 new students each year and graduates an average of 25, all of whom pass their boards and are eligible to practice within six months of graduation. Johnson County Community College admits 26 and graduates an average of 22, who likewise become eligible to practice. Colby Community College has just initiated its program.

CCC plans to admit 12 in the Fall of 1999 and to admit 18 every fall thereafter. We would expect that an average of 14 would become eligible to practice. Thus Kansas, with the maturity of the new program at CCC and taking into consideration UMKC graduates who return to Kansas, is projected to produce at least the 60 new hygienists needed per year as identified in the *Kansas Occupational Outlook, 1997* (BLS).

Johnson County Community College admits 26 first-year students because that is the maximum number of second-year students its clinical facilities can accommodate, according to accreditation guidelines. However, four students, on average, leave the program before the beginning of the second year. Based on this fact, JCCC is planning to increase its intake to 30, a 15 percent increase. Wichita State University is investigating its capacity to expand as well. CCC will be hard-pressed to expand beyond the 18 already projected. Existing programs should continue to investigate fiscally responsible ways to serve their communities through flexible scheduling and/or creative programming.

Like other health care programs, dental hygiene is expensive to maintain. For example, to expand at JCCC would require remodeling, including the loss of badly needed science lab space, and the hiring of additional faculty. Further, the cost of the program is currently greater than \$300 per credit hour per student. The revenue for the program is around \$100 per credit hour per student (tuition plus state reimbursement). Thus, assuming that costs did not rise, every additional credit hour in the expanded program would cost the college another \$200. As Table 3 indicates, by far the most significant need for additional hygienists is in western Kansas. Past experience has shown that students from western Kansas who have received dental hygiene training at JCCC have not gone back to western Kansas; rather, they have tended to stay in the metropolitan area. Thus, with the UMKC program having just increased its program by six students, it does not make economic sense for the JCCC program to increase its first year enrollments beyond thirty.

Access to nearby schools in other states. An agreement already exists allowing up to 80 Kansas students to attend the UMKC Dental School as part of the Midwest Student Exchange Program (MSEP). These students pay one-and-one-half times the tuition paid by in-state Missouri students. Currently, 53 Kansans attend the UMKC Dental program and 27 Kansans are enrolled in the four-year UMKC Dental Hygiene program as part of this exchange. The most likely candidates for additional agreements are Missouri Southern State College (MSSC) at Joplin and Central Community College at Hastings, Nebraska. The program at Tulsa Community College is another possibility. The best opportunities are with MSSC, which is in the process of expanding its program and could provide training for southeast Kansas residents, and with Central Community College, which could provide opportunities for North Central Kansas residents. A few Kansas students have attended the MSSC program and returned to practice in southeast Kansas. Central CC is a smaller program, so the number of positions that could be reserved would be small. Unfortunately, informal inquiries to both these schools have been discouraging.

Each would welcome Kansas applicants, but neither is willing to guarantee positions. Neither program is currently a part of the Midwest Student Exchange Program.

If it is not possible to procure positions in these programs through the MSEP, some attempt should be made to procure seats through cooperative programs. In this situation a tuition program would be established so that Kansas residents could be reimbursed for the difference between in-state and out-of-state tuition. This would allow Kansans to attend at tuition rates comparable to in-state rates at Kansas schools. Otherwise, there would be little incentive for a Kansan to invest in the out-of-state program.

New schools. The establishment of new schools would have the most dramatic effect on the number of hygienists in Kansas. However, it raises a number of questions, the most significant being, where will the money come from to start and then to maintain a new program? Why would a school start a program that is going to cost it significantly more than it receives in reimbursement? The answer at Colby Community College is that the community need (encompassing western and northwestern Kansas) overshadowed the expense. Other community colleges have been reluctant to step forward, presumably due to the high cost of both starting and maintaining a program.

One possible solution is to establish the new program at a technical college. Because of the difference in how programs are funded, the negative impact on revenues would be limited. The legislature would have to appropriate the "up-front" money needed to establish the program, then current state funding would maintain it. The committee recommends that if new programs are established, that only one be established. A possible candidate for a new program is Flint Hills Technical College at Emporia. This is one of three sites in Kansas that already has a dental assisting program. Establishment at one of these sites would provide efficiencies through better utilization of facilities and faculty and integration of the two curricula. Additionally, Emporia is roughly halfway between established programs in Overland Park and Wichita. It would serve to address the needs of both the northeast and the southeast regions. Perhaps at some point in the future, another school should be established in the southwest. However, for the present, Colby CC should be given the opportunity to show that its program can serve the western part of the state. Whether or not a new school is established, money should be appropriated to provide CCC with the resources it needs to ensure its dental hygiene program is a success.

Another suggestion that would make it more attractive for community colleges to start a new dental hygiene program would be a change in funding. Technical schools and colleges are currently funded by the "85/15" formula, meaning that student tuition covers 15% of the cost of the program and the state reimburses the institution 85% of the cost of the program. If all dental hygiene programs were



funded by the 85/15 formula, schools would be better reimbursed for the cost of the program and would be more likely to invest in starting or expanding a program.

There are few shortages in the populated areas of the state of Kansas. If there is no change in the Kansas Dental Practice Act, there is little use in establishing a new school, as it will likely result in oversupply in urban areas and will not alleviate the problem of underservice in the rural areas.

To encourage new graduates to practice in underserved areas, the Kansas State Legislature could establish a tuition reimbursement program. It would be based on the same principle as the Kansas Medical Student Loan Program, that monetary incentives will induce graduates to practice in underserved areas. Under this program, graduates would be reimbursed the cost of their tuition, course fees and supplies, and examination fees (first attempt only) for serving a minimum of two-years in an identified dentally underserved area of Kansas.

#### Lowering Attrition and Making Reentry Easier

Attrition from dental hygiene practice can be attributed to personal reasons, reasons related to the particular practices with which individual dental hygienists are associated and the difficulty in reentering the profession after moving. It is a fact that more than 95 percent of hygienists are female. Since there is little opportunity for advancement, one attraction of dental hygiene practice for these women is that 'stopping out' (temporary unemployment) for family reasons incurs no penalty. Another issue is that in households with two wage earners, the dental hygiene practitioner tends to be the second income, so that if the primary wage earner in the household is required to relocate, the dental hygiene practitioner will likely follow, which leads to problems of reentry.

A review of the literature indicates that limitations of dental hygiene practice have been identified as factors influencing attrition from and reentry into the profession of dental hygiene. Changes in work force issues suggested to bring hygienists back to employment include issues related to salary and benefits, greater utilization of hygienists' skills, input into office procedures for infection control, office management and interpersonal relationships, restrictions of the law, and reciprocity of licensure. While the first four issues listed must be dealt with by individual dental practices, there are two potential areas for change of the dental practice act which could increase the number of hygienists returning to the workforce.

First, the Kansas Dental Board currently accepts only the Central Regional Dental Testing Service and Western Regional Examining Board clinical board examinations. It is recommended that the Kansas Dental Board accept clinical board examination results for graduates of accredited dental hygiene programs from all regional and individual states. This would increase the mobility of licensed hygienists in active practice and new graduates.

Second, for previously licensed hygienists who have not been in active practice or who have let their licenses lapse, the Kansas Dental Board requires the individual to repeat the clinical board examination. It is recommended that the Kansas Dental Practice Act be changed to allow the Kansas Dental Board to accept approved refresher courses in dental hygiene continuing education in lieu of repeating the clinical examination. These courses would be modeled after the refresher courses at Forsythe Dental Center in Massachusetts, which is recognized by several state dental boards. The course would include content in both classroom and clinical instruction and typically includes a minimum of two clinical days. The educational institution which sponsors the course verifies successful completion and an adequate level of competence to return to the workforce.

### Expanding the Scope of Dental Hygiene Practice

The dentally underserved areas of Kansas are underserved by dentists as well as by dental hygienists. The state has some control over the number of dental hygienists, but it is unlikely to be able to increase the number of dentists significantly. How, then, is the maldistribution of dental care practitioners to be addressed?

A place to start would be the 30 clinics for the medically underserved in Kansas. These clinics receive grant funding or cost-based reimbursement for services provided. The new health insurance programs (CHIP and Health Wave) enacted this past year by the legislature are designed to improve access to medical and dental care for low-income children. It is estimated that as many as 60,000 Kansas children could benefit from this program. As Dr. Michael J. Reed, Dean of the UMKC School of Dentistry, says in a letter inviting officials from Missouri and Kansas to a mini-policy conference on oral health scheduled for January 29, 1999:

[Providing] dental care presents a serious problem, however [sic]. The current Medicaid programs in both states [Kansas and Missouri] are, for various reasons, failing to attract enough dental providers to meet the current demand for services. In large portions of Missouri and Kansas, Medicaid recipients cannot find a dentist who will treat them. Adding 150,000 new patients [including 90,000 in Missouri] to these overburdened, underperforming systems is unlikely to make things better.

Because there are not enough dental providers to meet the current demand for services, this is a prime opportunity for hygienists to help meet the needs of this population in Kansas. This could happen if dental hygienists are allowed to work with dentally indigent patients under less restrictive supervision in clinics for the medically underserved, in nursing homes, and in hospitals.

The present law requires a dentist to examine the patient within a twelve month period prior to the dental hygienist seeing the patient. Under a new plan, a dentist might never see the patient directly. Rather, the dental hygienist would perform services already approved under general supervision. Then, the records would be

examined by a dentist, licensed in Kansas and acting in the capacity of a dental consultant. If necessary, the patient would be referred to a dentist for evaluation and necessary treatment. This is a clumsy way to meet the needs, but it does provide a way to stretch a very limited dental resource—the dentists. Perhaps more importantly, it puts Kansas well on the way to being able to implement tele-dentistry, in which the hygienist would create the records, but the dentist could look at both the information and the patient through technology.

### Recommendations

1. Change the way dental hygiene programs are funded, from reimbursement per credit hour to a formula through which the state pays 85% of the cost of the program and the student pays 15%.
2. Establish of a State Education Fund for tuition reimbursement for hygienists who agree to practice in areas identified by the Kansas Dental Board as underserved.
3. Change the Kansas Dental Practice Act to make it easier for dental hygiene practitioners to relocate and to reenter practice.
4. The Kansas Dental Board should accept the clinical board examination results for graduates of accredited dental hygiene education programs from all regional and individual states' examinations.
5. Change the Kansas Dental Practice Act to allow dental hygienists to work with dentally indigent patients under less restrictive supervision in clinics for the medically underserved, in nursing homes, and in hospitals.
6. Establish one new dental hygiene education program.
7. Increase access to out-of-state dental hygiene programs through student exchange, cooperative agreements, and tuition reimbursement programs.
8. Establish a representative committee to gather more specific information on the current dental care situation in Kansas through the implementation of surveys and research, and to monitor/evaluate the effects of the changes implemented in the Kansas Dental Practice Act.



## Attachments

Attachment 1 is a map of Kansas with regional boundaries agreed upon by the members of the committee. It shows current numbers of dentists and dental hygienists by county and by region. Attachment 2 is a chart showing the current ratios of population to dentists and hygienists for the six regions. It also shows the numbers of hygienists needed to reach particular ratios of population to hygienists. These figures were used in the committee's deliberations.

## Participants

HB 2724 specified who was to report this issue to the legislature. KSDE, together with the Board of Regents, formulated the original list. The following individuals were among those originally called by Don Richards to be on the committee:

Estel Landreth, 1998 President of the Kansas Dental Board, Wichita  
Margaret LoGiudice, Johnson County Community College Dental Hygiene Program, Director  
Denise Maseman, Wichita State University Dental Hygiene Program, Director  
Melanie Mitchell, Wichita Technical College Dental Assisting Program, Director  
Pam Overman, UMKC School of Dentistry, Division of Dental Hygiene, Director  
Don Richards, Kansas State Department of Education, Health Occupations Education Consultant  
Kathy Rupp, Kansas Board of Regents, Associate Director of Academic Affairs  
Becky Vollertsen, Colby Community College Dental Hygiene Program, Director

The following individuals also participated on the committee at the invitation of the members of the original committee:

Kelly Douglass, Kansas Dental Board, member  
John Federico, Kansas Dental Association, Lobbyist  
Teresa Higgins, Kansas Dental Hygienists' Association, President-elect  
Gracemary Melvin, Colby Community College, Dean of Instruction  
Kevin Robertson, Kansas Dental Association, Executive Director  
Anne Spiess, Kansas Dental Association, Lobbyist  
Ted White, Johnson County Community College, Associate Dean of Instruction  
Jim Yonally, Kansas Dental Hygienists' Association lobbyist

Recorders included:

Charlene Beaver, Johnson County Community College Administrative Assistant  
Ruth Dreher, Johnson County Community College Administrative Assistant  
Charlotte Zeller, Kansas State Department of Education, Technical Assistant

## Meeting Dates

The DHTC met five times:

- September 3 at Johnson County Community College in Overland Park
- October 1 at the Washburn University Memorial Union in Topeka
- October 29 at the Kansas Department of Education Annex in Topeka
- December 2 at the Washburn University Memorial Union
- January 7 at the Washburn University Memorial Union

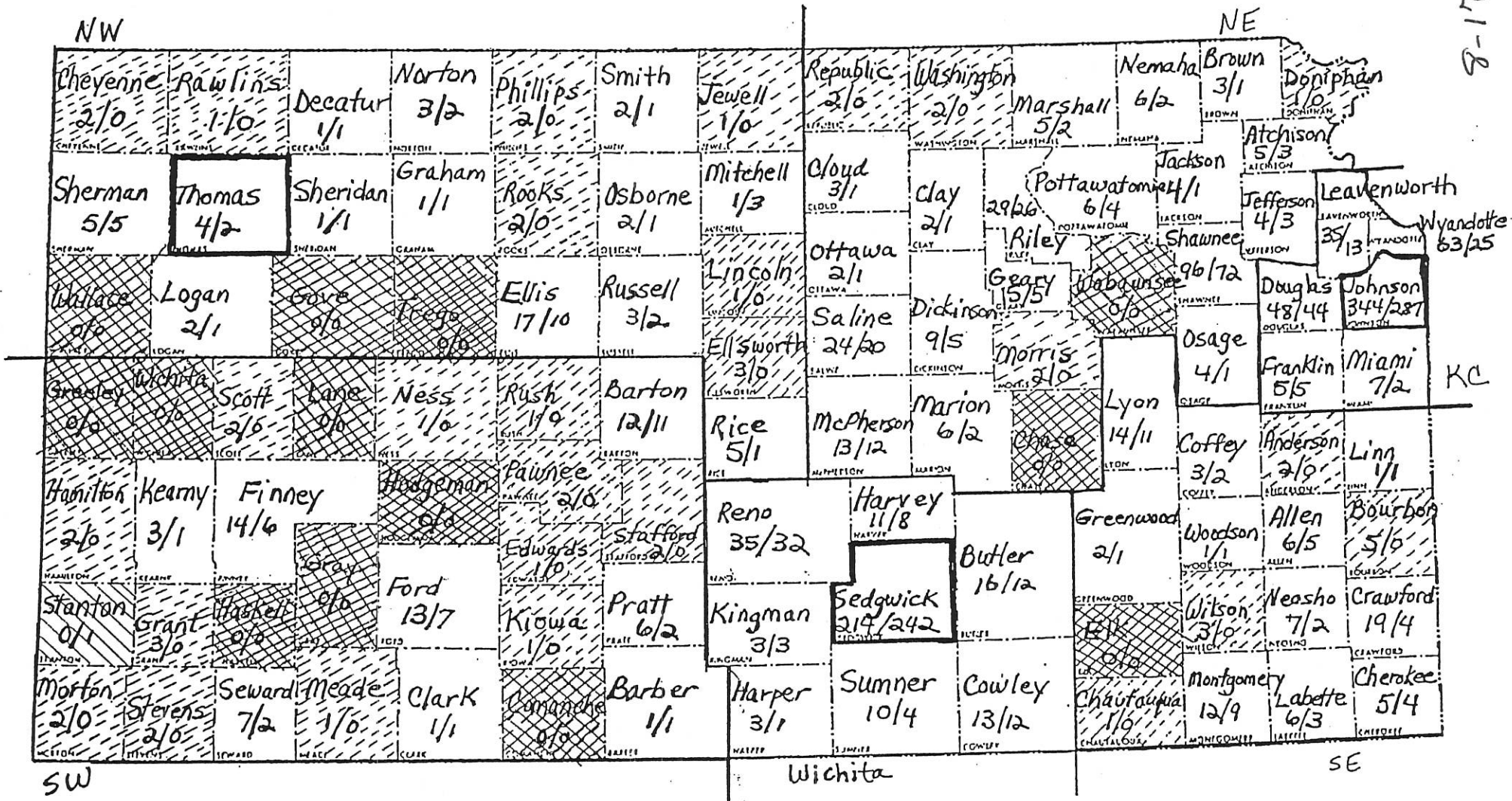
This document represents a truly collaborative effort. Each of the members of the committee should be commended for approaching this task with an open mind and dedication to service. This report was adopted unanimously by the members present at the final meeting.

Presented on behalf of the Dental Hygienist Training Committee by:




Margaret LoGiudice, RDH, MS  
(913-469-2582)

Ted White, Ph.D.  
(913-469-2573)

# Kansas



Dentist / Hygienist per KS Dental Board 9/98

-  Counties without Hygienists
-  Counties without Dentists and Hygienists
-  Existing Dental Hygiene Educational programs

Attachment 8-17

8-17



## Attachment 2

### Current Ratios of Population to Dentists and Dental Hygienists by Region

Region	Population	No. of Dentists	Population per Dentist	No. of Dental Hyg.	Population per D H
Northwest	133,312	59	2,259.5	31	4,300.4
Northeast	392,721	243	1,616.1	162	2,424.2
Kansas City	781,212	502	1,556.2	376	2,077.7
Southwest	212,332	77	2,757.6	32	6,635.4
Wichita	672,136	305	2,203.7	314	2,140.6
Southeast	255,127	87	2,932.5	43	5,933.2
<b>Total</b>	<b>2,446,840</b>	<b>1273</b>	<b>1,922.1</b>	<b>958</b>	<b>2,554.1</b>

### Current Ratios of Dentists to Population by Region

Region	Population	No. of Dentists	Ratio (per 5000)	Ratio (per 1000)
Northwest	133,312	59	0.44	2.21
Northeast	392,721	243	0.62	3.09
Kansas City	781,212	502	0.64	3.21
Southwest	212,332	77	0.36	1.81
Wichita	672,136	305	0.45	2.27
Southeast	255,127	87	0.34	1.71
<b>Total</b>	<b>2,446,840</b>	<b>1273</b>	<b>0.52</b>	<b>2.60</b>

### Projected Needs for Dental Hygienists by Region for Various Ratios

Region	Population	No. of Dental Hyg.	Ratio (/ 5000)	No. DH Needed	Ratio (/ 4000)	Number DH Needed	Ratio (/ 3000)	Number DH Needed
Northwest	133,312	31	1.16	0.00	0.93	2.33	0.70	13.44
Northeast	392,721	162	2.06	0.00	1.65	0.00	1.24	0.00
Kansas City	781,212	376	2.41	0.00	1.93	0.00	1.44	0.00
Southwest	212,332	32	0.75	10.47	0.60	21.08	0.45	38.78
Wichita	672,136	314	2.34	0.00	1.87	0.00	1.40	0.00
Southeast	255,127	43	0.84	8.03	0.67	20.78	0.51	42.04
<b>Total</b>	<b>2,446,840</b>	<b>958</b>	<b>1.96</b>	<b>18.49</b>	<b>1.57</b>	<b>44.19</b>	<b>1.17</b>	<b>94.26</b>

Region	Population	No. of Dental Hyg.	Ratio (/ 2500)	Number DH Needed	Ratio (/ 2000)	Number DH Needed	Ratio (/ 1000)	Number DH Needed
Northwest	133,312	31	0.58	22.32	0.47	35.66	0.23	102.31
Northeast	392,721	162	1.03	0.00	0.83	34.36	0.41	230.72
Kansas City	781,212	376	1.20	0.00	0.96	14.61	0.48	405.21
Southwest	212,332	32	0.75	52.93	0.30	74.17	0.15	180.33
Wichita	672,136	314	1.17	0.00	0.93	22.07	0.47	358.14
Southeast	255,127	43	0.42	59.05	0.34	84.56	0.17	212.13
<b>Total</b>	<b>2,446,840</b>	<b>958</b>	<b>0.98</b>	<b>134.31</b>	<b>0.78</b>	<b>265.42</b>	<b>0.39</b>	<b>1488.84</b>

# *Starting a Dental Hygiene Program*

*Gracemary Melvin*

*Colby Community College*

## *DO DO OR NOT TO DO*

■ *How did we determine if we should start a Dental Hygiene Program?*

■ *Some initial contacts:*

- *Prior to August 1996--*
  - *Dr. Nordstrom*
  - *Dr Roger Rupp, Chairman of the Council on Dental Education and Manpower for the Kansas Dental Association*

*Senate Public Health + Welfare Committee  
Meeting Note 1-31-01  
Attachment 9-1*

## *TO DO OR NOT TO DO-----*

- October 24, 1996--Wichita State University Meeting to develop a strategy to expand dental hygiene education opportunities through distance learning technology.*
- Dinner meeting with all the local dentists in Colby.*
- April 1997--Visit to Northcentral Technical College in Wausau, Wisconsin.*

## *TO DO OR NOT TO DO-----*

- Needs Assessment*
  - May 1996--Initial Survey done.*
  - Spring 1997--Required survey done for the Kansas State Board of Education.*
  - Researched other obstacles that may have to be overcome--Kansas Board of Regents.*
- Grant Searches to Assist with Funding*
  - Senate Bill 33--KSBE*
  - Kansas Department of Commerce and Industry*
  - Kansas Dental Association*



## *TO DO OR NOT TO DO-----*

- *Support Sources*
  - *Kansas Dental Association Input*
    - *Our Mentor--Dr. Roger Rupp*
    - *Executive Director of the Kansas Dental Association*
  - *CCC Board of Trustees*
  - *Administrative and Faculty Support*
  - *Local Advisory Committee Support*

## *PLAYERS-----*

- *In the Planning Process*
  - *Dr. Ary and the Administrative Team*
  - *My secretary and the Director of Instructional and Curricular Design*
  - *Math/Science Division Chair*
  - *NTC Dental Hygiene Staff in Wausau*
  - *Dr. Roger Rupp*
  - *Dr. Tom Barlow*
  - *Local Advisory Committee*

## PLAYERS-----

- *In the Construction Process*
  - *The Maintenance Director, Gene Robert, and his entire staff.*
  - *Local Construction Support*
    - *Stephens Construction*
    - *Larry Brown Plumbing*
    - *Colby Lumber*
    - *Jerome Mazanac*
  - *Out of Town Vendor Support*
    - *Patterson Dental Supply--Design of the clinic and supplier of equipment and instructional supplies.*

## PLAYERS-----

- *Doc Holiday and Crew--Three days of non-stop work to prepare "old" donated equipment . He and his staff made it possible for our clinic to be up and running for the fall classes in 1998.*
- *In the Instruction Process*
  - *Sue Webb, Kathy Cayton, Vernon Wranosky, Becky Vollertsen, and the patience of the Nursing and PTA staff during the construction process.*
- *It took a total TEAM effort to keep the project viable!*

## STATUS-----

### ■ Accomplishments--

- *May 15, 1998--State Department of Education Approval*
- *May 1998--Board of Regents On-Site Visit to Examine Proposal and Site*
- *June 25, 1998--Board of Regents Official Approval Vote in Topeka*

## ACCOMPLISHMENTS-----

- *We have a program!*
- *We have two instructors!*
- *We have four sophomores and twelve freshmen.*
- *We are serving all of Northwest Kansas.*
- *We have been through a focus site visit and just completed the first accreditation visit from the American Dental Association.*



## *GRANT SUPPORT PROGRESS*

- *Kansas Dental Association*
- *United Methodist Health Ministries Fund*
- *Perkins III Federal Funding*

## *WHAT'S NEXT----*

- *Continue to recruit qualified students.*
- *Increase staff to accommodate the student enrollment.*
- *Continue to upgrade the equipment.*
- *Continue to seek additional grant support.*

## DENTAL HYGIENE APPLICANTS/STAGES OF APPLICATION

CLASS OF 1998 (4)

CLASS OF 1999 (9)

CLASS OF 2000 (12)

ADMISSIONS TO THE NEXT OPEN CLASS (FALL 2001) (12)

WAITING LIST FOR NEXT OPEN CLASS (8)

APPLIED/TAKEN AHAT - FILE READY FOR ADMISSIONS COMMITTEE (7)

APPLIED/TAKEN AHAT - NEED ADDITIONAL COURSEWORK (9)

APPLIED - NOT TAKEN AHAT (22)

APPLIED/WILL RETAKE THE AHAT (2)

APPLIED/FAILED THE AHAT (10)

DENTAL HYGIENE PROGRAM INQUIRIES W/FILES STARTED (31)

WITHDREW FROM CONSIDERATION (40)

01/30/01

*Attachment 9-7*

## DENTAL HYGIENE PROGRAM INQUIRIES

<u>CITY</u>	<u>NUMBER OF INQUIRIES</u>
Abilene	4
Admire	1
Allen	1
Alliance, NE	1
Arkansas City	2
•Atwood	4
Ayr, NE	1
Baileyville	1
Beaver, OK	1
Beloit	2
Bern	1
Berryville, AR	1
Bertrand, NE	2
•Bird City	1
Blue Springs, MO	1
•Brewster	3
Broken Arrow, OK	1
Bruning, NE	1
Burlington, CO	1
Burns, WY	1
Cambridge, NE	2
Cheney	1
Cimarron	2
Clay Center	1
•Clayton	1
•Colby	36
Coldwater	3
Commerce City, CO	1
Concordia	1
Copeland	1
>Culbertson, NE	4
Dalhart, TX	1
>Danbury, NE	1
Deerfield	1
Delia	1
Denver, CO	1
Derby	2
•Dighton	2
>Dodge City	11
Downs	1
•Dresden	1
El Dorado	1
Ellis	2
Ellsworth	1
Elm Creek, NE	1
Emporia	2
Estes Park, CO	1
Eureka	1

01/30/01

*attachment 9-8*

Fairfield, CA	1
Fort Worth, TX	2
Franklin, NE	2
Galva	1
>Garden City	17
Gardner	1
Gem	1
•Goodland	5
Gorham	1
Gove	2
Grainfield	2
Grandview, MO	1
Granite Bay, CA	1
Grantsville	1
Granview Plaza	1
>Great Bend	7
Greensburg	2
•Grinnell	1
Halstead	1
Hanover	1
>Hanston	2
>Hastings, NE	2
•Hays	37
Hershey, NE	3
•Hill City	1
Hoisington	1
>Holcomb	2
Holdredge, NE	2
•Hoxie	2
Hudson, CO	1
>Hugo CO	1
Hutchinson	5
Imperial, NE	1
Independence	1
>Indianola, NE	2
Ingalls	1
Iola	1
Jet, OK	1
Jetmore	4
Johnson	2
Junction City	1
Kanopolis	1
Kansas City	1
Kansas City, MO	2
>Kearney, NE	3
>Kinsley	3
Kremlin, OK	1

01/30/01

attachment 9-9



>Lakin	5
Landover, MD	1
Laramie, WY	1
Larned	1
Lawrence	3
Leavenworth	2
Lenexa	2
Lenora	2
Leonardville	1
•Leoti	2
Liberal	2
Little River	1
Logan	1
Logan, UT	1
•Ludell	1
Manhattan	17
Mayfield, UT	1
>McCook, NE	24
McPherson	1
>Meade	2
Meadow Grove, NE	1
Merriam	1
•Monument	1
Morland	1
Mulvane	1
Niotaze	1
•Norcatur	2
>North Platte, NE	6
•Norton	7
•Oakley	5
•Oberlin	3
Offerle	2
Oklahoma City, OK	1
Olsburg	1
Omaha, NE	1
O'Neill, NE	1
Oskaloosa	4
Overland Park	1
Oxford, NE	1
Ozawkie	1
Palco	1
Palisade, NE	1
•Phillipsburg	3
Pittsburg	1
•Plainville	3
•Prairie View	1
Princeton	1
Quincy, CA	1
Quinter	1
Rexford	1
>Russell	3
•Russell Springs	2

01/30/01

Attachment 9-10

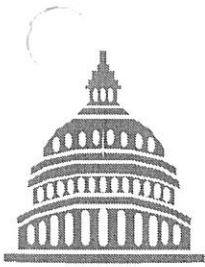
Salina	9
Sandy, UT	1
•Scott City	2
Sedalia, MO	1
Seiling, OK	1
•Selden	2
Sharon Springs	2
>Shelby, NE	1
Sidney, NE	2
Smith Center	1
Spearville	2
Springfield, CO	1
•St. Francis	5
St. George	2
Stafford, VA	1
Stevensville, MT	1
Stratton, NE	2
Studley	1
>Sublette	1
>Syracuse	2
Tecumseh	1
Theford, NE	1
Tigard, OR	1
Tokyo	1
Topeka	14
Towanda	1
Tribune	2
Tulsa, OK	1
Tyrone, OK	1
Ulysses	3
>Utica	2
•Victoria	1
Wakarusa	1
•Wakeeney	4
Wakefield	1
Wallace, NE	1
Wamego	2
Waneta, NE	2
West Jordan, UT	1
Weskan	1
Wichita	11
Winfield	1
>Wray, CO	1
York, NE	2

Total Inquiries	<u>479</u>
-----------------	------------

• Our Service Area	138
> Rural Kansas, Nebraska, and Colorado	<u>102</u>
Total Our Service Area and Rural KS, NE, CO	240

01/30/01

Attachment 9-11



# Gaches, Braden, Barbee & Associates

## Governmental Affairs & Association Management

300 SW EIGHTH • THIRD FLOOR • TOPEKA, KANSAS 66603-3912 • 785-233-4512 • FAX 785-233-2206

**Testimony of Ron Gaches**  
**Submitted on behalf of the Kansas Dental Hygienists' Association**  
**Before Senate Public Health and Welfare**  
**Regarding Senate Bill 50**  
**Wednesday, January 31, 2001**

Deal with the facts. Don't be emotional. Focus on the policy issues.

Scaling assistants receive inadequate training and education to substitute for services provided by Registered Dental Hygienists.

Scaling assistants training programs approved by the Kansas Dental Board fall short in meeting the Legislative intent of the Council of Dental Accreditation standards referenced in the 1998 bill creating the scaling assistant position.

Scaling assistants are not regulated or licensed by the Kansas Dental Board. They pass no standardized test certifying their ability to perform dental hygiene or dental education work.

Scaling assistants are not addressing the access-to-care issue. According to data from the KDB, 73% of the 188 scaling assistants are working in areas that the State says are already adequately served by Dental professionals.

- 43 work in the Greater Kansas City area
- 25 work in Sedgwick County
- 27 work in Shawnee County

Amazingly, many of the scaling assistants are working in the same offices. 32 dental offices have more than one scaling assistant. A total of 84 scaling assistants (44% of the total) work in offices with more than one scaling assistant. Most of these are in urban areas adequately served by Dental Hygienists.

One Topeka dental office has hired seven scaling assistants and has zero Dental Hygienists. Even one of our Kansas Dental Board members has three scaling assistants working in his office.

There's no disagreement that some areas of the state are experiencing a shortage of skilled dental care providers. But there is disagreement about how widespread the problem is and what is the correct solution. The assertion previously made that we need 265 additional Dental Hygienists ignores the gains made in recent years, ignores the

*Senate Public Health + Welfare Committee  
Meeting Date 1-31-01  
Attachment 10-1*

declining population in many rural areas, ignores that fact that Dental Hygienists can only work where a dentist is present, and also ignores the reality that nearly 25% of all Kansans have no teeth and don't require a Dental Hygienist.

Correctly counting the number of Dentists and Registered Dental Hygienists serving Kansas is apparently difficult. Numbers provided by the KDB over the past couple of years have varied, sometimes significantly. This much is certain, the number of Registered Dental Hygienists serving Kansas has increased significantly the past two years, by at least 123, an increase of 12.4%; even as the number of practicing Dentists has declined by over 3%.

The ADA has endorsed and is trying to implement a new dental workforce model, called the 2020 Plan. This model calls for the creation of three tiers of dental assistants that would conduct much of the work currently conducted by dental hygienists. The model is attractive to Dentists because it calls for much greater reliance on lower skilled and lower wage employees to provide a wide variety of dental services. Implementing the scaling assistant position is just the first step towards lowering the education and training standards for many of the dental hygiene positions supporting the dentist. The Legislature should study and understand where our current path takes us before we eliminate the sunset of the scaling assistant program.

Better yet, inform your constituents about the differences between the education of a Registered Dental Hygienist and a scaling assistant and ask them whom would they rather have scaling their teeth.

If the issue of whether to pass Senate Bill 50 is decided on which organization, the KDA or KDHA, has more political influence, then SB 50 will pass. If the issue is decided based on whether scaling assistants improve the bottom line for dentists, then SB 50 will pass. But if you focus on the public health policy issues, then you should take a good look at what's really going on in the delivery of dental hygiene and dental education and vote "No" on elimination of the sunset.

We urge this Committee to endorse a Legislative Post Audit study of the scaling assistant initiative. Develop an independent analysis of the dental health needs of the state of Kansas and prepare a comprehensive plan to address them.



**Table 1**  
**Distribution of Unlicensed, Unregulated Dental Assistive Personnel in Kansas**

<b>Region</b> <i>(*identified as underserved at time of enactment of HB2724 and listed in order of highest need)</i>	<b>Number of unlicensed, unregulated personnel practicing</b>	<b>Percentage for each region</b> <i>(rounded)</i>
<b>*Southwest Region</b> <u>Counties</u> -Clark (2) -Finney (14) -Ford (5) -Grant (2) -Hamilton (1) -Kearny (1) -Kiowa (1) -Scott (1) -Seward (1) -Stafford (3)	31	16%
<b>*Southeast Region</b> <u>Counties</u> -Allen (1) -Anderson (2) -Bourbon (1) -Crawford (1) -Labette (1) -Lyon (9) -Montgomery (1) -Wilson (1)	17	9%
<b>*Northwest Region</b> <u>Counties</u> -Decatur (1) -Ellis (1) -Mitchell (1-seeking employment) -Rooks (1) -Sheridan (1)	4	2%
<b>Region</b> <i>(not identified as underserved)</i>	<b>Number of unlicensed, unregulated personnel practicing</b>	<b>Percentage for each region</b> <i>(rounded)</i>

Senate Public Health + Welfare Committee  
 Meeting Date 1-31-01  
 Attachment 11-1

<b>Northeast Counties</b> -Atchison (6) -Dickinson (1) -Doniphan (1) -Geary (2) -Jefferson (1) -McPherson (2) -Marion (2) -Nemaha (1) -Osage (9) -Pottawatomie (1) -Riley (3) -Saline (1) -Shawnee (27)	57	30%
<b>South Counties</b> -Cowley (6) -Harvey (1) -Reno (4) -Sedgewick (25) -Sumner (1)	37	20%
<b>Greater Kansas City Counties</b> -Franklin (4) -Johnson (29) -Miami (1) -Wyandotte (9)	43	23%
<b>Total:</b>	188	100%

\* % practicing in underserved areas = 27%  
 % practicing in areas not identified as underserved in 1998 = 73%

Source: Kansas Dental Board 1/1/01

### Scaling Assistants - more than one in an office

Employer	Number of Scaling Assistants in Office	City
<b>Urban Areas - Kansas City</b>		
Bagby (Lindhart)	2	Olathe
Doyle	3	Overland Park
Dowling	2	Shawnee
Williamson (Heath)	3	Edwardsville
" "	1	McLouth
Hofer	2	Kansas City
Martin	2	Overland Park
Myers	3	Olathe
Vernon	2	Kansas City
<b>Urban Area-St. John</b>		
Rosenberg	4	St. John
<b>Urban Area-Manhattan</b>		
Wisdom	2	Manhattan
<b>Urban Area-Emporia</b>		
Bennett	3	Ottawa
Jones	2	Emporia
Vinduska	2	Marion
Waldron	2	Ottawa
<b>Urban Area-Topeka</b>		
Bettin	3	Topeka
Donnigan	3	Osage City
Harmon	4	Osage City
Hall	2	Lyndon
Manroe	2	Merriam
Mead/Meisner	7	Topeka
Michel	2	Topeka
Martin De Porres Center	2	Topeka
Webber	2	Topeka
<b>Urban Area-Wichita</b>		
Callahan	3	Wichita
Katzer	4	Auburn
Kinach	2	Arkansas City
Landreth	3	Wichita
Mendoza	2	Wichita
McLean	2	Wichita
Moore	2	Wichita
Sietz	2	Arkansas City
Tangelwood Center	2	Derby
<b>Total</b>	<b>84</b>	